Tata Power: # 1 Indian Private Power Player

TATA POWER

October 4, 2004

KEY MESSAGES

- **Huge opportunity**
  in an evolving sector

- **Positioned to be a front runner**
  Tata heritage, established skills in generation, transmission and distribution

- **Strategy under uncertainty**
  Three pronged approach to sustain position as India's number 1 private power company by creating a portfolio of initiatives

KEY MESSAGES

- **Huge opportunity**
  in an evolving sector
- **Positioned to be a front runner**
  Tata heritage, established skills in generation, transmission and distribution
- **Strategy under uncertainty**
  Three pronged approach to sustain position as India's number 1 private power company by creating a portfolio of initiatives

INDIAN POWER SECTOR IS FUNDAMENTALLY ATTRACTIVE

Huge energy deficit

- Peak supply shortage of 11% (~13,000 MW)
- Average supply shortage of 7%

Deficit likely to widen

- Demand of 212,000 MW (by 2012) vs, current capacity of 112,000 MW
- Demand drivers
  - Per capita power consumption is 50% of China (475 kwh per annum vs. 1,020 kwh per annum for China)
  - Industrial growth

Significant inefficiencies

- High AT&C losses estimated at 43-53%
- US$ 4.5 billion (Rs.20,700 crore) loss
- Low realised tariff (70%)

> US$170 billion (Rs.8 lakh crore) of investment required over next decade

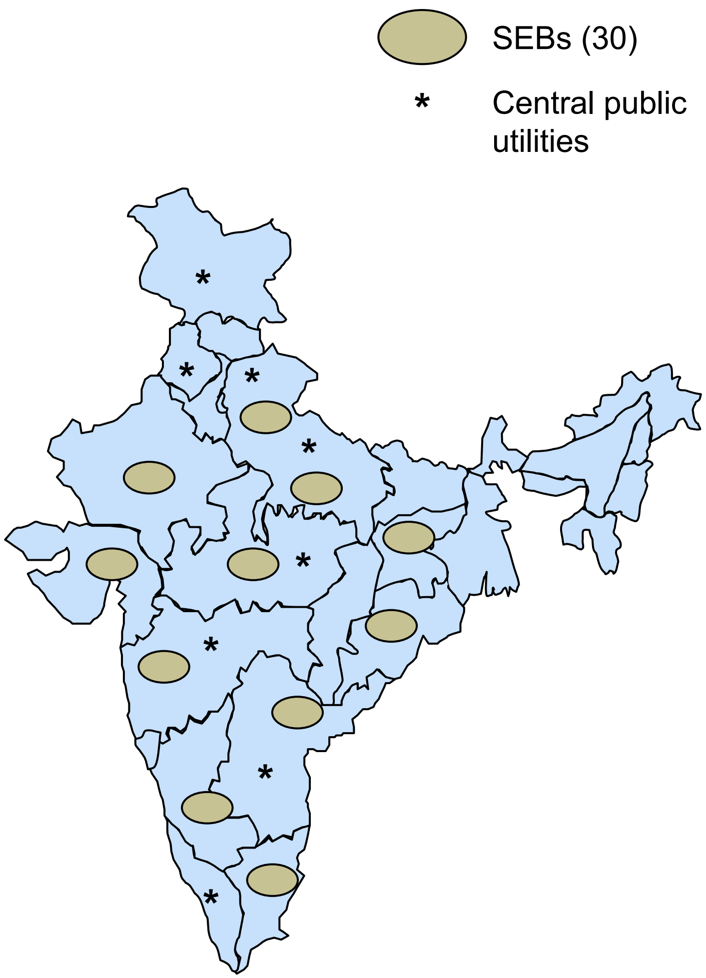
Source: Ministry of Power presentation – May 2004, SEB report 2004, Powerline research

VISION 2012 – “POWER FOR ALL BY 2012”

- Increase generation capacity from 112,000 MW to 212,000 MW
- Increase private sector share from 11% to 16.5%
- Increase inter-regional transmission capacity to 30,000 MW (~ 9000 MW currently)
- Reduce AT&C losses to 13% (43-53% currently)
- Increase recovery of power cost through realised tariff to 100% (70% currently)
- Reduce peak energy shortage to 0 (11% currently)
- Reduce average energy shortage to 0 (7% currently)

COMPLEX INDUSTRY STRUCTURE WITH MULTIPLE STAKEHOLDERS

Power is a concurrent subject



Multiple stakeholders with different functions

Central government
- Sets the vision (Vision 2012)
- Frames laws (Electricity Act, 2003)
- Frames taxation policies
- Sets investment guidelines (FI sectoral limits etc)

30 State governments
- Owns and controls State Electricity Boards
- Constitutes state regulatory body
- Determines extent of subsidies

Public utilities
- Significant presence across the system
  - – National Thermal Power Corporation
  - – Power Grid Corporation of India
  - – National Hydro Power Corporation

Private sector
- Accounts for 11% of generation
- Present in distribution (e.g., Mumbai, Delhi, Kolkata, Orissa parts of Gujarat)
- Two large players – TPC and REL, several small players - IPPs (e.g., GMR, Torrent) and Distcoms (e.g., AESC, CESC)

POLICY MAKERS ARE MOVING IN THE RIGHT DIRECTION

Central government

- Clearly stated vision – ‘Power for all by 2012’, but no service standards indicated
- Electricity Act, 2003 to promote competition and rationalise tariff
  - Generation delicensed
  - Open access of T&D networks
  - Regulatory framework established
- US$ 500 million (Rs.2,300 crore) released under ‘Accelerated Power Development Reforms Programme’

State government

- Regulatory setup in place in most states
- Ten states have unbundled State Electricity Boards
- Availability based tariff regime implemented
- Distribution privatised in Orissa and Delhi

Regulators

- Focus on rationalisation of tariff structure

* At the consumer level

HOWEVER, THE SECTOR IS EVOLVING WITH SEVERAL CRITICAL ISSUES STILL TO BE RESOLVED

How to make the sector attractive for new players?

- Implementation of open access: Regulatory norms on subsidy
- Distribution deregulation: Schedule? Timeline on disinvestment?
- Derisking investment: Payment guarantees? Other options?
- Policy regarding cross subsidy, increasing subsidy, theft control?
- Continued regulatory freedom? Maturing regulatory learning curve?

KEY MESSAGES

- **Huge opportunity**
  in an evolving sector
- **Positioned to be a front runner**
  Tata heritage, established skills in generation, transmission and distribution
- **Strategy under uncertainty**
  Three pronged approach to sustain position as India's number 1 private power company by creating a portfolio of initiatives

TPC IS PART OF THE 'TATA' GROUP, ONE OF THE LARGEST BUSINESS HOUSES IN INDIA

Pioneer in industrial development

- India's first
  - Hydro power project (1910)
  - Integrated iron and steel works (1907)
  - Chain of luxury hotels (1902)
  - Indigenous passenger car (1998)
- World's largest integrated tea operations
- Asia's largest software exporter

Strong financials

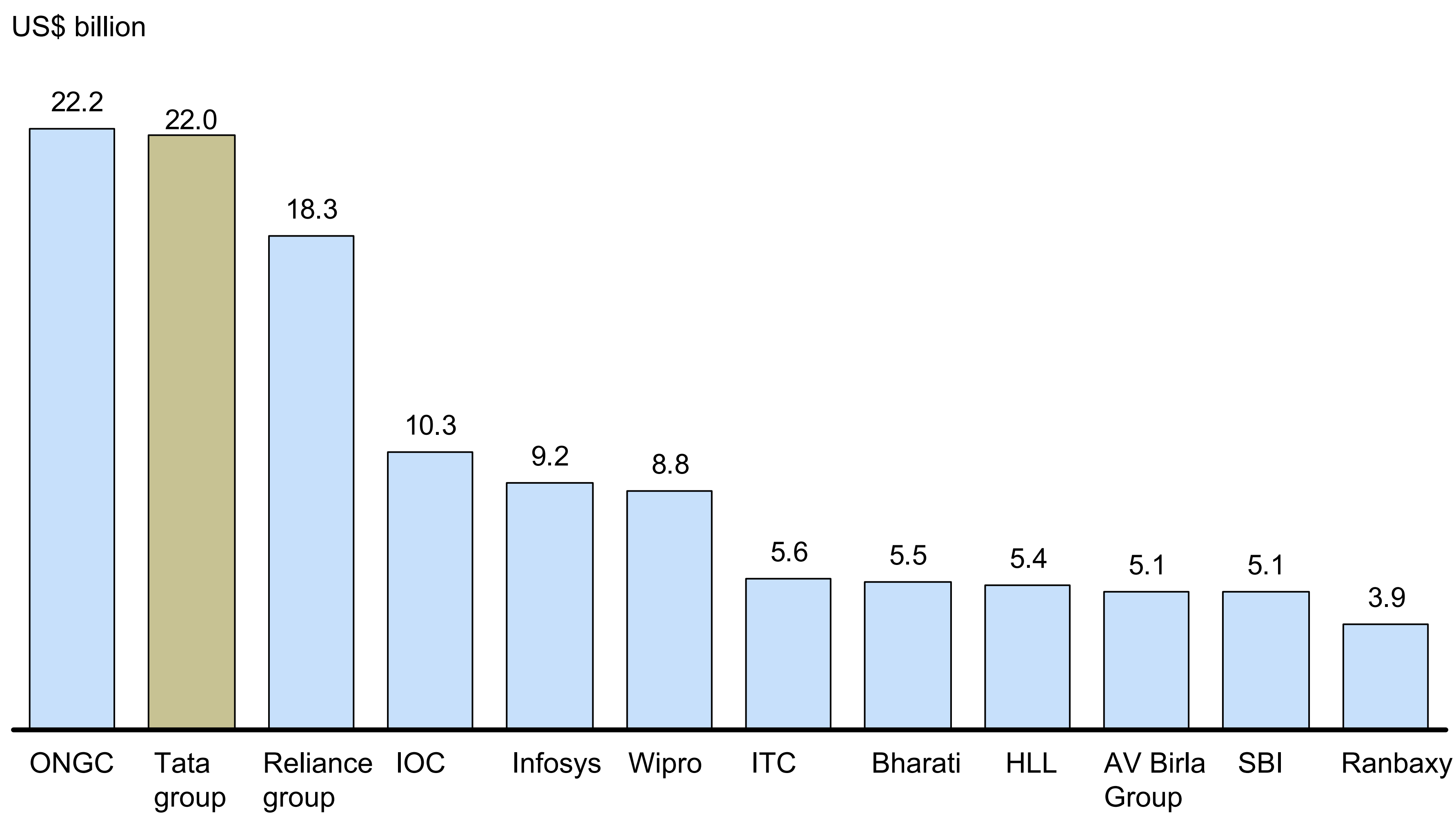
- Over 80 operating companies with market cap. of US$22 billion (Rs.101,000 crore)
- Contributes to 2.4% of India's GDP (2004 revenues: US$13.4 billion, Rs.61,640 crore)
- Over 2 million shareholders

Committed to social and environmental causes

- Medical assistances to villages
- Drought relief
- Afforestation
- Emission control

#2 IN MARKET CAPITALISATION

Market capitalisation (as on August 30, 2004)



THE TATA GROUP: AT THE FOREFRONT OF INDIAN ECONOMIC GROWTH

	1904	2004
Businesses	• Textiles, Hospitality, Steel & Power	• 7 business sectors
Companies	• Tata & Sons • Central India Mills • Svadeshi Mills • Ahmedabad Advance Mills • Indian Hotels	• Tata Sons • Tata Industries • 80+ operating companies
Sales	• US$ 26 million (Rs.122 crore)	• US$ 13.4 billion (Rs.61,434 crore)
Employees	• ~ 5,000	• 220,219
Beyond business	• J N Tata Endowment	• Trusts, TIFR, TISS, Tata Memorial

Without compromising values!

TATA GROUP: LEADERSHIP ACROSS INDUSTRIES

Business sector	Company	Top 3
• Engineering	• Tata Motors • Voltas	✓ ✓
• Materials	• Tata Steel	✓
• Infotech/Telecom	• Tata Consultancy + Infotech • VSNL • Tata Teleservices	✓ ✓ Potential
• Consumer products	• Tata Tea • Titan	✓ ✓
• Services	• Indian Hotels	✓
• Energy	• Tata Power	✓ In private sector
• Chemicals	• Rallis • Tata Chemicals	✓ ✓ Soda Ash

TPC: INDIA'S #1 PRIVATE POWER PLAYER, PRESENT ACROSS THE BUSINESS SYSTEM

Generation

- National Thermal Power Corporation (21,249 MW)
- National Hydro Power Corporation (2,475 MW)
- **TPC (2,300 MW)**
- Reliance Energy Limited (941 MW)

Transmission

- Power Grid Corporation of India (41,000 Ckms)
- **TPC (2,200 Ckms)**

Distribution

- State Electricity Boards
- Reliance Energy Limited (5 million consumers)
- Calcutta Electricity Supply company (2 million consumers)
- **TPC (1 million consumers)**
- Ahmedabad Electricity supply company (1 million consumers)

Project management and consulting

- Tata Projects
- TCE

TATA POWER: A COMPANY WITH MANY FIRSTS

First Hydro Electric power plant in India

First 500 MW thermal unit in India

First to commission GIS mechanism

First Flue Gas De-Sulphurisation plant

First to introduce SCADA and Fibre Optic ground wire communication

First Pumped Storage Unit in India

Successful Delhi distribution

Tala transmission line (1,300 Kms)

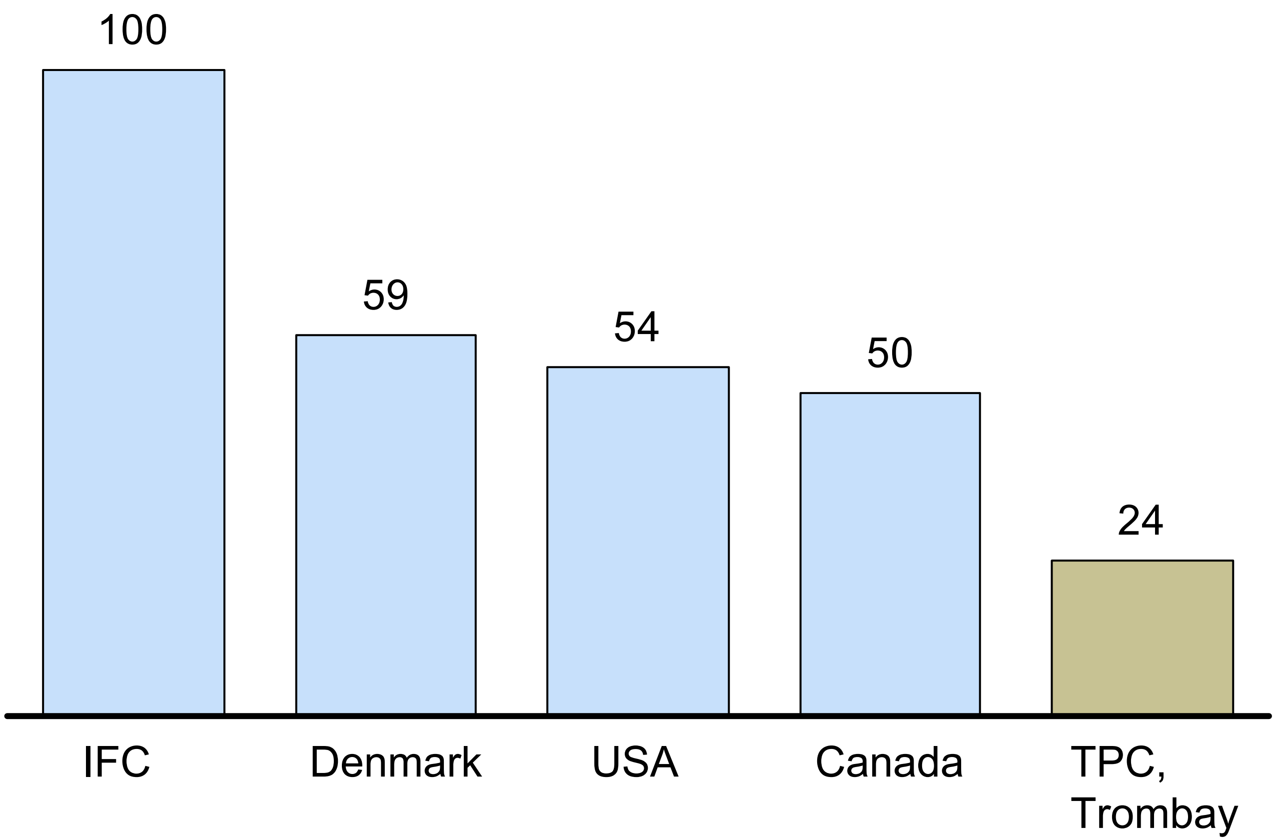
GENERATION: CREATING EXCELLENCE IN MUMBAI

Reliability	• Unique islanding system ensures uninterrupted power to Mumbai during grid disturbance • Plant availability of 94% • State of the art distributed control system
T&D	• Lowest T&D losses in India of 2.4%
Tariffs	• 5% reduction achieved in FY 2004 vs. FY 2003
Emission control	• Among the lowest SO_2 emissions in the world • Latest technology to reduce emissions (e.g., Fly Ash Aggregator, Flue Gas De-sulphurisation etc.)

SO_2 EMISSIONS AT TROMBAY ARE AMONG THE LOWEST IN THE WORLD

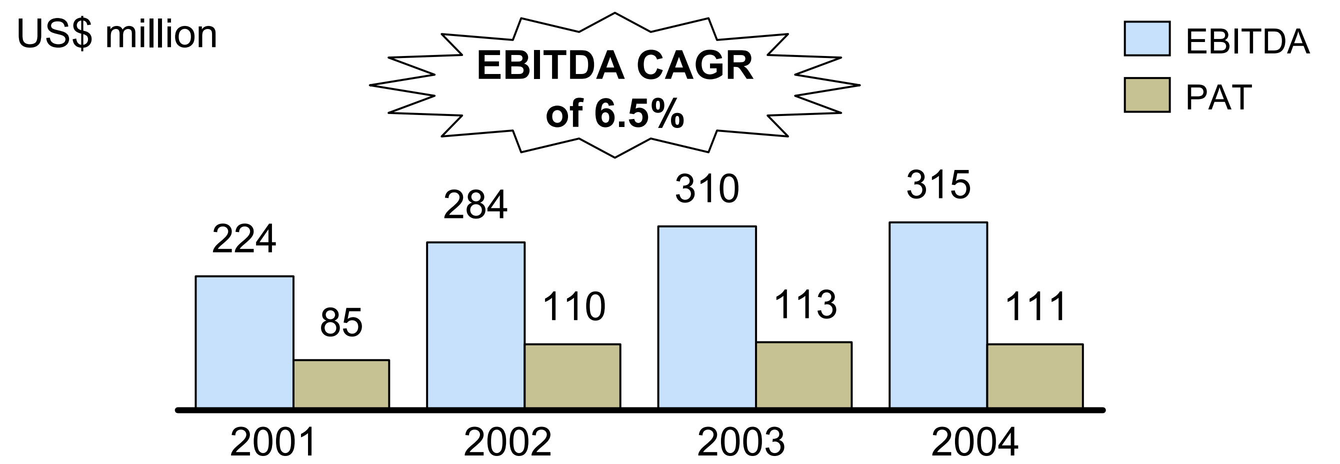
SO2 emissions

Metric tonnes per day

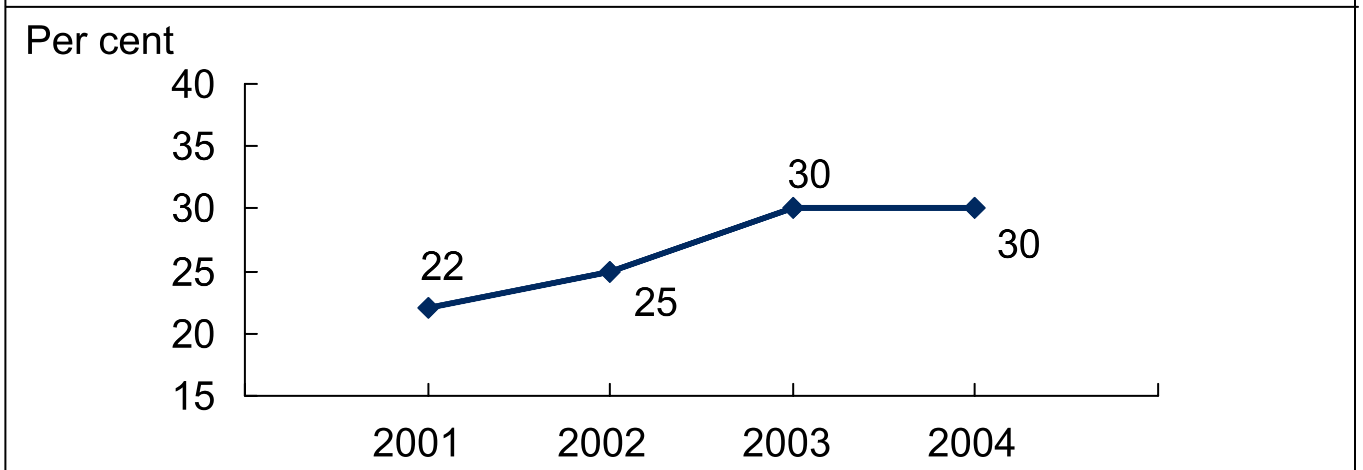


TPC's PERFORMANCE IS REFLECTED IN STRONG FINANCIAL RESULTS . . .

Profits

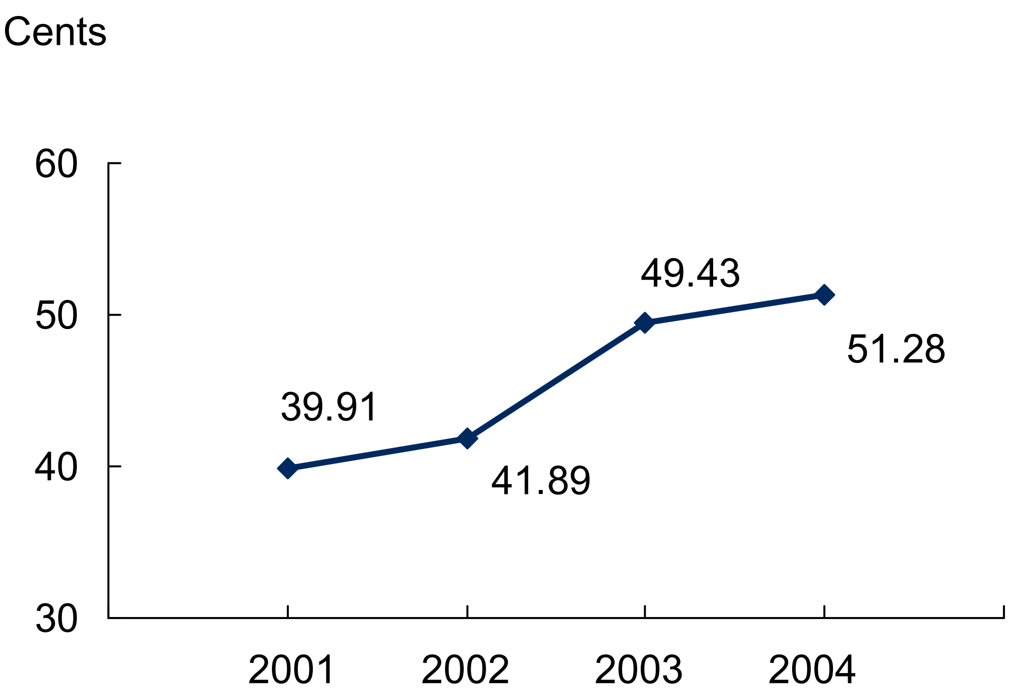


Operating margins



. . . AND SUSTAINED EPS

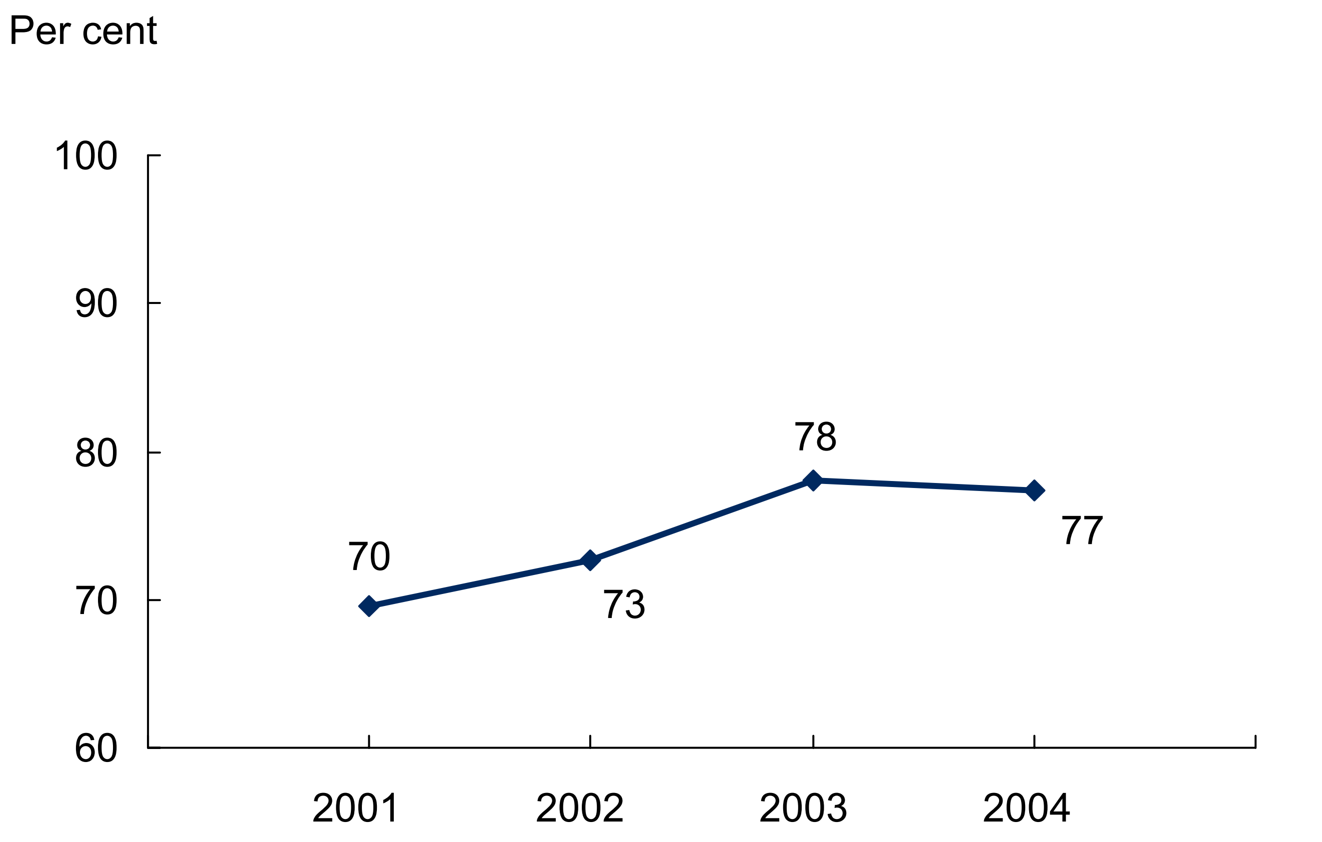
EPS



- **Market capitalisation of US$ 1.36 billion (Rs.6,300 crore)**
- **Annualised return of over 100% (BSE Sensex 53%)**
- **FII holding increased from 7% in 2003 to 14% in 2004**
- **67% floating stock**

OPPORTUNITY TO IMPROVE PLANT LOAD FACTOR

Plant load factor at Trombay



DISTRIBUTION: CREATED A SUCCESS STORY AT NDPL – THE ONLY SUCCESSFUL PRIVATISATION IN DISTRIBUTION

Reduced T&D losses	Improved Network	Increased Reliability	Better customer service
• Reduced from 53% to 43% over two years	• Over 25% capacity added • Package substitution • Fully remote operated grid stations • High voltage distribution system	• US$ 73 million (Rs.330 crore) invested to improve reliability • Average interruptions per annum reduced by 67%	• Electronic metering • Online account management • 24 hour call center • 100,000 legacy pending complaints resolved

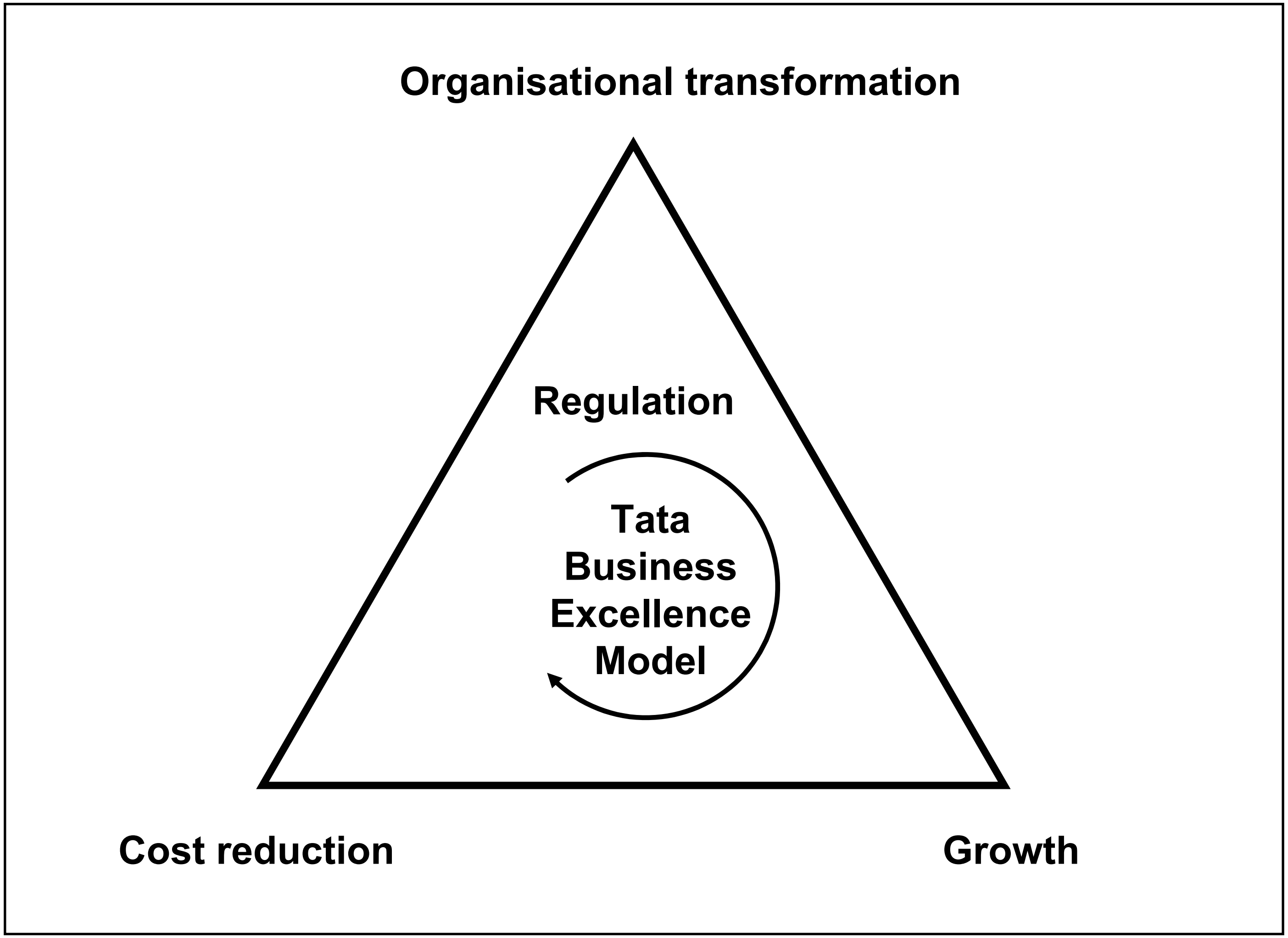
NDPL meets 27% of New Delhi's power requirements (procures only 20% of input)


SHORT
Circuit
Reliance Energy Consumers
Irked By Power Breakdowns
DOW JONES
10393.06
39.46
S'PORE
1820.12
0.02

KEY MESSAGES

- **Huge opportunity**
  in an evolving sector
- **Positioned to be a front runner**
  Tata heritage, established skills in generation, transmission and distribution
- ***Strategy under uncertainty***
  Three pronged approach to sustain position as India's number 1 private power company by creating a portfolio of initiatives

SIGNIFICANT EFFORTS BEING MADE TO ACHIEVE COST COMPETITIVE OPERATIONS



COST REDUCTION

3SCR WE CAN. WE MUST.

Speedy, **S**ustainable and **S**ignificant **C**ost **R**eduction

- Conscious effort towards cost reduction.
- Main thrust on
  - Asset Management.
  - Supply Chain Management
  - Efficiency Improvement
  - Reduction in Manpower Cost
- ‘Bottom-up’ programme
  - Channels the knowledge and experience of employees to generate and implement ideas that significantly improve operations.
- Structured and rigorous process - successful in other Tata companies
- Frequent top management guidance and support

THREE PRONGED APPROACH TO SUSTAIN POSITION AS INDIA'S #1 PRIVATE POWER COMPANY

Develop portfolio of generation assets

- Flexible fuel strategy as not locked into a single fuel: **a multi-fuel strategy** to deliver lowest cost power in key markets
- Invest in a portfolio of assets – lock in strategic markets/sources, create options in other markets

Actively grow distribution footprint

- **Expanding portfolio of customers (bulk, residential)**
- **Partner with select state governments**

Building world class team

- **Multiple capabilities to grow at rapid pace**
  - **Operational excellence**
  - **Distribution skills**
  - **Regulatory management**
  - **Business development and project execution skills**

OUR FOCUS ON GENERATION – MIX OF FUELS

Opportunistic, where relevant

Our focus

	Reserves/India position	Cost
Coal (pithead generation in eastern India)	• 4th rank with 8% of global reserves	• Leading cost position possible for power generation at pithead (2.5-4 cents/kwh, 1.2-1.8 Rs/kwh) • Requires transmission infrastructure creation
Hydro	• Substantial generation potential in numerous rivers	• Suitable to meet large gap between peak and base load
Gas	• Despite recent discoveries only 0.5 % of proven gas reserves in India	• Significant alternate uses (e.g., fertilizer) will dictate high price in long term • High cost of deep sea exploration

Source: BP Statistical Review Of World Energy, 2004 & Energy Information Administration / EIA

THREE PRONGED APPROACH TO SUSTAIN POSITION AS INDIA'S #1 PRIVATE POWER COMPANY

Develop portfolio of generation assets

- Flexible fuel strategy as not locked into a single fuel: **a multi-fuel strategy** to deliver lowest cost power in key markets
- Invest in a portfolio of assets – lock in strategic markets/sources, create options in other markets

Actively grow distribution footprint

- **Expanding portfolio of customers (bulk, residential)**
- **Partner with select state governments**

Building world class team

- **Multiple capabilities to grow at rapid pace**
  - **Operational excellence**
  - **Distribution skills**
  - **Regulatory management**
  - **Business development and project execution skills**

A CHANGING PORTFOLIO OF CUSTOMERS OVER TIME

More profitable, more sticky, less risky

	Attractiveness of customer base	Timing
• Tied wholesale to state distributors (SEBs)	• Large, but mix of loads • Many SEBs unviable	• Immediate
• Wholesale/trading	• Rapid growth in traded power	• Immediate
• Direct to large customers enabled by open access and captive power policy	• High industry growth (4-6%) • Open access mandated for 1 MW+	• 3-5 years
• Own distribution operations acquired or franchised	• Sticky customer base • Private participation models emerging	• ?

Changing mix, over time

THREE PRONGED APPROACH TO SUSTAIN POSITION AS INDIA'S #1 PRIVATE POWER COMPANY

Develop portfolio of generation assets	• Flexible fuel strategy as not locked into a single fuel: **a multi-fuel strategy** to deliver lowest cost power in key markets • Invest in a portfolio of assets – lock in strategic markets/sources, create options in other markets
Actively grow distribution footprint	• **Expanding portfolio of customers (bulk, residential)** • **Partner with select state governments**
Building world class team	• **Multiple capabilities to grow at rapid pace** – **Operational excellence** – **Distribution skills** – **Regulatory management** – **Business development and project execution skills**

Thank You

Statements in this presentation describing the Company's objectives, projections, estimates and expectations may be "forward looking statements" within the meaning of applicable securities laws and regulations. Actual results could differ materially from those expressed or implied. Important factors that could make a difference to the Company's operations include, among others, general economic and business conditions affecting the demand for electric power in the areas in which the Company operates, changes in Government regulations, tax laws and other statutes and incidental factors.