



A Maharatna Company

**NTPC
Welcomes you to**

7th Analyst and Investors' Meet

August 01, 2011

Presentation outline

NTPC Overview

Performance Highlights

Opportunities

Challenges

Sustainability initiatives

Towards Realising the Corporate Vision....

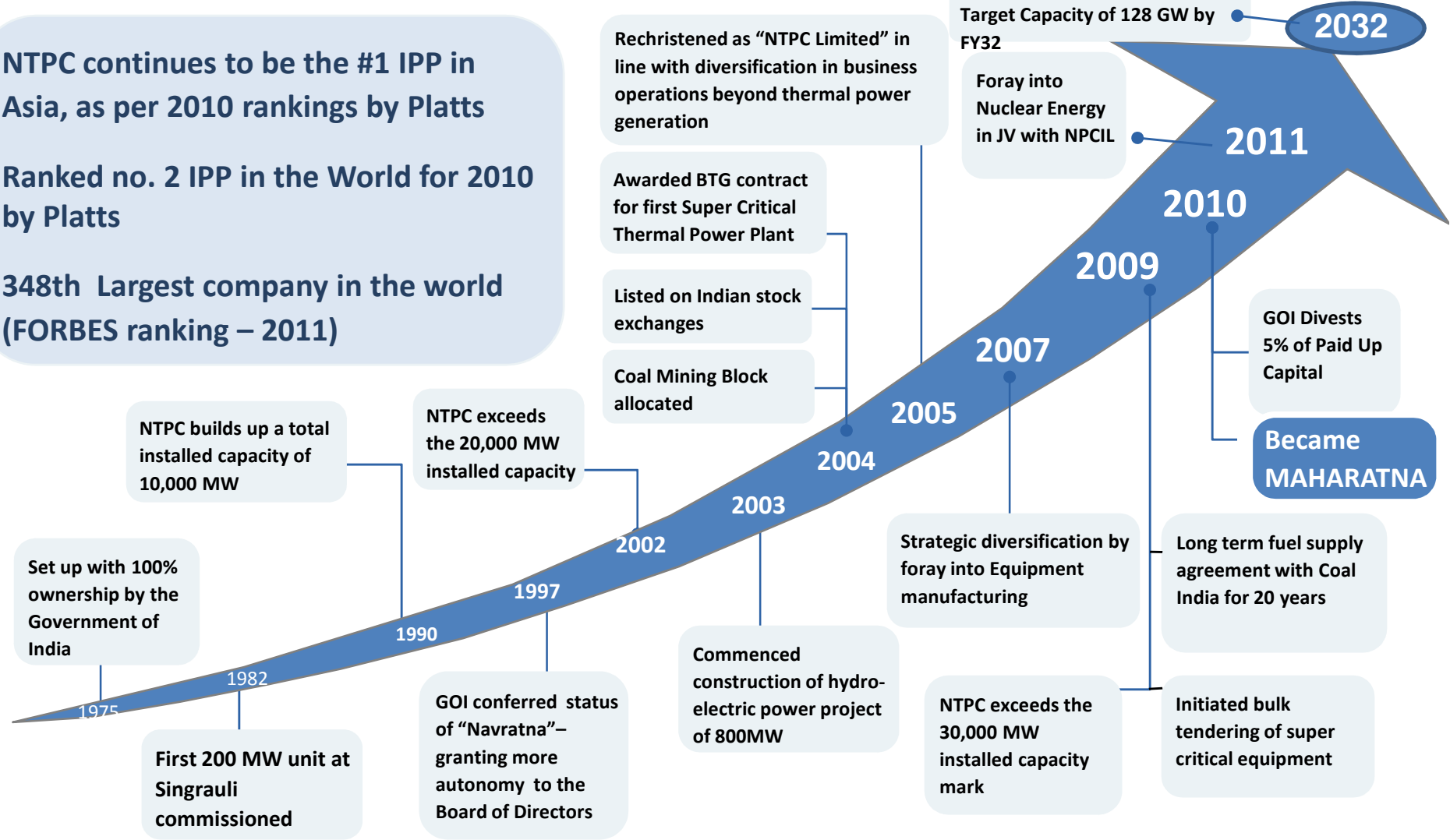


A Maharatna Company

NTPC continues to be the #1 IPP in Asia, as per 2010 rankings by Platts

Ranked no. 2 IPP in the World for 2010 by Platts

348th Largest company in the world (FORBES ranking – 2011)



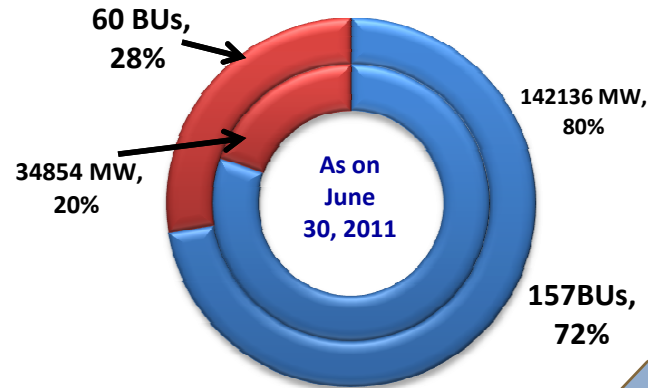
...To be the world's largest and best power producer, powering India's growth

35 Years since Inception and 'Energizing India'

PAN India Presence



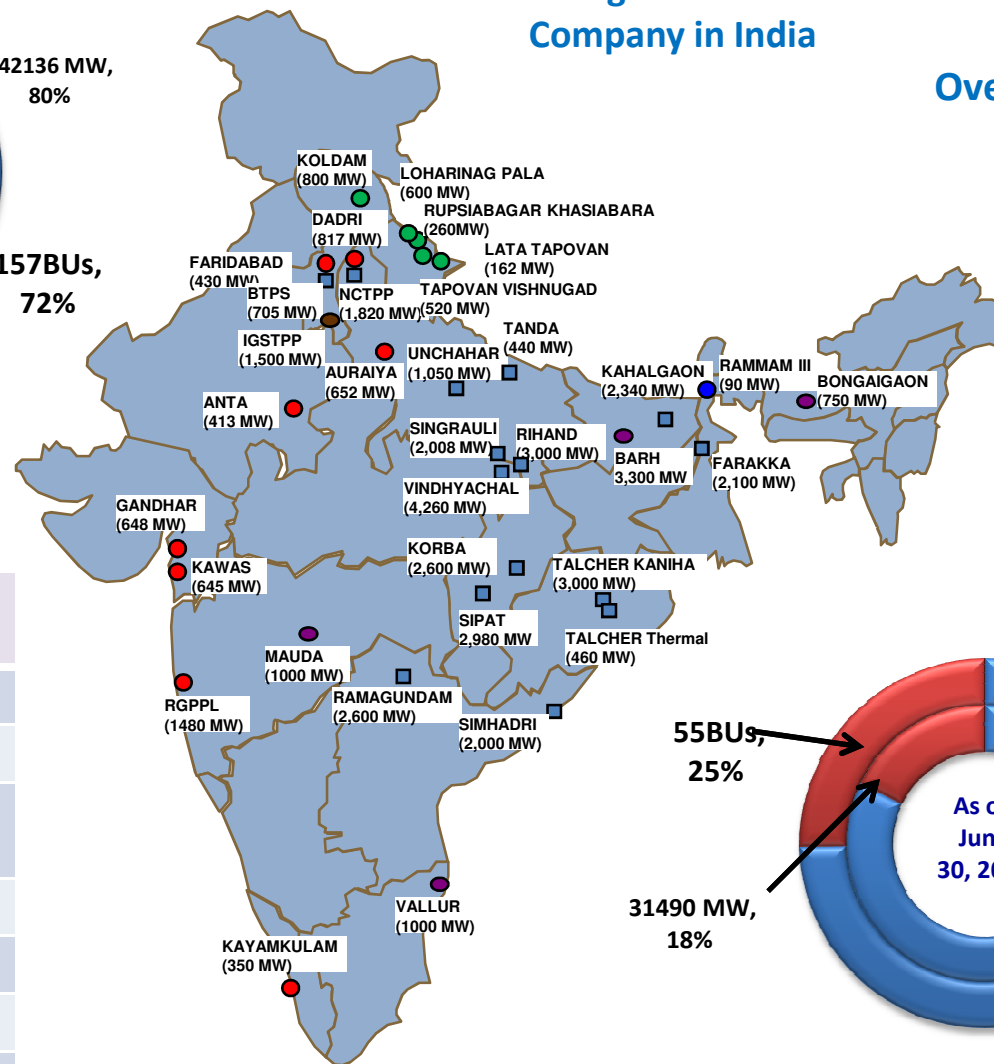
A Maharatna Company



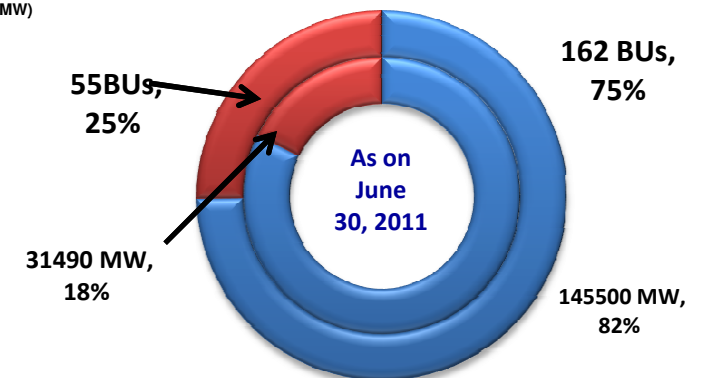
■ Rest of India ■ NTPC Group

Largest Power Company in India

Over 14,000 villages electrified



As on 30.06.2011	No. of Plants	Capacity MW
NTPC Owned		
Coal	15	27535*
Gas/Liquid fuel	7	3955
Total	22	31490*
Owned by JVs		
Coal & Gas	6	3364
Total	28	34854*



■ Rest of India ■ NTPC

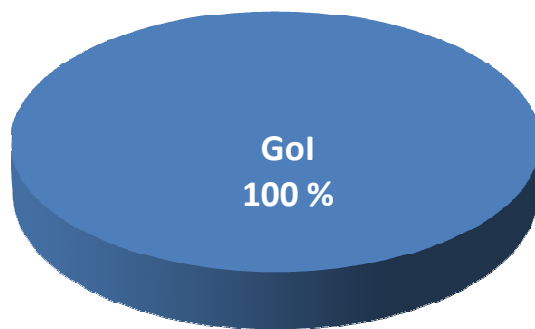
* Including 660 MW first Supercritical unit of Sipat-I commissioned on 28.06.2011

Shareholding Pattern

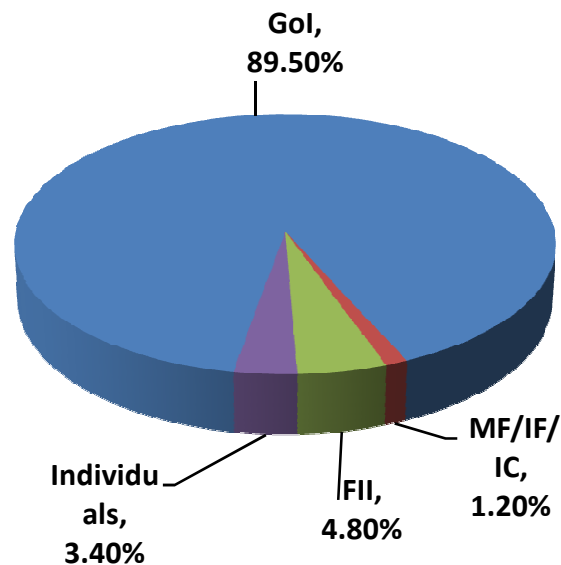


A Maharatna Company

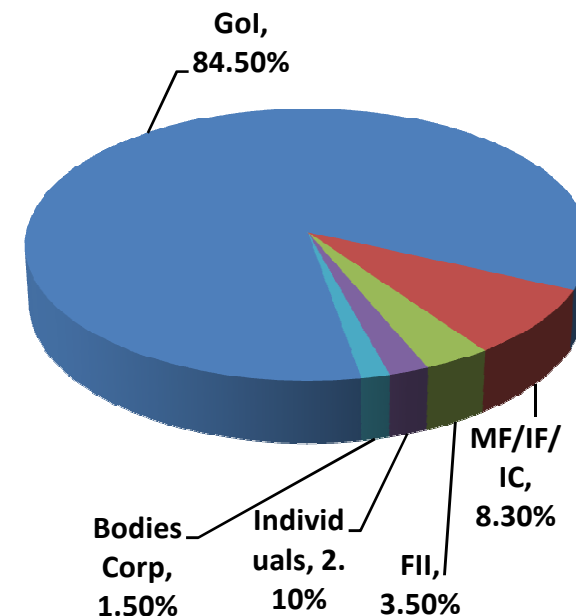
1975



2004



2011



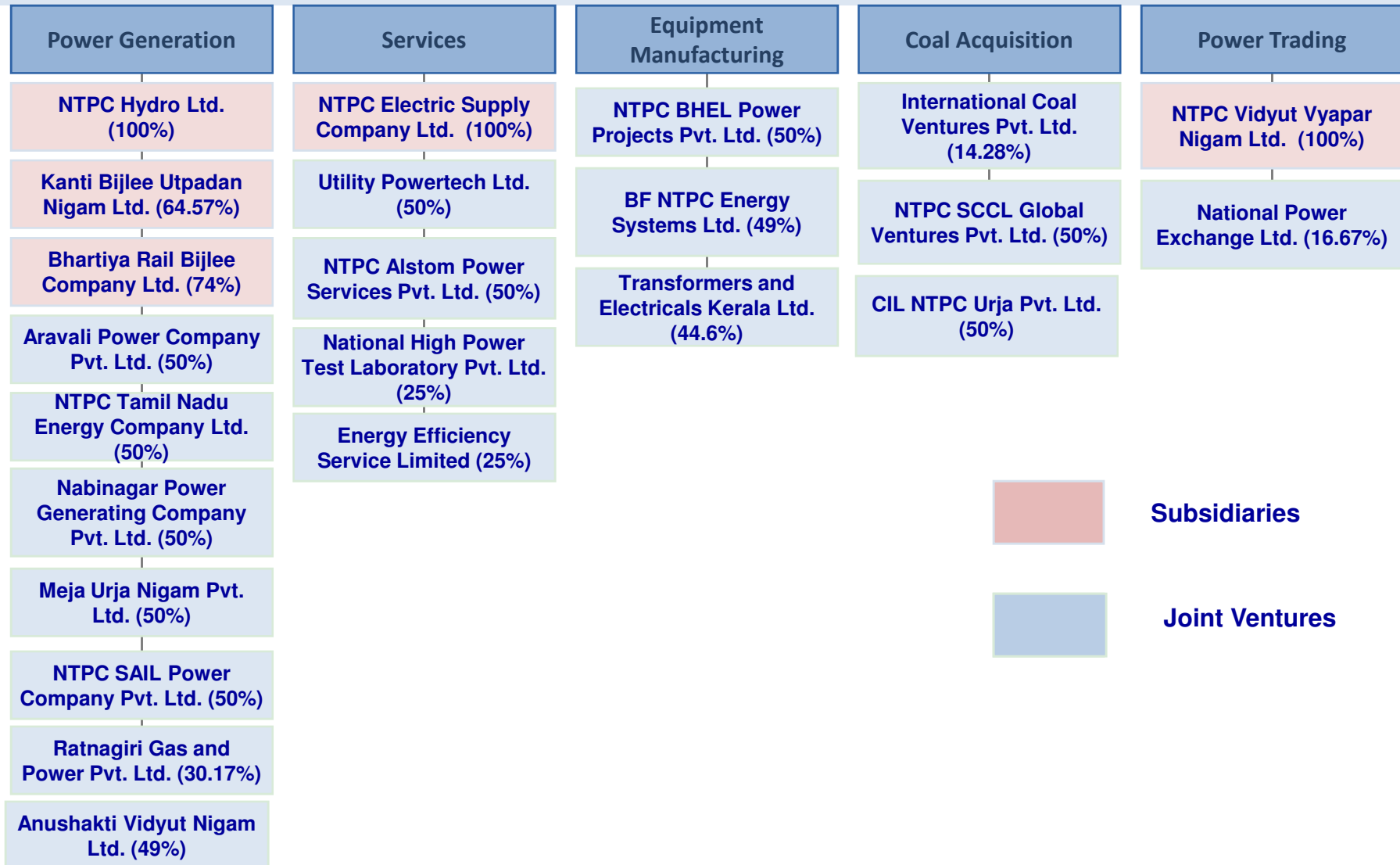
Among the largest shareholder base in India with over 550 institutional investors and over 8,00,000 retail investors as of June 30, 2011

Group NTPC

5 Subsidiaries and 18 Joint Ventures



A Maharatna Company



Synergy fuelling growth

Figures in brackets indicate holding of NTPC

Presentation outline

NTPC Overview

Performance Highlights

Opportunities

Challenges

Sustainability initiatives

Performance Highlights - Operational



A Maharatna Company

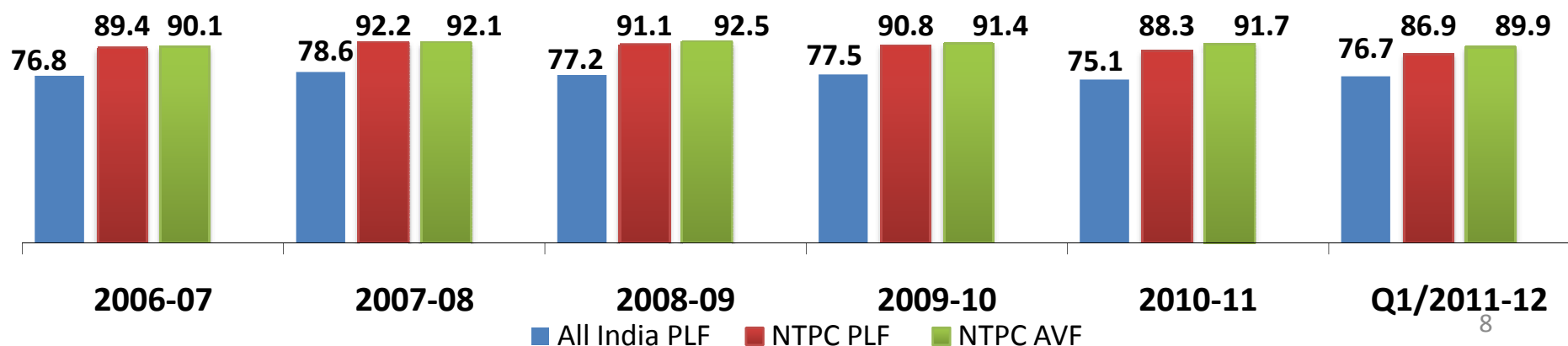
Consistently Delivering

2010-11

- 7 NTPC Coal Stations figure among the Top 10 stations in the country in terms of PLF
- Out of 15 Coal Stations, 3 stations achieved PLF of more than 95% and 7 other Stations achieved PLF of more than 90%
- Coal Stations achieved an Availability of 91.66% as against 91.41% in 2009-10
- Gas Stations achieved an Availability of 92.60% as against 90.64% in 2009-10
- PLF of Coal Stations is 88.29% and of Gas stations is 71.77% . All India PLF for coal stations was 75.08%

Q1/2011-12

- Coal Stations achieved availability of 89.9% (Q1/10-11 : 90.14%) and for Gas Stations availability was 89.82% (Q1/10-11 : 85.93%)
- PLF of Coal Stations is 86.85% (Q1/10-11: 89.51%) against All India PLF for coal stations was 76.67% (CEA)



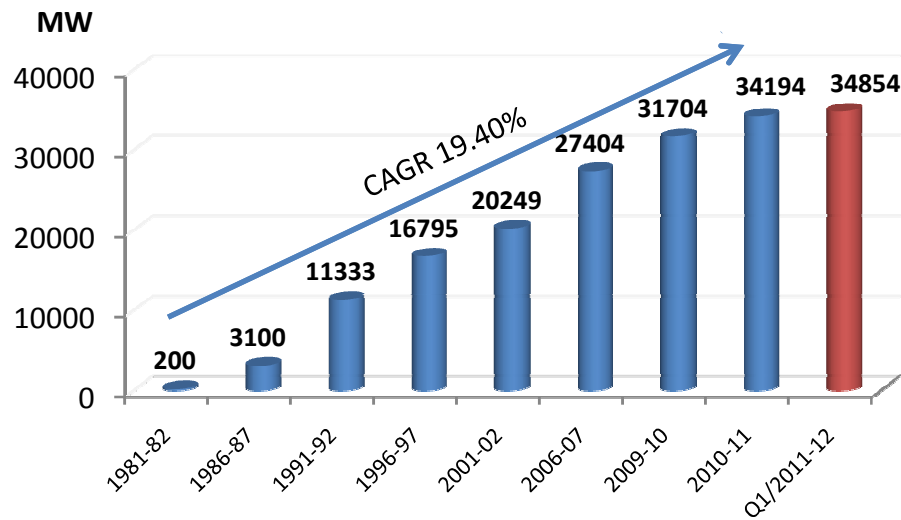
Performance Highlights...growth story



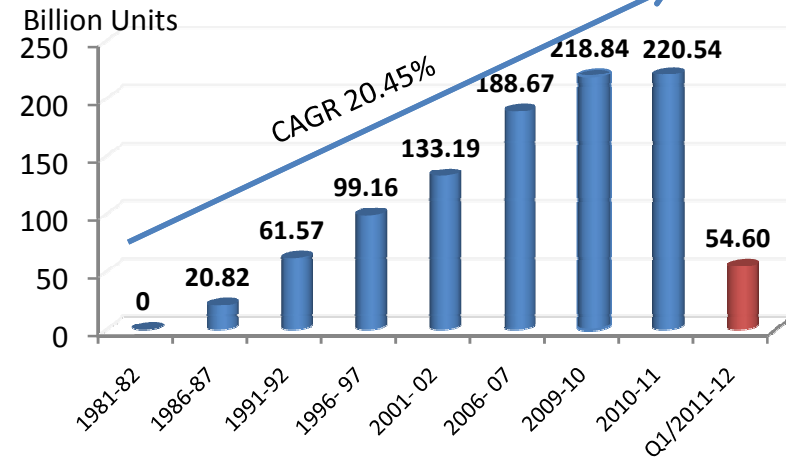
A Maharatna Company

Astounding CAGR

CAPACITY (Group)

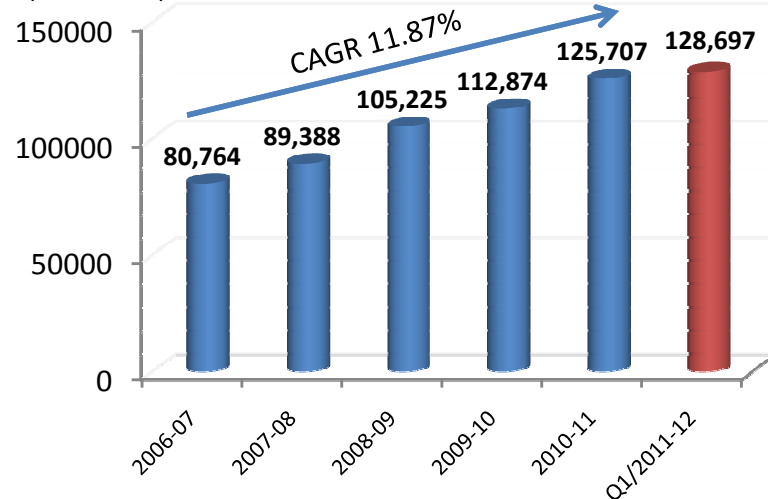


GENERATION



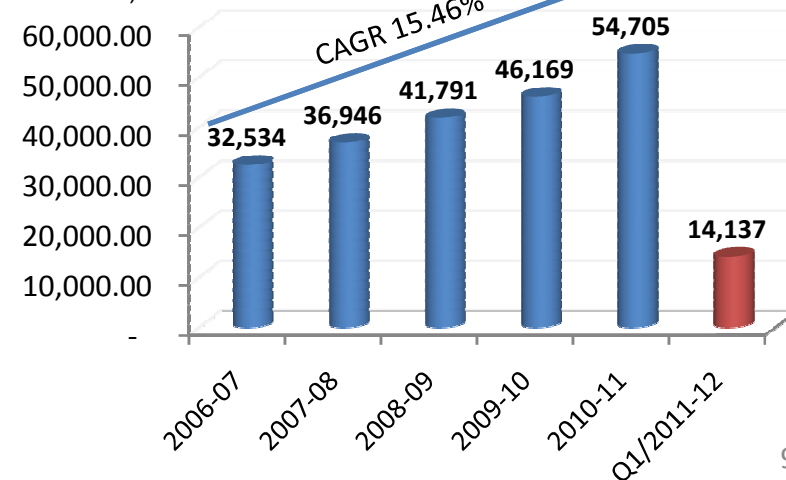
ASSETS

(INR. Crore)



REVENUE - Sale of Energy

(INR Crore)

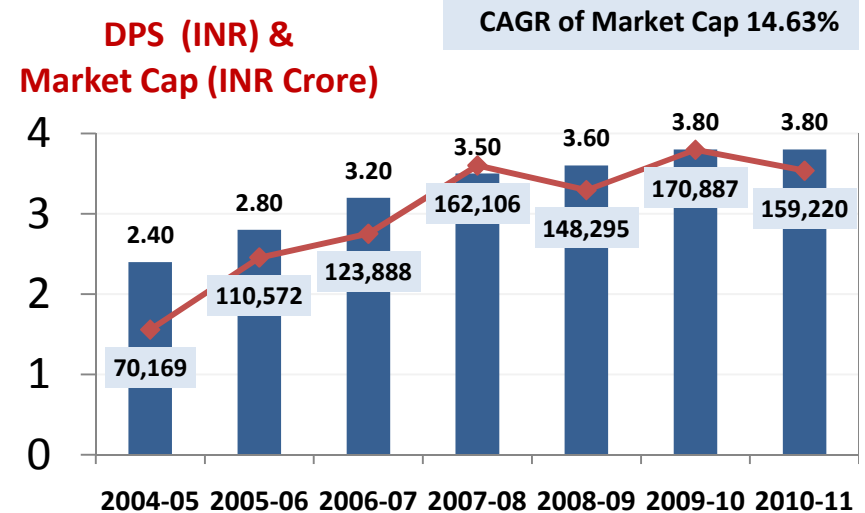
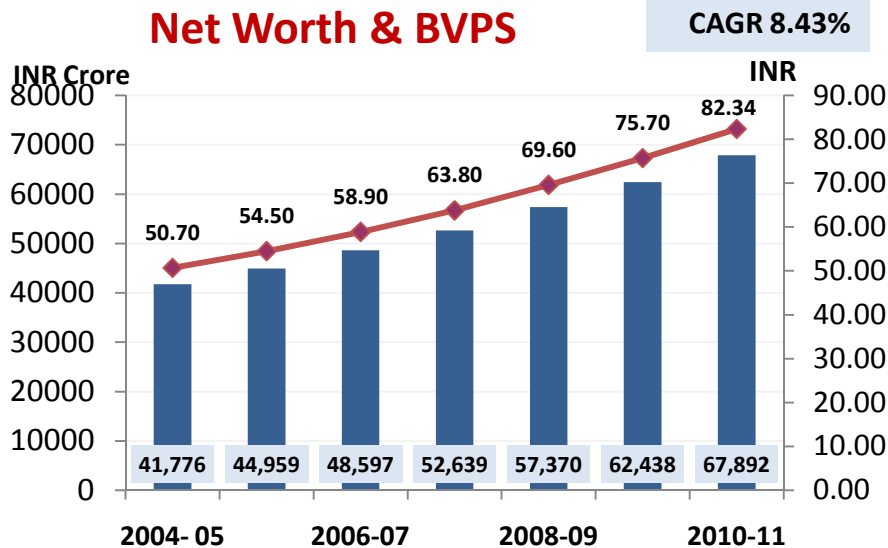
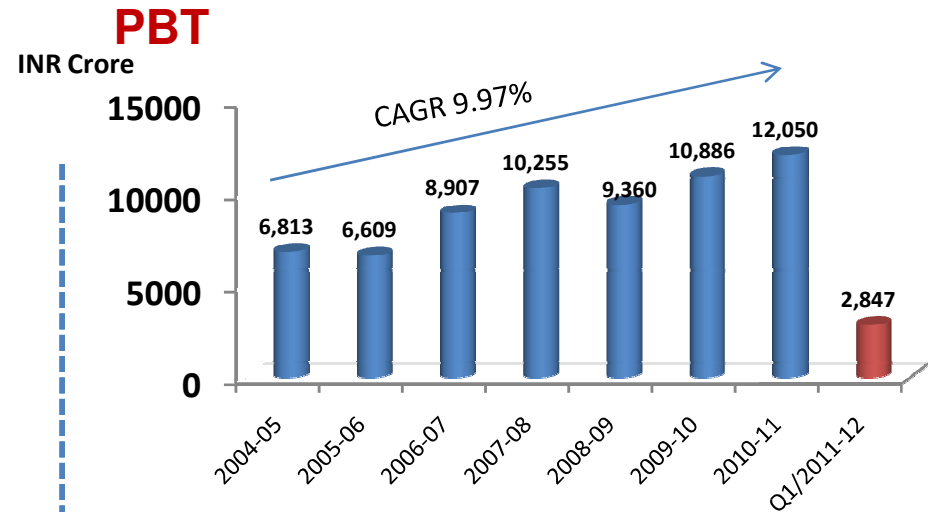
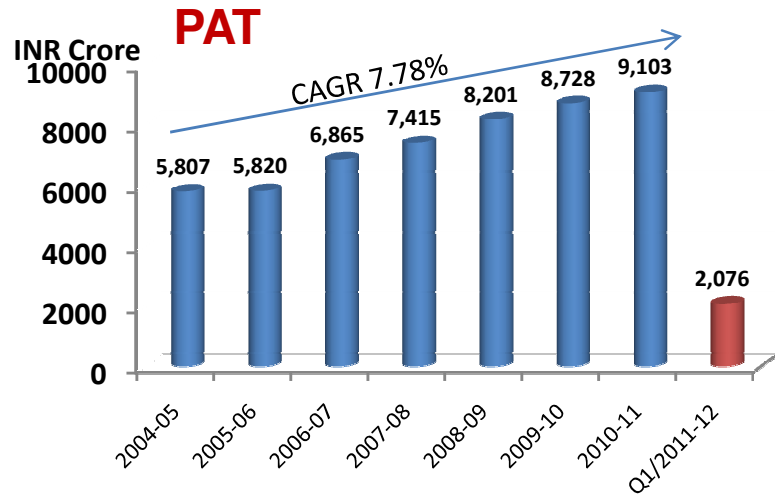


Performance Highlights....since listing



A Maharatna Company

Consistent Improvement in PAT, PBT, Net Worth & DPS

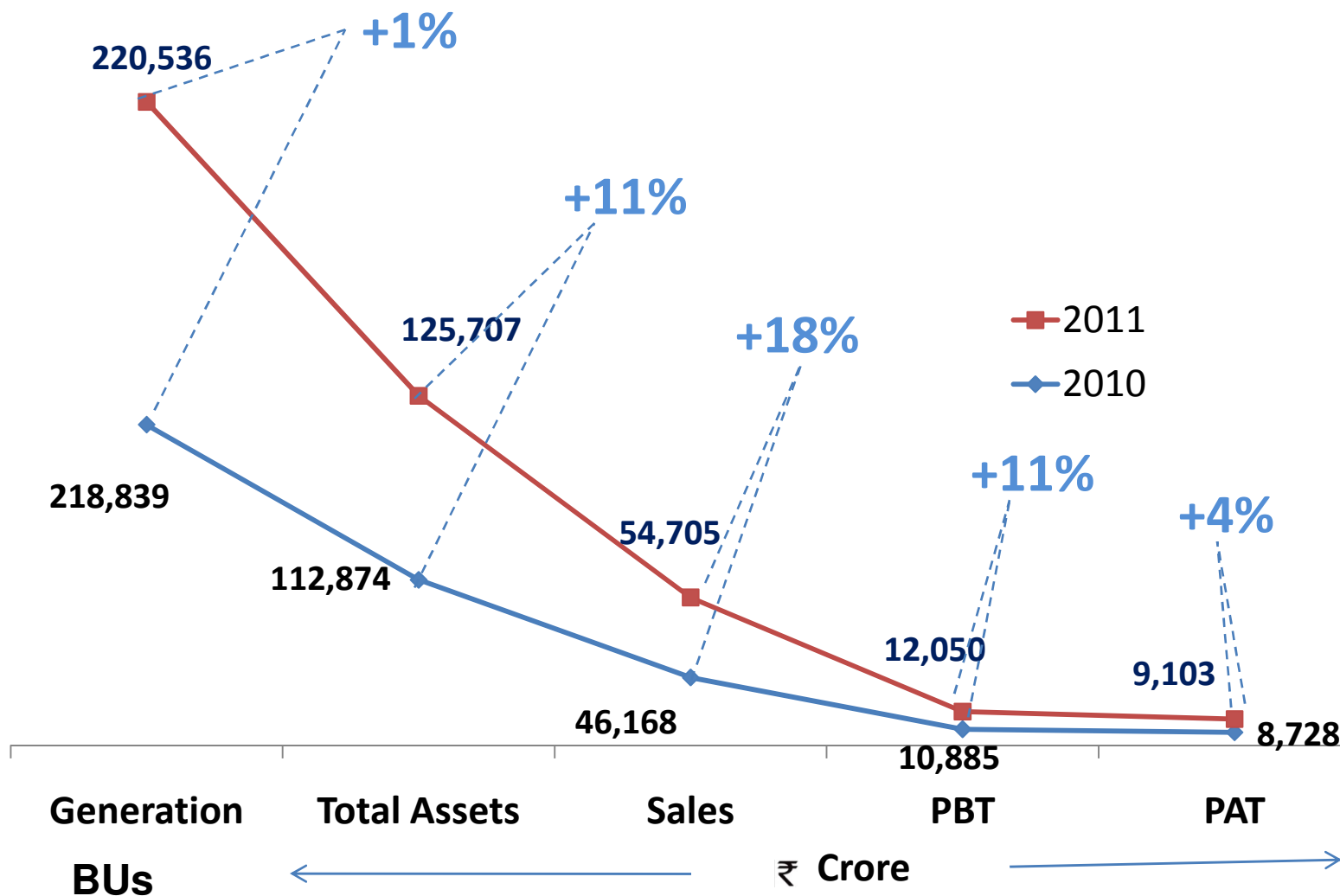


Y-O-Y Performance – NTPC Ltd

Units transformed to Earnings



A Maharatna Company



828,231

Trusted Shareholders
(as on 30.06.2011)

14.30%

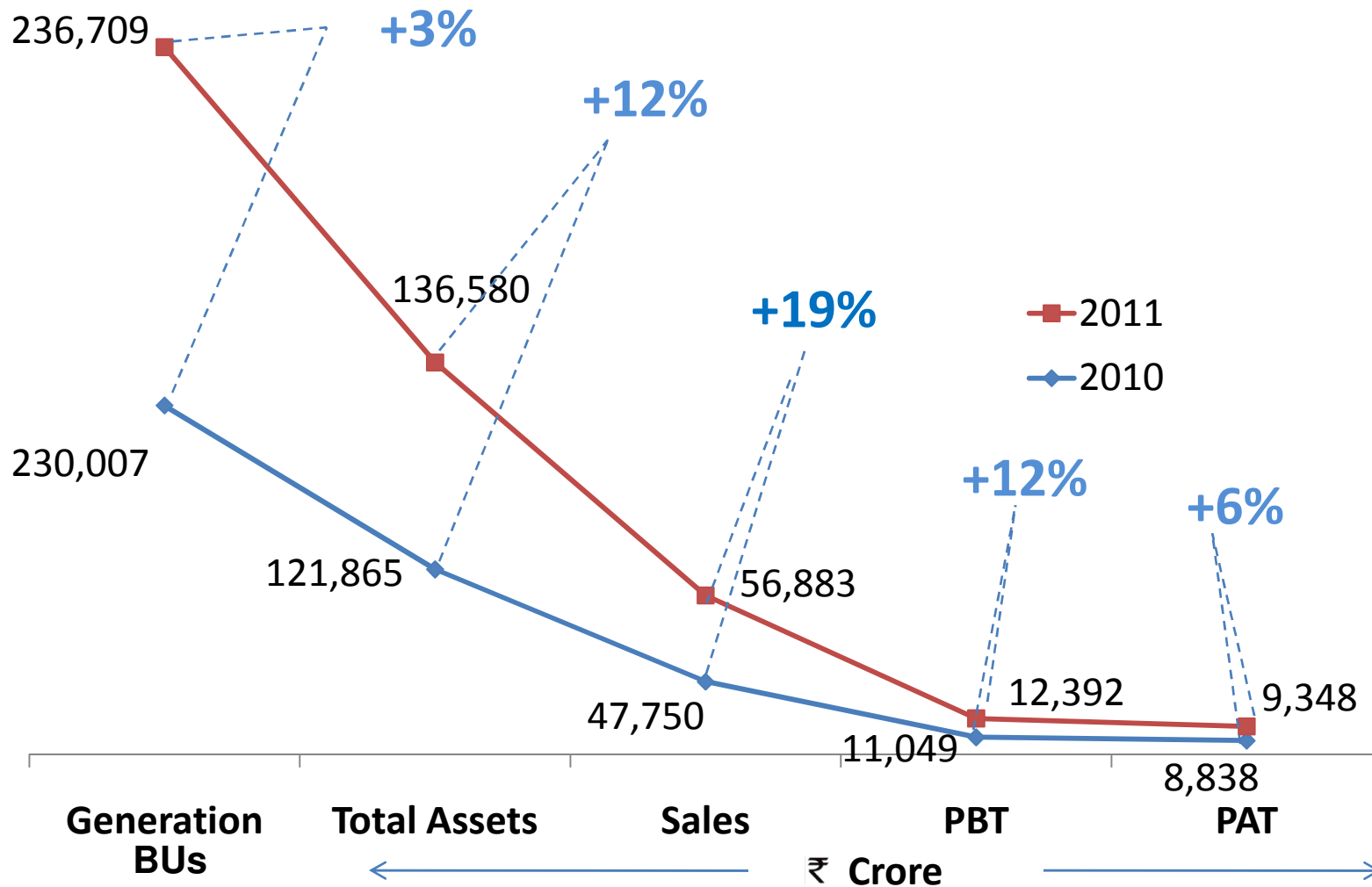
Return on Capital Employed

16.92%

Return on Net Worth

Y-O-Y Performance – NTPC Group

Units transformed to Earnings



NVVN

2nd

Largest Power
Trader in
India

NESCL

Commenced
Distribution
with

KINFRA

JVs+Subs

Breaking
Ground -
Generated

16.17

(BUs)

in 2010-11

Y-o-Y Performance

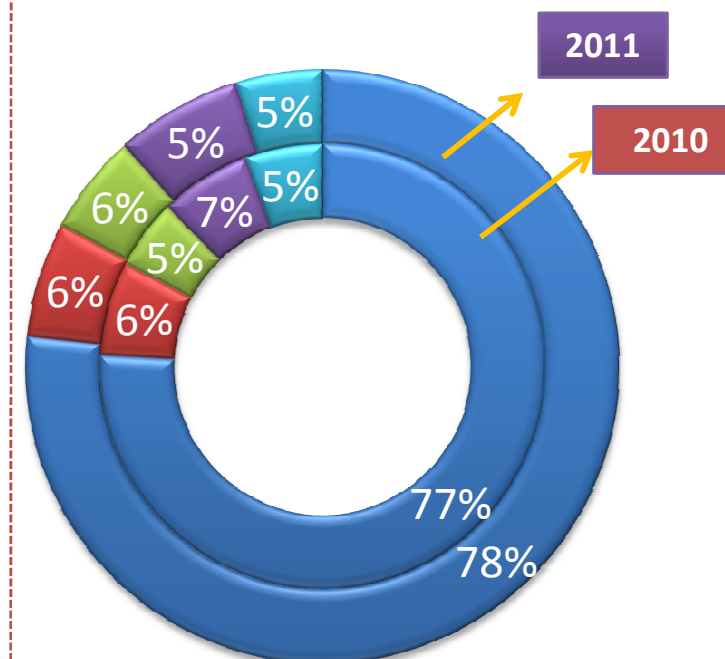
Profitability



A Maharatna Company

	₹ Crore		
	2010-11 (Audited)	2009-10 (Audited)	Y-O-Y
Total Income	57,407.30	49,246.65	17%
Net Sales	54,874.00	46,322.59	18%
Other income	2,533.30	2,924.06	-13%
Total Expenditure	45,357.70	38,361.19	18%
Fuel	35,373.78	29,462.74	20%
Employee Remu.	2,789.71	2,412.36	16%
Generation exp. etc	2,559.44	2,027.10	26%
Depreciation	2,485.69	2,650.06	-6%
Int. & fin. charges	2,149.08	1,808.93	19%
PBT	12,049.60	10,885.46	11%
Tax	2,947.01	2,157.26	37%
PAT	9,102.59	8,728.20	4%
Adjusted PAT	8,911.76	8,451.99	5%

Expenses Analysis



- Fuel
- Employees' Cost
- Generation, administration & other expenses
- Depreciation
- Interest and finance charges

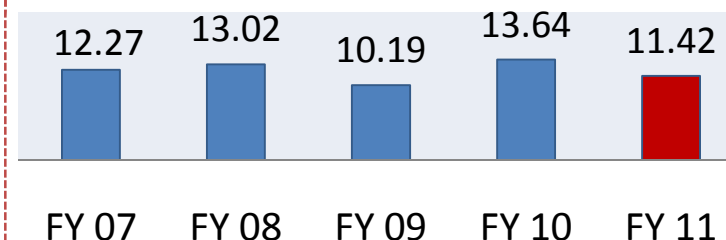
Robust Financials Y-o-Y



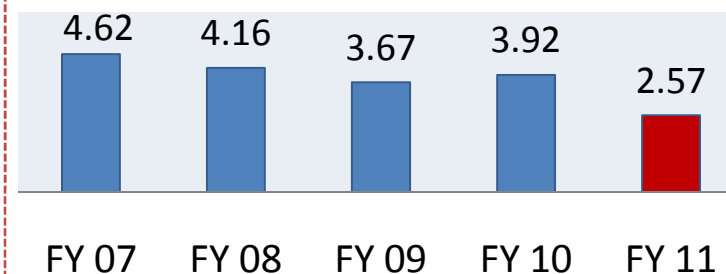
A Maharatna Company

	2010-11 (Audited)	2009-10 (Audited)	Y-O-Y
			₹ Crore
Gross fixed assets	72,755.15	66,850.07	9%
Net block	39,235.96	34,761.29	13%
CWIP incl. stores	38,270.63	32,104.31	19%
Investments	12,344.84	14,807.09	-17%
Current assets, loans and advances	35,396.79	30,815.80	15%
Deferred FE Assets/EXP	459.15	385.25	19%
TOTAL	125,707.37	112,873.74	11%
Equity sh. Capital	8,245.46	8,245.46	
Reserves & Surplus	59,646.79	54,191.96	10%
Net worth	67,892.25	62,437.42	9%
Loan Funds	43,188.24	37,797.02	14%
Current Liab. & Prov .	13,072.91	10,758.16	22%
Others (Deferred -AAD/ FERV liability)	1,553.97	1,881.14	-17%
TOTAL	125,707.37	112,873.74	11%

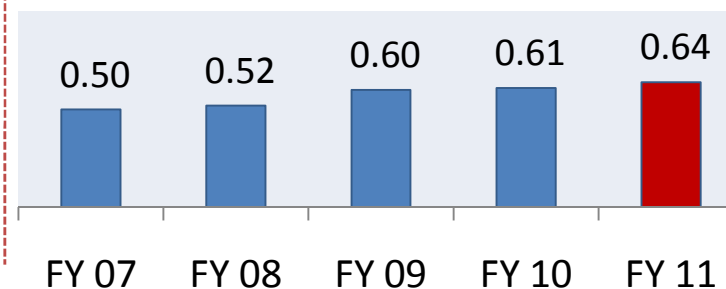
Interest Coverage Ratio



Debt Service Coverage Ratio



Debt to Equity



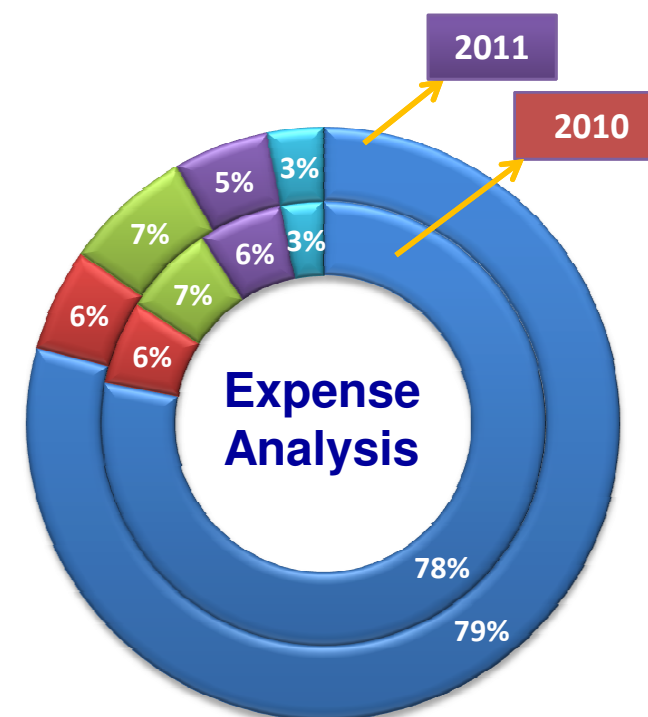
Q-o-Q Performance

Profitability



A Maharatna Company

	₹ Crore		
	Q1/2011-12 (Unaudited)	Q1/2010-11 (Unaudited)	Q-o-Q
Total Income	15,167.89	13,516.31	12%
Net Sales	14,524.23	13,006.26	12%
Other income	643.66	510.05	26%
Total Expenditure	12,320.74	11,163.12	10%
Fuel	9,749.82	8702.31	12%
Employee Remu.	690.72	683.82	1%
Generation exp. etc	864.72	752.74	15%
Depreciation	641.13	682.72	-6%
Int. & fin. charges	374.35	341.53	10%
PBT	2,847.15	2353.19	21%
Tax	771.37	511.30	51%
PAT	2,075.78	1,841.89	13%
Adjusted PAT	2,131.45	1,888.84	13%



- Fuel
- Employee Remu.
- Generation exp. etc
- Depreciation
- Int. & fin. charges

Q-o-Q Performance

Adjusted PAT



A Maharatna Company

₹ Crore

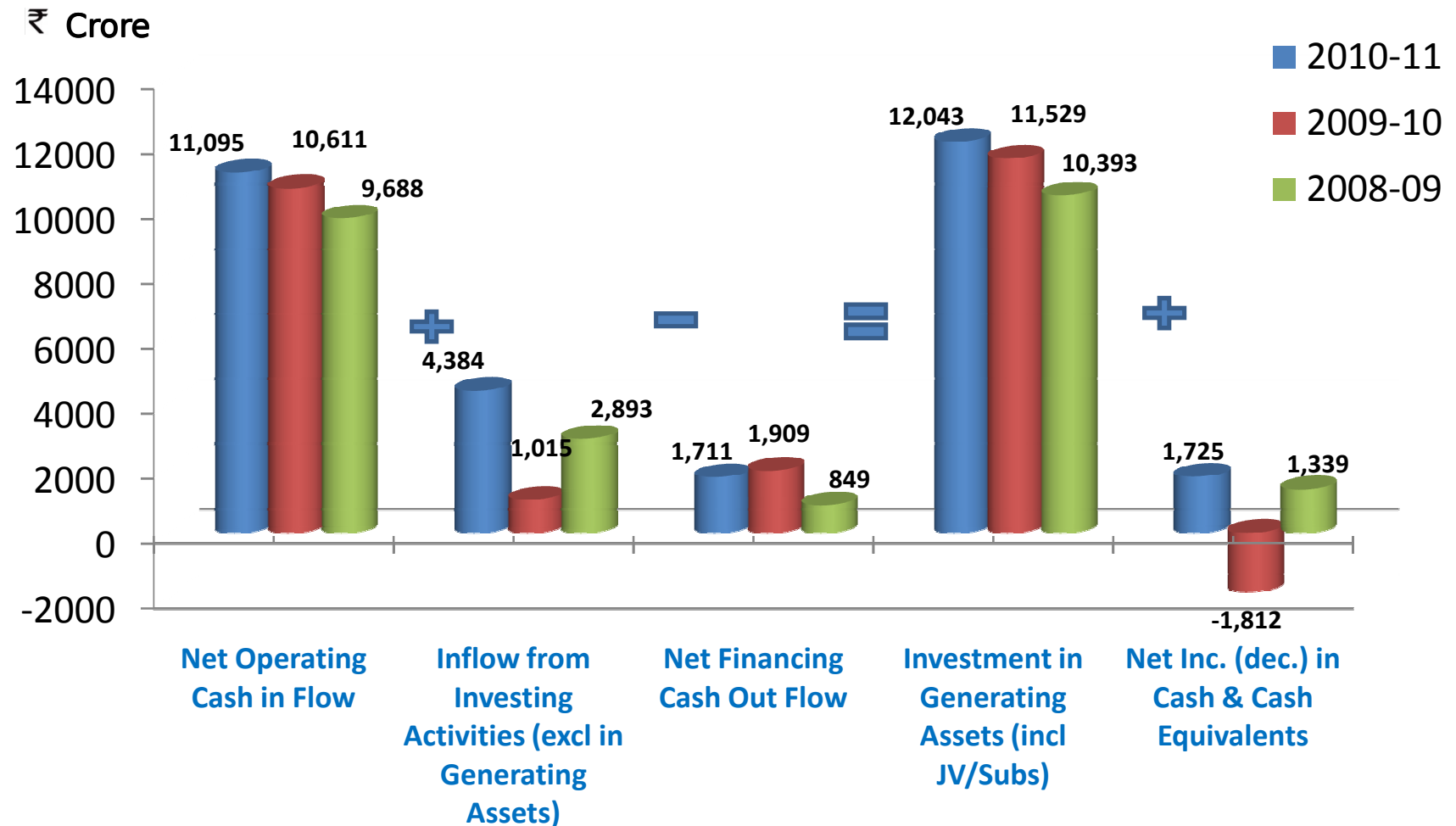
Description	Apr-Jun 11	Apr-Jun 10	% Variation
PAT	2,075.78	1,841.89	12.70
Previous years' sales (excl. PY VC)	240.54	39.25	
Prior period adjustments	3.66	1.43	
Interest on Tax refund (net)	-44.35		
Lohari nagpala interest	-	6.27	
Provisions written back (tariff)	-263.63		
Income/deferred tax of PY	109.23		
RLDC Charges	10.22		
Adjusted PAT	2,131.45	1,888.84	12.84

Robust financials leading to strong Cash Flows

Cash progressively deployed in Generating Assets



A Maharatna Company



During 2010-11, cash invested in Generation Assets increased by 4.5%

Cash & Cash Equivalents :

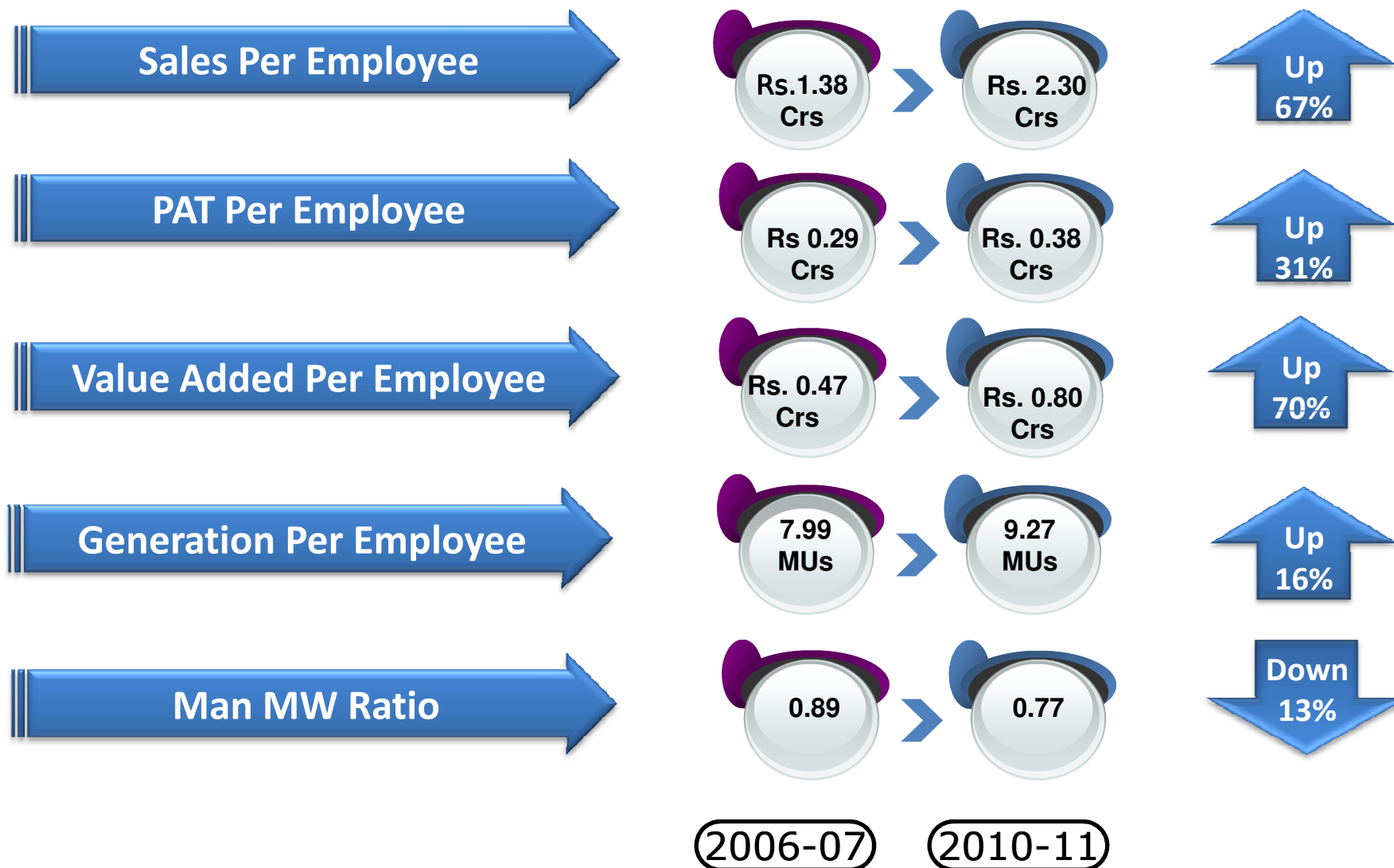
- +Rs. 16,185 Crore as on 31.03.11
- +Rs. 14,460 Crore as on 31.03.10
- +Rs. 16,272 Crore as on 31.03.09

Performance Highlights- Human Capital

Improving Productivity per employee....



A Maharatna Company



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

Presentation outline

NTPC Overview

Performance Highlights

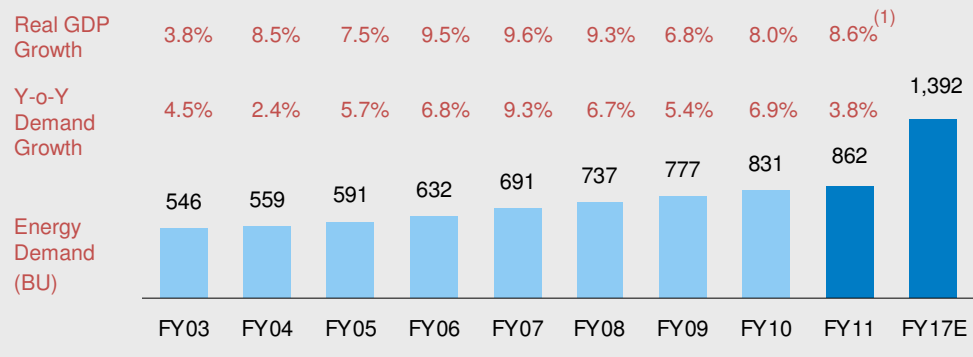
Opportunities

Challenges

Sustainability initiatives

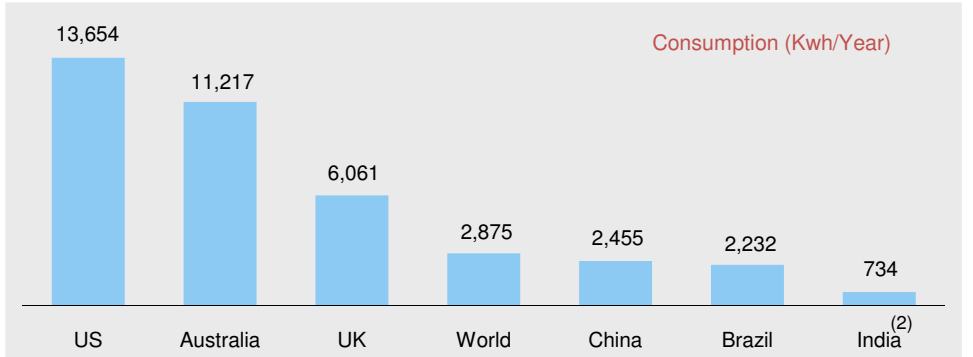
Robust Underpinnings for Sustained Growth...

Robust Demand Growth



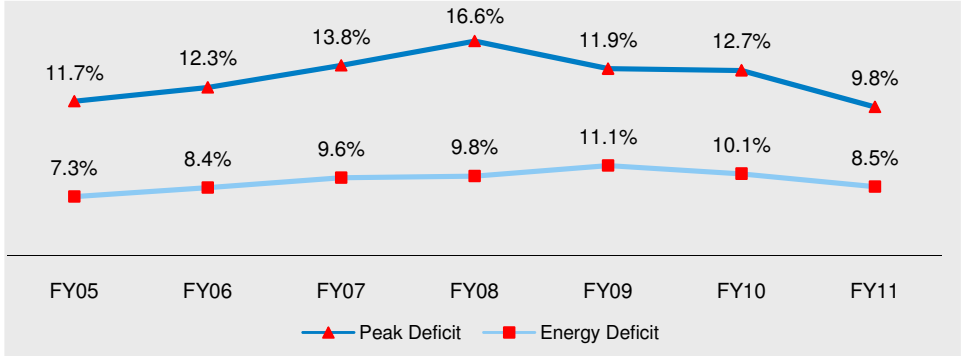
- Energy demand growth closely linked to GDP growth
- Demand to increase by c. 1.6 times by FY17

Per Capita Consumption Lags the World



- Notwithstanding sustained demand, India continues to be among the lowest per capita consumers of electricity globally, lagging Brazil & China by over 3:1
- Per capita consumption c. 26% of the world average

Energy Deficit Scenario Continues



- Power deficit scenario has sustained despite capacity addition
 - 9.8% peak deficit and 8.5% energy deficit in FY11

Sources: Government of India Economic Survey 2010-11; CEA, Power Scenario at a Glance, April 2010; World Bank Development Report, 2010; CEA Executive Summary, March 2011; Ministry of Power Annual Report 2009-10; Economic Survey 2010-11

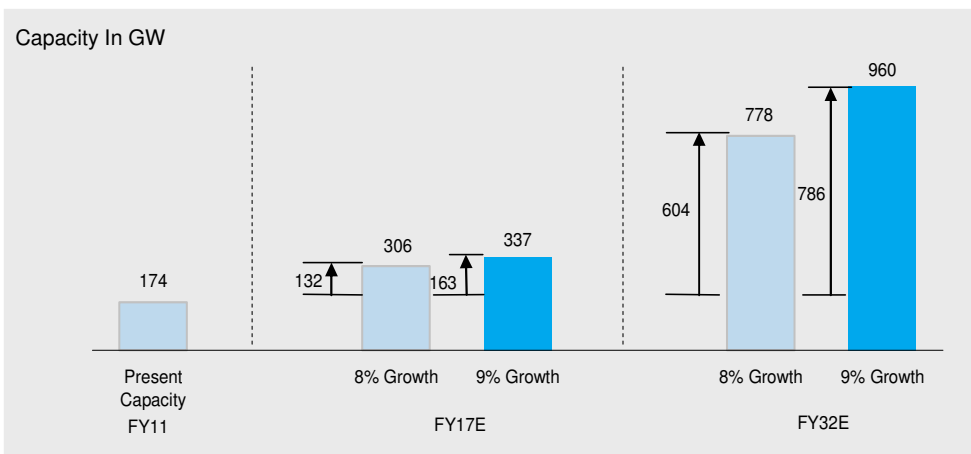
FY denotes year ending March 31.

(1) Advance estimate as per Economic survey 2010-11

(2) Per Capita consumption for India for FY09 (March 2009). For others, per capita consumption for CY08.

... has Necessitated Ambitious Capacity Addition Plans

India has a Large Capacity Requirement ...

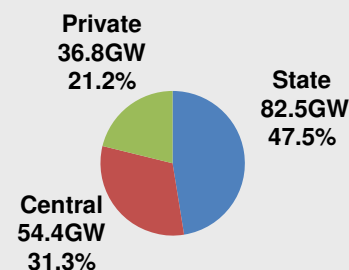


- 76% of existing capacity needs to be added by FY17 to sustain 8% GDP growth
- Average annual capacity addition of 22GW required till FY17

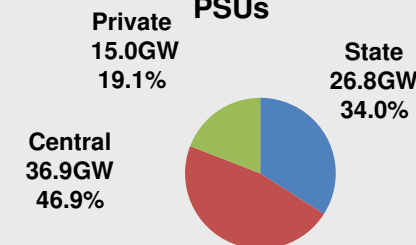
... With Significant Investments Planned in the Sector

	11 th Plan (2007-12)
Capacity (MW)	78,700 ⁽¹⁾
Investment for Generation (INR Crore)	403,632
% of Infrastructure Spend	16.9%

Current Capacity Break-up



47% of the Capacity Addition in 11th Plan Expected from Central PSUs



Note (1): Capacity addition target has been revised to 62,374 MW by the Planning Commission during the mid-term appraisal

Sources: Government of India (GoI) Integrated Energy Policy, Report of the Expert Committee (August 2006), Ministry of Power, 2009-2010 Annual Report.

Capacity Addition by 2017

Long Term Plan to become 132 GW by 2032



A Maharatna Company



- ❑ 14088 MW under Construction
- ❑ Invited bids for 16,192 MW
- ❑ Working on a basket of new projects of more than 40,000 MW for implementation

MOU Target 2011-12 - 4320 MW

Project/Unit	Capacity (MW)
Sipat Stage I	1,320
Jhajjar	1,000
Vallur	1,000
Simhadri, Stage II	500
Mouda, Stage I *	500
Total	4,320

*Best Effort Basis

Globalization

Geographical diversification fuelling growth



A Maharatna Company

Bangladesh

NTPC Board has approved the Joint Agreement (JVA) finalized with BPDB. In principle approval of BPDB received.

Draft Feasibility Report for the site at Rampal (Khulna) (1320MW) has been prepared by NTPC as a consultancy assignment and has been sent to BPDB on 30.03.2011.

BPDB is to commence Coal Study. Thereafter FR shall be finalised.

Bhutan

➤ Agreement with Royal Govt. of Bhutan for preparing DPR for 620 MW Amochhu Reservoir based HEP.

➤ NNVN, appointed as the nodal agency for trading power from Bhutan

Sri Lanka (Trincomalee)

➤ NTPC is setting up a 2x250 MW coal based power project in Trincomalee with Ceylon Electricity Board. Joint Venture Agreement (JVA), Power Purchase Agreement (PPA) and Board of Investment (BOI) Agreement have been finalized and initialed. Implementation Agreement (IA) is under negotiations.

Mozambique , Indonesia , Australia
Scouting for coal mines



Presentation outline

NTPC Overview

Performance Highlights

Opportunities

Challenges

Sustainability initiatives

Insulating Fuel Risk – Coal

Enhancing Fuel Security



A Maharatna Company

- 2010-11** ➔ Total Coal Supply received 137.48 MMT (consisting of domestic coal of 126.88 MMT + imported coal of 10.60 MMT) as against 136.21 MMT received during 2009-10.
- Q1/2011-12** ➔ Total Coal received 33.97 MMT (Domestic Coal 30.6 MMT+ imported Coal 3.37 MMT)

	FY 2011-12
Requirement	164.0 MMT
Availability	
From CIL (ACQ)	114.7 MMT
From SCCL Linkage	10.2 MMT
New Projects	11.0 MMT
Import(14 MMT)	~23 MMT
Bilateral (SCCL & ECL)	5 MMT
E-auction (Spot)	As & When Reqd.

Domestic Fuel Security

- Long term Fuel Supply Agreement signed with CIL for supply of coal for a period of 20 years
- Standing Linkage Committee(LT) accorded approval for long term coal linkage/issuance of LoA for all 11th Plan Projects.

Development of Coal Mines

- M/s Thies Mines India Private Limited has been appointed MDO for PB CMP for a period of 27 years. 2.34 million tonnes of coal is expected to be mined during 2012-13. PB CMP will give 15 MTPA of coal at peak capacity. MDO also appointed for Talaipalli CMP
- Environmental Clearance received for PB, CB & KD CMP. Stage-II forest clearance received for PB
- Dulanga cleared from 'No-Go' Area by MoEF.
- Formed JV company with CIL: "CIL NTPC Urja Pvt. Ltd" for development of Brahmini & Chichro Patrismal coal mine blocks and also acquisition of coal mines in India and abroad.
- Target of 47 MTPA by 2017 from the 5 blocks allotted.

Acquisition of Mines abroad

- 'International Coal Ventures Ltd' incorporated for overseas acquisition, operation of coal mines or blocks.
- Scouting opportunities for acquisition of stakes in Coal Mines in Indonesia, Mozambique & Australia.²⁵

Insulating Fuel Risk – Gas

Sustaining and Enhancing Fuel Security



A Maharatna Company

2010-11



APM/PMT Gas of 9.00 MMSCMD received as against 9.08 MMSCMD received last Yr.



Purchased 0.95 MMSCMD of regassified LNG from Spot Market and 1.91 MMSCMD on Fallback/ Long term Arrangement and 1.91 under KGD6.

2011-12 (planned)



Long term tie up of 15.46 MMSCMD sufficient to meet 80-85% PLF



Under APM/PMT 9.00 MMSCMD, KGD 4.46 MMSCMD, GAIL long term RLNG 2.00 MMSCMD

Q1/ 2011-12



APM/PMT Gas of 8.61 MMSCMD received, KG-D6 Gas 2.09 MMSCMD



GAIL Long-term +Spot RLNG 1.3 MMSCMD

Long Term
Supply
Agreements

- Gas Supply agreement with GAIL in place for supply of 14.48 MMSCMD gas
- Agreement entered with GAIL for Supply of 2.5 MMSCMD of RLNG till Yr 2019.
- Fallback Agreements with GAIL, BPCL, IOC and GSPCL for supply of Gas on Reasonable Endeavour Basis
- Govt. allocated 4.46 MMSCMD from KG-D6 for NCR projects. GSPA signed for 2.30 MMSCMD for KG D6 Gas. Remaining 2.16 MMSCMD being tied up.

Participation in
Gas Value Chain

- Allotted 4 Blocks under NELP-VIII. Production sharing Contract signed with Govt. of India for NELP VIII. NTPC has 100% interest in one block and 10% each in other 3 blocks.

Benchmarking Operational Efficiency

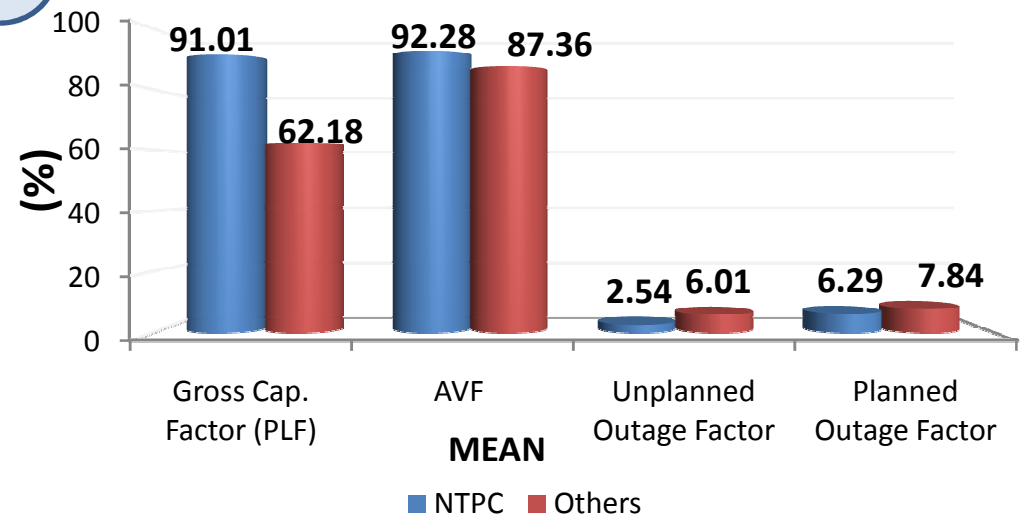
Comparison with global peers



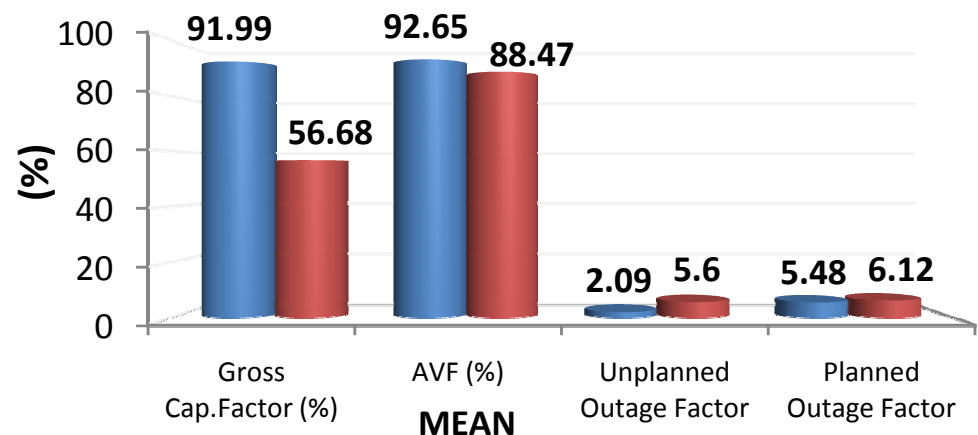
A Maharatna Company

- NTPC became a member of North American 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 of 5000 units from NERC for the period 1982-2008 for benchmarking
- Parameters selected 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

Performance Comparison (475 – 525 MW)
 No. of International Units =76 NTPC Units = 27



Performance Comparison (190-220 MW)
 No. of International units=77 NTPC units=35



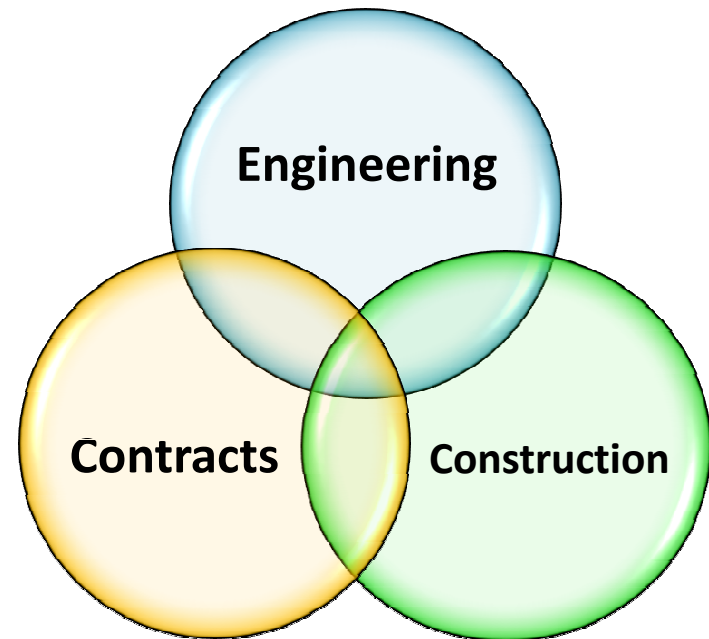
Challenge: Accelerated Capacity Addition

Strategy: Multi pronged



A Maharatna Company

- Bulk Tendering
- Enhanced Delegation of Power for quick decision making
- State of the Art Project Monitoring Centre at Corporate Office to have on-line Monitoring of Progress of Projects
- Adoption of new concepts like – Limited Notice to Proceed to enable start of Engineering activities before the award of main Plant award.
- Land acquisition cell created at Corporate centre to support the activities at Site.



Three control centers working in synchronisation

Sustainability hinges on Health of SEBs

Certainty stemming from Regulatory Framework



A Maharatna Company

- ❑ Existing Capacity on PPA route ensuring certainty of Fixed Charges. Total 100 GW Capacity PPAs already signed.
- ❑ Strong Payment Security Mechanism (PSM) in place :
 - State utilities required to establish LCs in NTPC's favour to cover 105% of the average monthly billing. As on March 2011, L/Cs in place for Rs. 4386.03 Crore
 - Supplementary agreements signed for first charge over customers' receivables after 2016
- ❑ Realized 100% payment of bills from customers for eighth years in succession
- ❑ Average cost of NTPC's Power is Rs.2.63/Kwh for 2010-11 (for Q1/11-12 Rs. 2.77/Kwh), ensuring least riskiness of power off-take in the sector
- ❑ Future Projects are also likely to be low cost as most of projects are expansion projects as well as pit head.

Sustainability hinges on collection Efficiency

Challenges



A Maharatna Company

- NTPC's billing expected to increase substantially in 5 years - as there is complete regulatory certainty in the form of multi-year Tariffs etc.
- NTPC partnering with customers in their Improvement Programs through sharing of best practices
- NTPC monitors health of customers through customer specific strategies
- AT&C losses declined during 5 years from 34.33% (2004-05) to 28.44% in 2008-09
- Performance based R-APDRP alongwith support provided by MoP is expected to sustain the declining trended in AT&C losses

Human Capital Management

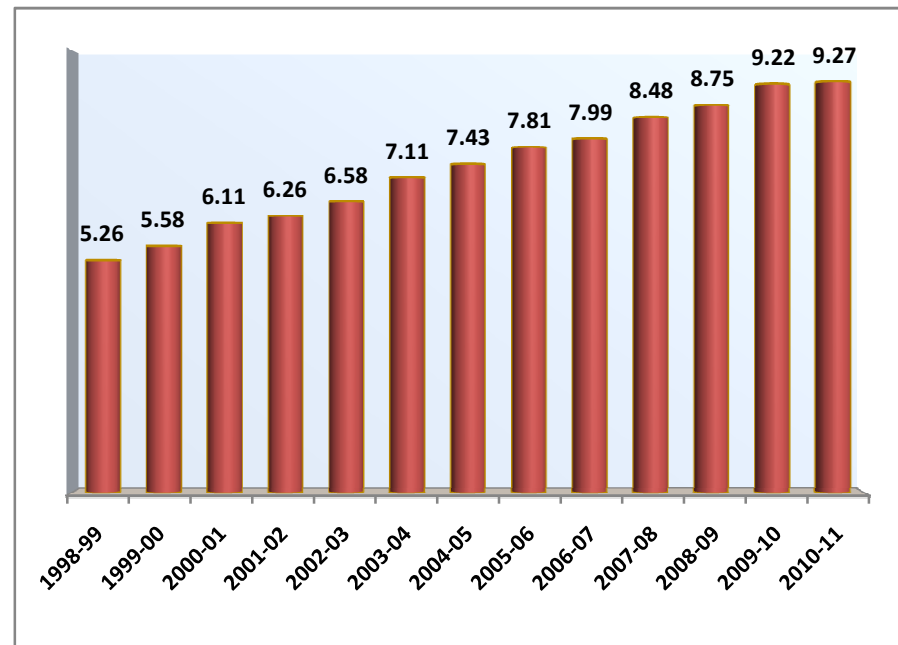
Motivating large pool of human resource



A Maharatna Company

- Talent pool of ~25,000 employees
- Systematic training ensures 7 man days training per employee per year
- Power Management Institute (PMI) trained 9130 participants in FY-11.
- PMI has added a 660 MW supercritical simulator training centre in which 256 participants were provided practical training during 2010-11.
- Planned interventions at various stages of career
- Leadership Development Centre for formulating the process to identify and groom potential leaders.
- Executive attrition is ~1% in 2010-11.

Generation (MUs) per Employee



Man – MW Ratio

2009-10	2010 -11
0.82	0.77

✓ Ranked 6th in Aon Hewitt Best Employers in India 2011 Study of Best Employers in the country

Fund Mobilization

Strong ratios ensures debt at optimal cost



A Maharatna Company

Capital Structure

- ❑ New projects financed with Debt equity ratio of 70:30.
- ❑ Internal accruals sufficient to finance equity portion of scheduled investment in NTPC
- ❑ Deployment of equity in Subsidiaries/JVs selectively-preferably with control retention

Debt Funding

- ❑ NTPC has “Most Favoured Borrower” status due to:
 - ❑ Low gearing and healthy coverage ratios
 - ❑ Debt servicing ability to remain strong due to certainty of revenues based on cost plus regime
- ❑ Long Term debt (term loans/bonds) preferred to match project cash flows-to be raised from domestic/international markets
- ❑ Projects executed by Subsidiaries and JVs to be financed under project finance route

Debt Funding 2011-12

- ❑ Loan amounting to Rs. 10,000 crore signed with State Bank of India in current year (2011-12).
- ❑ Cumulative loan tied up stand at Rs. 55,644.35 crore till date
- ❑ Total undrawn Loan amount till date (31.07.2011) :Rs.22,065.00 crore.
- ❑ US\$ 500 million Fixed Rate Senior Unsecured Notes raised after a robust book building

- ✓ Supported by highest credit ratings – *BBB- with Stable Outlook & Standalone rating at BBB by Standard and Poors’*
- ✓ *Fitch has given BBB- with Stable Outlook* credit rating for raising foreign debt
- ✓ Highest ratings “AAA” assigned by domestic rating agencies CRISIL and ICRA

Presentation outline

NTPC Overview

Performance Highlights

Opportunities

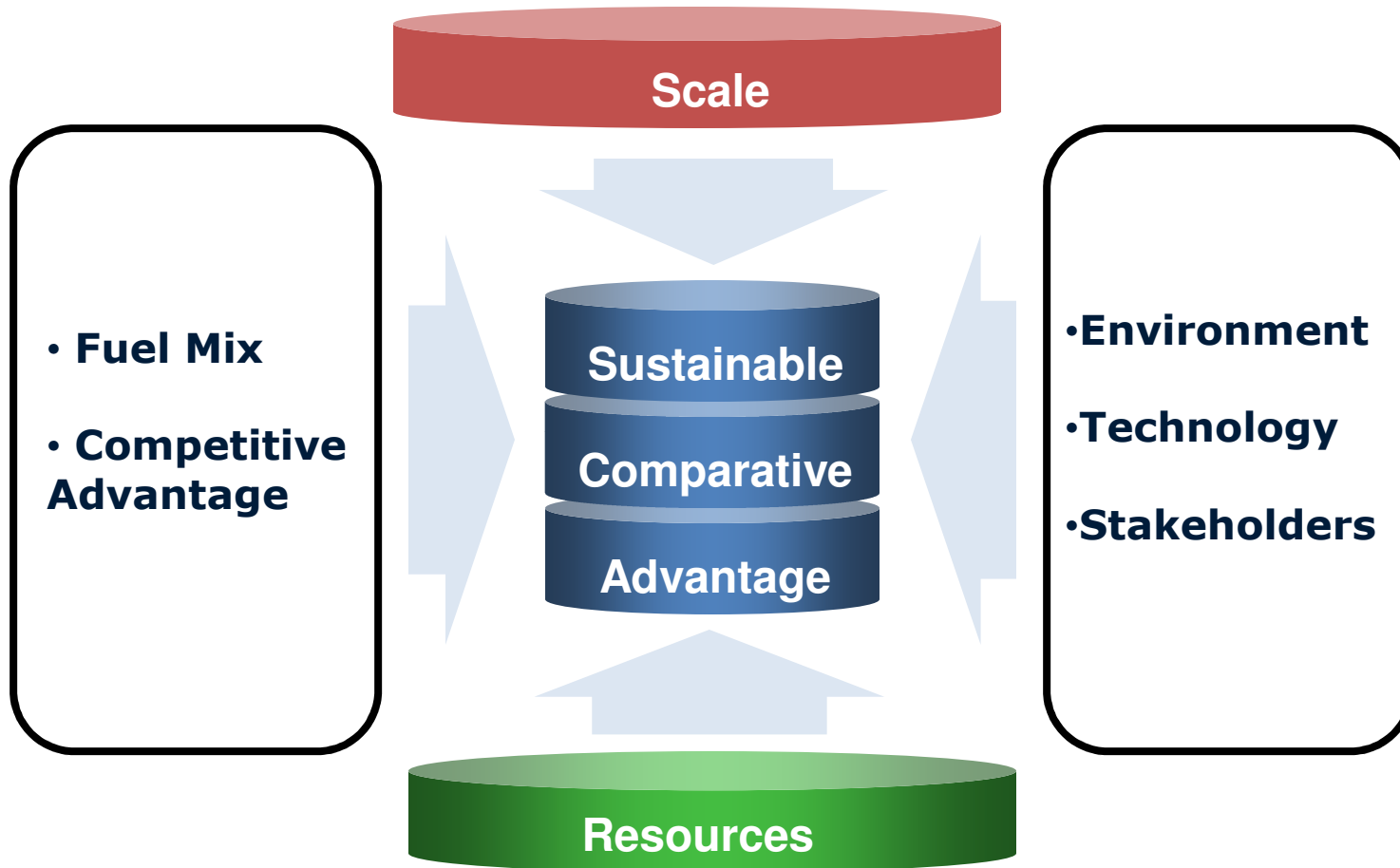
Challenges

Sustainability initiatives

Challenges of Sustainability



A Maharatna Company



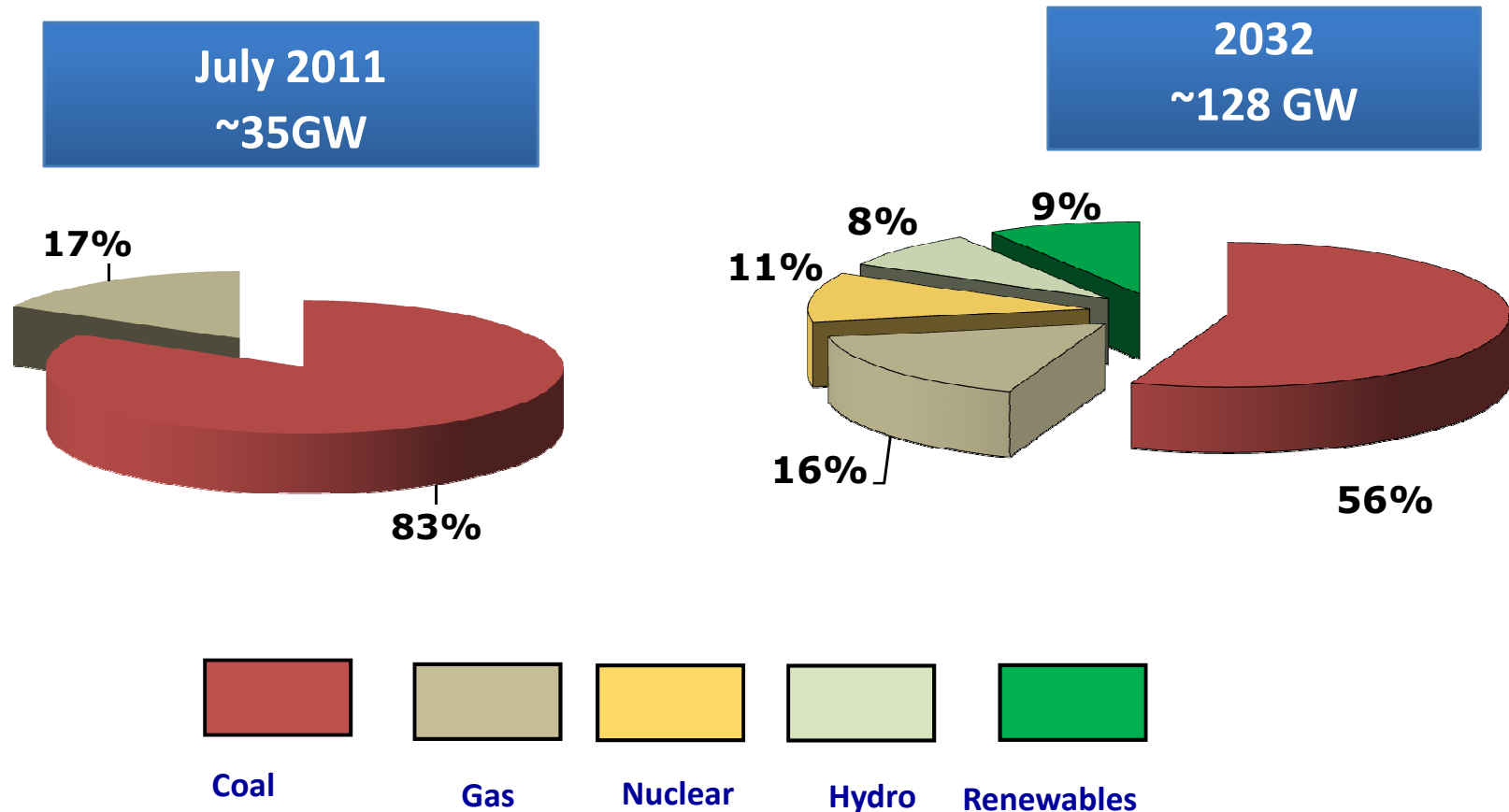
Sustained Growth can be assured only if we have Long Term Competitive Advantage

NTPC : Fuel Mix by 2032



A Maharatna Company

- Long Term Corporate Plan prepared for next 21 years upto 2032 to position NTPC as the world's largest and best power producer and a leader in green power



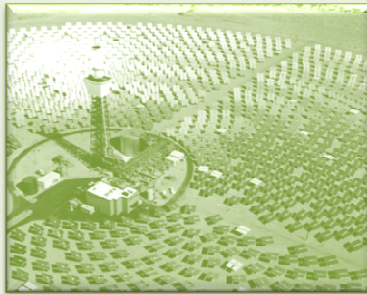
By 2032, NTPC targets a capacity of 128 GW with 28% capacity from non-fossil sources

Reducing reliance on fossil based fuels



A Maharatna Company

Solar



- Gol has approved bundling of solar power with thermal power for 105MW under Phase I
- 5 MW solar PV project each at Andaman & Nicobar Islands– bids under evaluation
- 15 MW solar plant at NTPC Anta–Bids invited
- Detailed Project Reports (DPRs) for 85 MW at are under finalization/approval

Wind



- Signed MOU with Govt. of Kerala to develop 200 MW wind energy based projects.
- 100 MW Guledagudda wind energy project (Karnataka)-Bids invited

Reducing reliance on fossil based fuels



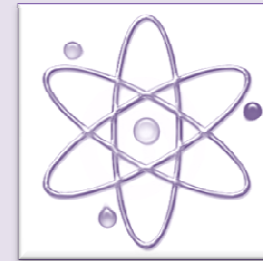
A Maharatna Company

Hydro



- **1328 MW Hydro Capacity under Construction Viz.**
 - **Koldam 800 MW,**
 - **Tapovan Vishnugarh 520 MW and**
 - **Singrauli Hydro 8 MW**
- **NTPC's Subsidiary NTPC Hydro Ltd taking up Lata Tapovan 171 MW & Rammam 120 MW**

Nuclear



- **JVC "Anushakti" formed with 51% stake of NPCIL and 49% stake of NTPC.**
- **Site selection is in progress. Training being imparted to 30 NTPC employees in this area**

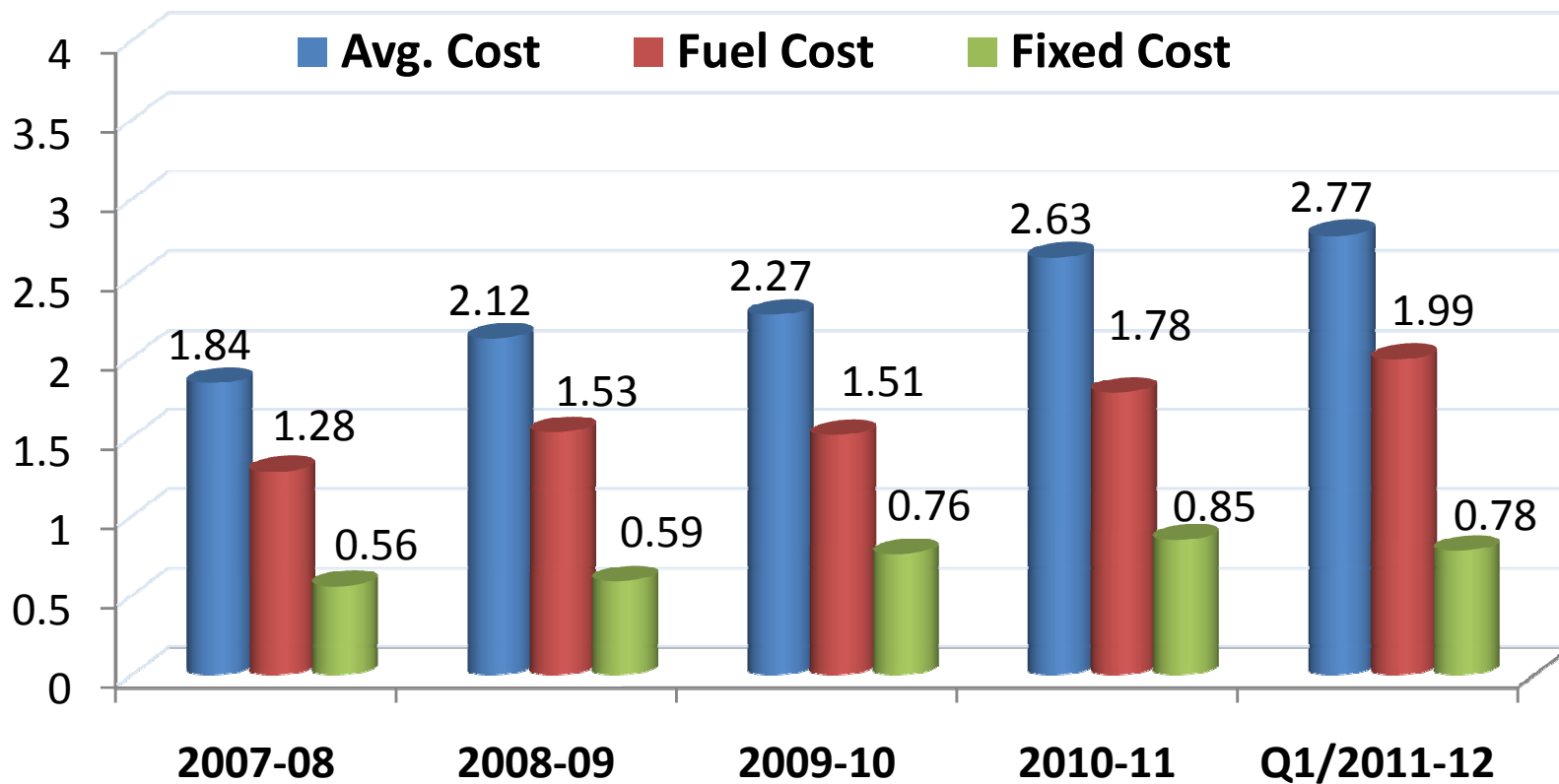
Competitive Advantage.....

Sustaining its status of low cost power producer



A Maharatna Company

Rs./Kwh



Coal based plants close to pit head stations ensure competitive variable cost of generation

Competition

Emerging business opportunities



A Maharatna Company

Projects on Bidding route

- **Tariff Policy mandates Future Power Procurement through Tariff Based Competitive Bidding**
- **Change in approach from Cost-plus to Market-minus**
- **Capacity addition plans will require:**
 - ✓ **Orienting NTPC's internal processes to meet the challenges of tariff based bidding**
 - ✓ **Balancing the requirements of a responsible PSU with that of competing against IPPs**

NTPC still remains as one of the lowest cost producer at an average tariff of ₹ 2.77/kwh (Q1/2011-12)

Environmental Initiatives



A Maharatna Company

More than 30 million tons of CO₂ has been avoided in NTPC

Technology choices

- Advanced and high efficiency technologies.
- NTPC's 1st Super-Critical unit of 660 MW commissioned at Sipat-I Power Project
- 90% of the total coal based capacities planned under 12th plan period will be based on super critical technologies

Monitoring Systems

- CO₂ measurement systems being installed at all NTPC stations in the chimney stacks
- 61 Ambient Air Quality Monitoring System(AAQMS) installed in NTPC stations

Energy Conservation

- Online energy management system at 15 stations to reduce auxiliary power consumption
- Energy Audits

Afforestation

- Creation of green wealth of ~1.9 Crore trees

2.8 Million Tons CO₂ avoided in 2010-11

Ash Management

Waste Product to Bye-Product



A Maharatna Company

9.88 million tons fly ash issued to cement & concrete industry in 2010-11.

577 million ash bricks manufactured in pilot ash brick manufacturing plants.

Export of Ash from Simhadri, Farakka, and Unchahar stations

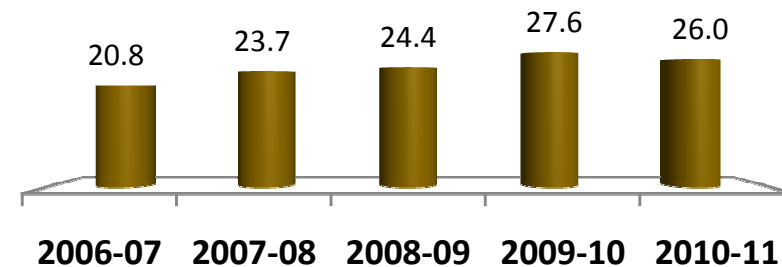
Show case projects for use of ash in agriculture. A documentary film "Use of Fly Ash in Agriculture" been made to create awareness

MoU has been signed with Research Designs & Standard Organization (RDSO), Lucknow to explore use of ash in Railway



Achieved ash utilization of 55.14% during 2010-11

Ash Utilization (Million Tons)



Technology progression

Increased efficiency and greater environmental protection

Leader in introducing new technologies in the power sector



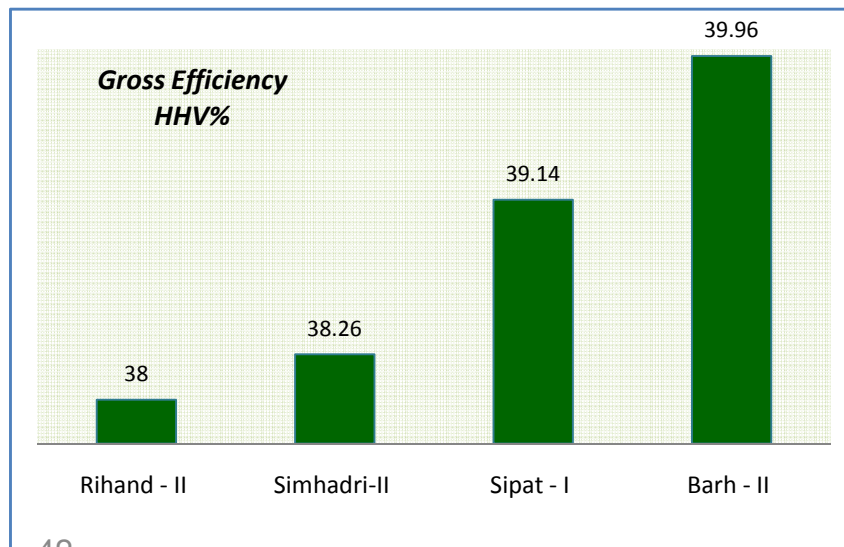
A Maharatna Company

Technologies Introduced

- High Voltage Direct Current Technology
- Distributed Digital Control – MIS
- Dry Ash extraction and disposal system
- 765 KV AC switchyard
- Tunnel Boring machines

Technologies under development

- Development of IGCC suitable for Indian coal
- Use of advanced technologies in the renovation and modernization of aging power stations
- Induction of efficient Advanced Class gas turbines
- High concentration slurry disposal system
- Flue gas desulphurisation



Induction of high efficiency equipment, including supercritical and ultra-supercritical machines

- 4,620 MW super-critical capacity under construction
- 5,940 MW super-critical capacity under award
- 7200 MW (800x9) under bidding

Investing in R&D and technology

NETRA: 15 Patent Applications filed so far



A Maharatna Company

NTPC Energy Technology Research Alliance

Efficiency Improvement
& Cost reduction

Climate Change

New & Renewable
Energy

- ✓ Developing waste heat recovery from flue gas
- ✓ Innovative ammonia cycle for low grade heat utilization
- ✓ Waste Management

- ✓ Developing technologies CO2 fixation
- ✓ Study of CO2 capture technology (With IIT Guwahati)
- ✓ Study of CO2 storage technology (With IIT Kharagpur)
- ✓ PSA based CO2 capture technology (With IIT Mumbai, IIP Dehradun, NEERI & CSMRI Bhavnagar).

- ✓ In-house development of innovative solar thermal for power and air conditioning
- ✓ 1 MW Solar thermal plant being developed
- ✓ Mou with KfW, Germany for underatking studies on Solar stations

- ECBC (Energy Conservation Building Code) compliant building
- ISO/NABL 17025 Certified Labs



Intend to invest up to 1% of distributable profit for R&D Activities and Climate Change studies



Partners in Progress...

Building social capital- Going beyond generation of Power



A Maharatna Company

“Money invested in the promotion of learning gives multiple return to the people as a seed sown in good soil returns a luxurious crop.”

Reaching out to the differently-abled

- 800 Students benefitted from Information and Communication Technology (ICT) Centre for physically challenged students at Delhi University by NTPC Foundation
- ICT Centre for the visually challenged at Mysore, Trivandrum, Lucknow and Ajmer operational
- 26000 physically challenged persons benefitted at District Disability Rehabilitation Centre (DDRC) established in collaboration with National Institute for the Orthopedically Handicapped (NIOH) near NTPC-Tanda

Promoting Employability While bridging skill Gaps in Sector

- Adopting 18 ITIs & developing 8 new ITIs at various locations.
- Sponsored around 750 youth from villages in the vicinity of NTPC units for ITI training .
- Setting up Solapur Power Training Institute in Maharashtra to provide skill development for power generation and transmission

Extensive engagement with society

Building social capital- Going beyond generation of Power



A Maharatna Company

Providing Health Care

- ✓ Financial Support to Hyderabad Eye Research Foundation for 3 specialized Eye Centers at Bhubaneswar
- ✓ Directly Observable Treatment Centres (DOTS) running at 10 power stations for treatment of TB patients



Gender Justice

- ✓ MoU signed with Govt. of Uttarakhand for setting up of Technical Polytechnic at Nainital with financial support of NTPC.
- ✓ Commitment to set up Women's Polytechnic at Gopeshwar, Chamoli District in Uttarakhand.
- ✓ Constructed a School cum Multipurpose Building for Girls in a village in UP.
- ✓ Financial Assistance to 500 tribal girls / women in 15 tribal villages of Udaipur district.



Preserving Heritage

- ✓ Conservation of selected National Monuments in association with ASI
- ✓ Financial support of Rs. 5 Crore committed

“Can do it” culture drives excellence



A Maharatna Company

Ability to attract and retain highly skilled employees

- “People First” approach
- Strong brand name
- Industry leadership position
- Wide range of growth opportunities
- Focus on long-term professional development



Consistent Independent Recognition of NTPC’s Excellence

Leading Power company		Corporate Excellence		Project management	Corporate Finance	Corporate Governance	Environment management	
PLATTS TOP 250 GLOBAL ENERGY COMPANY 2010	IEEMA POWER AWARD 2008	Dun & Bradstreet American Express Corporate Award	SCOPE Meritorious Award	IPMA AWARD 2005 & 2008	Best CFO ICAI AWARD	ICSI National Award For Excellence in Corporate Governance	CII - ITC SUSTAINABILITY AWARD 2008	Greentech Environment Excellence Award 2007

Disclaimer

This presentation and the presentation materials distributed herein include forward-looking statements. All statements, other than statements of historical facts, that address activities, events or developments that NTPC Limited expects or anticipates will or may occur in the future (including but not limited to projections, targets, estimates and business plans) are forward-looking statements. NTPC Ltd's actual results or developments may differ materially from those indicated by these forward-looking statements as a result of various factors and uncertainties, including but not limited to price fluctuations, actual demand, exchange rate fluctuations, exploration and development outcomes, estimates of proven reserves, market shares, competition, environmental risks, changes in legal, financial and regulatory frameworks, international economic and financial market conditions, political risks, project delay, project approval, cost estimates and other risks and factors beyond our control. In addition, NTPC Ltd's makes the forward-looking statements referred to herein as of today and undertakes no obligation to update these statements.



A Maharatna Company

Thank You

www.ntpc.co.in

Some initiatives at NETRA

1

Solar Radiation Measurement Centre at NETRA in Greater NOIDA



1



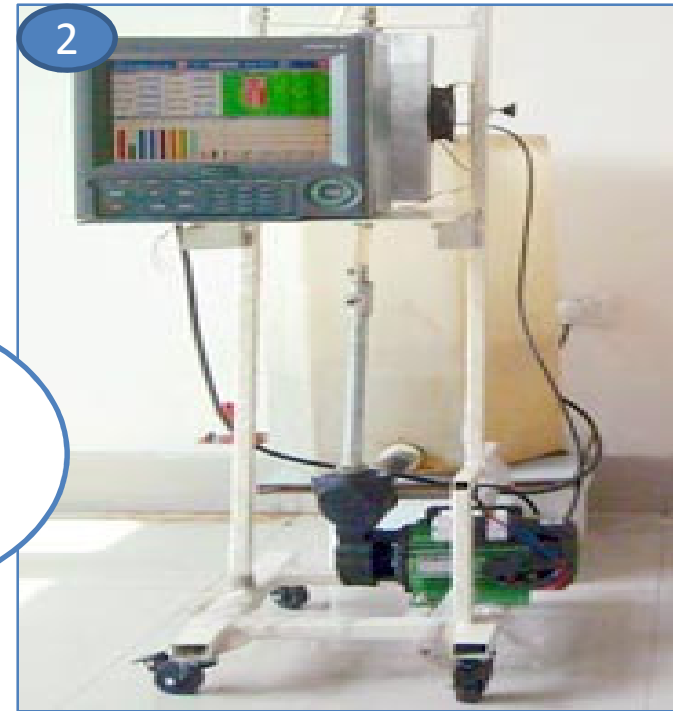
3

15 Patent Applications filed so far

2

A Maharatna Company

Experimental set up of Thermoelectric Generation for waste heat recovery from power plants



2

3

Integrated Bio-diesel Plant:

Conventional Plant utilise 15% of energy from Biofruit.

NETRA's plant uses 80% energy content

Some initiatives at NETRA..

4

Heat Exchanger installed for Moisture Extraction from Flue Gas



4

A Maharatna Company

5

Development of Multi-composition Ammonia Liquor Absorption Engine (MALAE Cycle) for power generation from flue gases



5

15 Patent Applications fled so far

6



6

Robotic inspection device for Water wall Tubes of boiler

