MANAGEMENT DISCUSSION AND ANALYSIS

INDUSTRY STRUCTURE AND DEVELOPMENTS

Structure of power market

Power is transacted in India largely through long term Power Purchase Agreements (PPA) entered between Generating/ Transmission Companies and the Distribution utilities. A small portion is transacted through various short-term mechanisms like trading through licensees, bi-lateral trading, trading through power exchanges and balancing market mechanism (i.e. Unscheduled Interchange (UI) mechanism).

In the year 2010-11, around 90% of power generated in the Country was transacted through the long term PPA route. 6.6% of the power was transacted through trading mechanism which included trading through short term licensees, bi-lateral trading, trading through power exchanges and the balance 3.4% of the power was transacted through UI mechanism. *(Source: Central Electricity Regulatory Commission)*

SNAP SHOT 2010-11

- Gross annual generation of the country has crossed the 800 BUs mark (811.14 BUs).
- Nuclear generation achieved remarkable growth rate of 40.9% due to improved availability of nuclear fuel.
- Generation from hydro based plants also improved with a growth rate of 7.11% due to revival of good monsoon after two successive years of deficient rain fall conditions.
- Total thermal generation achieved growth rate of 3.82%. Coal based generation recorded growth rate of 3.99 %.
- Average PLF of thermal power projects achieved during the year was 75.08%, as compared to 77.68% in the previous year.
- 19 thermal power stations with an aggregate installed capacity of 21,995 MW operated above 90% PLF.
- Availability of thermal stations marginally reduced to 84.24% from 85.10% achieved during the previous year.
- Single digit peak (9.8%) and energy (8.5%) deficit.

(Source: Annual Report, Central Electricity Authority)

Existing Installed Capacity

The total installed capacity in the country as on March 31, 2011 was 173,626.40 MW with State Sector having a share of 47.49%, followed by Central Sector with 31.34% share and balance 21.17% contributed by Private Sector entities.

Sector	Total Capacity (MW)	% share
State	82,452.58	47.49%
Centre	54,412.63	31.34%
Private	36,761.19	21.17%
Total*	**173,626.40**	**100.00%**

(Source: Central Electricity Authority)

*Including Renewable Energy Sources capacity (RES) of 18,454.52 MW, but excluding captive generating capacity connected to the grid (19,509.49 MW as on 31.3.2011).

Capacity addition gained momentum during the year 2010-11 with 12,160 MW (excluding RES) of capacity being added as compared to 9,585 MW added during the previous year, registering a growth of 26.86%.

Out of 14,227.91 MW (including RES) added during the year in the country, the Central Sector contributed to an addition of about 24.04%, State Sector 21.51% and 54.45% was contributed by private sector.

The total thermal capacity, including gas stations and diesel generation accounts for about 65% of installed capacity of the country followed by hydro capacity at 21.6%. Nuclear stations account for 2.80% and the balance 10.60% is contributed by RES.

Fuel	Total Capacity (MW)	% share
Thermal	112,824.48	65.0%
Hydro	37,567.40	21.6%
Nuclear	4,780.00	2.8%
R.E.S.	18,454.52	10.6%
Total	**173,626.40**	**100.0%**

(Source: CEA's monthly report – March 2011)

With 93,918.38 MW of the installed capacity based on coal which is 54.10% of nation's capacity, coal remains the key fuel for power generation.

Capacity Utilization

Capacity utilisation in the Indian power sector is measured by Plant Load Factor (PLF).

Sector wise PLF (Thermal)

Sector	Plant Load Factor		
	2008-09	2009-10	2010-11
State	71.2	71.13	66.72
Central	84.3	85.64	85.12
Private	91.0	82.41	76.70
All India	77.3	77.68	75.08

PLF of Thermal stations declined from 77.68% to 75.08% while PLF of gas stations declined from 67.32% clocked in

2009-10 to 66.15% in 2010-11. The decline in PLF was mainly on backing down/ shut down of units on account of low schedule from beneficiary states and due to shortage / poor quality of coal.

(Source: Annual report CEA)

Progress during 11th plan

Based on the progress made so far during 11th plan, the Planning Commission in its mid-term review has assessed that against a target of 78,700 MW, a total capacity of 62,374 MW is expected to be added in the 11th plan.

Capacity in MW					
Sector	**Thermal**	**Hydro**	**Nuclear**	**Total**	**Likely Addition**
Central	24,840	8,654	3,380	36,874	21,222
State	23,301	3,482	0	26,783	21,355
Private	11,552	3,491	0	15,043	19,797
Total	**59,693**	**15,627**	**3,380**	**78,700**	**62,374**

(Source : Planning Commission)

So far, in the 11th Plan, 34,462.20 MW (excluding RES) capacity has been added (upto March 31, 2011). In absolute terms, this capacity addition in the 11th plan is much higher as compared to the capacity added in each of last three five year plans. During financial year 2011-12, 17,601 MW is expected to be added. The installed capacity added by end of 11th Plan would be 52,063 MW and there would be a shortfall of 16.53% vis-à-vis capacity envisaged during 11th Plan Mid-Term Appraisal

The main reasons for likely shortfall of capacity addition targets during 11th plan are delayed supply of equipment, non-sequential supply of material by suppliers, shortage of skilled manpower for construction and commissioning of projects, contractual disputes among project authorities contractors and their sub-vendors, delay in readiness of balance of plants by the executing agencies. Difficulties have been experienced by developers in land acquisition, rehabilitation of Project Affected People (PAPs), environmental and forest related issues, inter-state issues and geological surprises in hydro projects. These issues continue to decelerate the pace of development of power projects.

Approach to 12th Plan

The addition of new capacities in earlier plans has been inadequate. Though the position has improved substantially in 11th Plan as the capacity added would be more than the capacity added in the 9th Plan and the 10th Plan put together, still it will fall short of the target envisaged for the 11th Plan itself. In fact, it will be even below, the target revised during mid-term appraisal of 11th plan. As regards 12th Plan, capacity addition close to 1,00,000 MW is anticipated. Projects of 58,083 MW are already under construction for likely benefit during 12th Plan.

Capacity in MW				
Particulars	**Hydro**	**Thermal**	**Nuclear**	**Total**
Central	4,772	8,526	700	**13,998**
State	455	11,240	0	**11,695**
Private	620	31,770	0	**32,390**
Total	**5,847**	**51,536**	**700**	**58,083**

(Source: CEA Report)

In the 12th Plan, substantial capacity is expected to be added through Ultra Mega Power Projects (UMPPs). A total of 4 UMPPs with planned capacity of 16,000 MW have been awarded and are under various stages of development.

CEA has set up 18th Electric Power Survey (EPS) Committee to forecast electricity demand in detail for the terminal years of 12th Plan (2016-17) and perspective demand for terminal year of 13th Plan (2021-22) and 14th Plan (2026-27). It would also study category wise consumption pattern of various categories and assess prospective T&D losses in States. Further, the Planning Commission has set up a Working Group on Power for finalizing the target for 12th Plan.

To ensure adequate availability of energy for faster economic growth and also to make the growth truly inclusive by providing energy access to rural population and urban poor, a multidimensional approach has to be adopted. The pace of addition of power generation capacities needs to be stepped up. In the proposed capacity, considering limited fuel resources, the major portion is expected to come through energy efficient super-critical technology. In order to achieve the 12th Plan target and in order to augment the domestic manufacturing base of main plant equipment, bulk tendering of super-critical units was approved by the Cabinet Committee on Infrastructure in August 2009 with emphasis on phased manufacturing programme so that domestic manufacturing capacity of super-critical units is established in the country through new manufacturers apart from BHEL.

Increased pace of power capacity addition needs to be coupled with reforms in power distribution sector since AT&C losses continue to be very high. Further, revision of tariffs are not taking place regularly and financial losses of State Utilities are mounting which need to be addressed with specific measures.

With larger addition to power capacities, substantial increase in availability of fuel would be required. Since, substantial capacity addition would be through coal based projects, policies need to be developed for exploration and exploitation of substantially large number of coal deposits while keeping the environmental concerns in mind. Necessary infrastructure for improving rail-road connectivity and coal jetties needs to be expanded. Domestic coal production needs to be supplemented with increased imports to meet the demand. As far as other fuels like gas and oil are concerned, exploration policies need to be refined to attract major global players, investors and technologies. Shale gas probably holds the key to ensure large availability of gas which needs to be explored.

Major investments are also required to be made to access fuel resources located in other energy resource rich countries.

GENERATION

India ranks 5th in the world in terms of total electricity generated (Source: World Energy Statistics Report, 2010). However, in terms of per capita consumption, it ranks among the lowest. The National Electricity Policy (NEP) stipulates "power for all" and annual per capita consumption of electricity to rise to 1000 units by 2012. The policy aims at inclusive growth of power sector by providing adequate reliable power, at affordable cost with access to all citizens. As per CEA report, Generation has grown at a CAGR of 5.17% since 2001-02. During 2010-11, generation has grown by 5.55%. The demand projections as per 17th EPS for next 10-11 years on all-India basis show that the energy requirement and annual peak load will be 2.22 times and 2.44 times respectively of the existing requirement as detailed hereunder:

Year	Energy Requirement (TWh)	Annual Peak Load at Power Stn. (GW)
2009-10 (Act.)	830.594	119.166
2010-11 (Act.)	861.591	122.287
2011-12	968.659	152.746
2016-17	1392.066	218.209
2021-22	1914.508	298.253

(Source:17th Electric Power Survey of CEA)

Existing Generation

The total power available in the country during the year 2010-11 was 811.14 billion units as compared to 768.43 billion units during last year, registering a growth of 5.55% (generation figures exclude generation from hydro stations upto 25 MW).

Sector wise and fuel wise break-up of generation for the year 2010-11 is detailed as under:

Sector	Total Generation (BUs)	% share
State Sector	343.30	42.32%
Central Sector	346.09	42.67%
Pvt. Sector	116.14	14.32%
Others*	5.61	0.69%
Total	**811.14**	**100.00%**

Fuel Type	Total Generation (BUs)	% share
Thermal	665.00	81.98%
Hydro	114.26	14.09%
Nuclear	26.27	3.24%
Others*	5.61	0.69%
Total	**811.14**	**100.00%**

* including Import from Bhutan

(Source: CEA's Reports)

Although the State Sector accounts for 47.49% of installed capacity, its contribution to national generation is only 42.32%. Central Sector utilities have better performing stations as compared to those of State utilities and contribute 42.67% of nation's generation with a share of 31.34% in installed capacity.

Main reasons for shortfall in generation in 2010-11 vis-à-vis the target were as under:

- Loss of generation due to delay in commissioning / stabilizing of new units.
- Loss of generation due to backing down of units due to low schedule from beneficiary states during the year 2010-11.
- Generation in some of the thermal power plants was restricted / plants were closed on account of shortage /receipt of wet/inferior quality of coal.
- During the months of May, June, July & August, some of the power plants in the Western Region were kept closed on account of acute shortage of water in these areas due to deficient rainfalls received in the catchment area during the years 2008-09 and 2009-10.
- After arrival of good Monsoon in the country, there was sudden drop in agriculture and domestic loads resulting in lower monthly growth rate. During the months of August & September, it fell below 2.0% against 10.6% & 7.9% monthly growth rate achieved during the corresponding months in the year 2009-10.

Demand and Supply position

The supply of power improved during the year 2010-11 owing to increase in capacity in coal as well as gas based plants.

Energy deficit declined on a year-on-year basis in 2010-11 to 8.5% from 10.1%. This is also attributed to higher capacity addition.

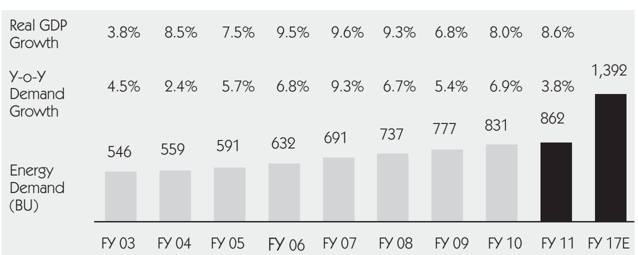
Peak load demand, increased by 2.62% whereas peak supply grew by 6.00% resulting in declining peak load deficit to 9.8% in 2010-11 from 12.7% in the previous year.

(Source : CEA reports for April 2011 & April 2010)

Years	Peak Deficit %	Energy Deficit %
2000-01	13.0	7.8
2001-02	11.8	7.5
2002-03	12.2	8.8
2003-04	11.2	7.1
2004-05	11.7	7.3
2005-06	12.3	8.4
2006-07	13.8	9.6
2007-08	16.6	9.8
2008-09	11.9	11.1
2009-10	12.7	10.1
2010-11	9.8	8.5
2011-12 *(Anticipated)	12.9	10.3

**(Source: CEA Load Generation Balancing Report (LGBR) 2011-12)*

As per IMF's World Economic Outlook 2011 (April), India's GDP is expected to grow at 7.8%, next only to China which is expected to grow at 9.5% in year 2012. In order to sustain the growth in GDP, India needs to add power generation capacity commensurate with this pace since growth of power sector is strongly co-related with the growth in GDP and going forward it is expected that supply will create further demand.



CEA in its LGBR 2011-12 projected a requirement of 933.741 BUs for financial year 2011-12 as against 17th Electric Power Survey (EPS) projection of 968.659 BUs in 2011-12.

Overall, the sector is characterized by acute shortages. The demand and supply position during the last seven year in the country is indicated as under:

Actual Power Demand- Supply Position

Years	Requirement (MUs)	Availability (MUs)	Surplus/Deficit (+/-) (MUs)	Surplus/Deficit (+/-) (%)
2004-05	591,373	548,115	-43,258	-7.3%
2005-06	631,554	578,819	-52,735	-8.4%
2006-07	690,587	624,495	-66,092	-9.6%
2007-08	737,052	664,660	-72,392	-9.8%
2008-09	777,039	691,038	-86,001	-11.1%
2009-10	830,594	746,644	-83,950	-10.1%
2010-11	861,591	788,355	-73,236	-8.5%
2011-12 (Anticipated)	933,741	837,374	-96,367	-10.3%

MUs denote Million units.

(Source: Executive Summary Reports of CEA and CEA LGBR 2011-12)

The deficit for the year 2011-12 is expected to increase to 10.3% from 8.5% in 2010-11.

Consumption

The end users of power can be broadly classified into industrial, agricultural, domestic and commercial consumers. These consumers represented approximately 38%, 20%, 23% and 10% respectively of power consumption measured by units of electricity consumed in financial year 2009-10 *(Source: Ministry of Statistics and Programme Implementation).*

India has very low per capita power consumption. The per capita consumption of power in India has increased from 631.50 units in 2005-06 to 733.5 units in 2008-09 *(Source: CEA).* India still has one of the lowest per capita power consumption compared to the world average of 2750 units in 2006 *(Source: World Development Report, 2010).*

TRANSMISSION AND DISTRIBUTION

In India, the power transmission and distribution (T&D) system is a three-tier structure comprising of distribution net-works, state grids and regional grids. The distribution networks are owned by the distribution licensees and the state grids are primarily owned and operated by respective State Utilities. In order to facilitate the transmission of power among neighbouring states, state grids are interconnected to form regional grids.

The regional grids are being gradually integrated to form a national grid enabling inter-regional transmission of power facilitating optimal utilization of the national generating capacity.

An integrated power transmission grid would help to even out supply demand mismatches. The existing inter-regional transmission capacity of about 22,400 MW connects the northern, western, eastern, and north-eastern regions in synchronous mode operating at the same frequency and the southern region in asynchronous mode. This has enabled inter-regional energy exchanges of about 38,000 million units in financial year 2010-11 (till November 2010), thus contributing to greater utilization of generation capacity and an improved power supply position. Proposals are under way to have synchronous integration of the southern region with the rest. *(Source: Economic Survey, 2010-11)*

Private Sector Participation in Transmission/Distribution

National Electricity Policy, 2006, issued guidelines for encouraging competition in development of transmission projects and tariff based competitive bidding guidelines for transmission services. These guidelines aimed at facilitating competition in the sector through wide participation in providing transmission services and tariff determination through a process of tariff based competitive bidding. So far, six transmission projects have been awarded. Further, two schemes in western regional system have been commissioned by private sector companies.

Apart from the above there is active participation by private sector through public private partnership through JV route.

Electricity Act, 2003 (EA 2003) provides for private participation in distribution. It further provides for distribution licensee to appoint a franchisee to distribute power without applying for distribution license. Even though, privatizing distribution is one of the simplest form of reform; since it involve change in ownership and thus directly affecting the employees, the States have been reluctant to privatize distribution. In this scenario, distribution franchising is emerging as an alternative solution and some of the States have taken initiatives in this direction.

POWER TRADING

Trading of power is recognized as a distinct license activity under the EA 2003. The Central and State Electricity Regulatory Commissions have powers to grant inter-state and intra-state trading licenses. As per CERC, there are 40 inter-state trading licensees on March 31, 2011.

Current participants in the power trading business include PTC, NVVN, Tata Power Trading Company Limited and GMR Energy Limited, among others. The following table shows the volume of power traded in India for the periods indicated:

PARTICULARS	FY 2010-11	FY 2009-10
Power traded (in BUs)	53.48	33.91
Electricity traded as % to total generation	6.6%	4.44%

(Source: CERC)

India has two power exchanges – Indian Energy Exchange (IEX) and Power Exchange India Limited (PXIL). During the year 2010-11, 13.54 BUs have been traded through these exchanges. The trading price range at the above exchanges in the year 2010-11 was between ₹ 2.04/unit and ₹ 7.75/unit.

Open access in inter-state transmission is fully operational. To boost open access, the CERC has notified a regulation on connectivity, long-term access and medium-term open access in inter-state Transmission.

One of the important features of these regulations is that the thermal generating company of at least 500 MW capacity and hydro generating company of at least 250 MW capacity, irrespective of ownership (whether government or private sector) can be connected to the grid directly and there will be no requirement of constructing a dedicated transmission line to the nearest pooling station of the inter-state transmission system.

The regulations on open access in inter-state transmission and on inter-state trading are issued by the Central Electricity Regulatory Commission (CERC). The responsibility for introduction of open access at distribution level rests with the State Electricity Regulatory Commissions (SERCs).

The total number of transactions under open access at inter-state level increased from 778 in 2004-05 to 18,128 in 2009-10. The Central Transmission Unit (CTU) has received 225 applications from private developers for long- term open access amounting to 1,62,898 MW. At State level, as per information available with the Forum of Regulators Secretariat, 24 SERCs have notified terms and conditions of open access regulations, 20 have determined cross-subsidy surcharge, 25 have allowed open access up to 1 MW, 22 have determined transmission charges, and 18 have determined wheeling charges. The Power System Operation Corporation Limited (POSOCO), has been operationalized by the Government of India with effect from 1st October 2010 to manage load dispatch functions earlier being managed by the CTU, i.e. POWERGRID. *(Source: Economic Survey 2010-11)*

RURAL ELECTRIFICATION

As per Central Electricity Authority (CEA), around 90.6% villages have been electrified by end March 2011. The Central Government launched a scheme "Rajiv Gandhi Grameen Vidyutikaran Yojana" (RGGVY) in April 2005 with the goal of electrifying all (around 118500) un-electrified villages and hamlets and providing access to electricity to all households in next five years. Under RGGVY, 97177 villages have been electrified and connections to 1.62 crore Below Poverty Line (BPL) households have been released up to 15.05.2011.

(Source: Ministry of Power –RGGVY projects)

R-APDRP

Accelerated Power Development and Reforms Programme (APDRP) was modified and renamed as Restructured APDRP (R-APDRP). R-APDRP is linked to actual demonstrable performance in terms of AT&C loss reduction to 15% or less by the end of 11th plan through adoption of IT for energy accounting/auditing, strengthening /up-gradation of distribution network, capacity building and payment of incentives to utility personnel for bringing down the AT&C losses below the baseline levels.

APDRP and R-APDRP have been successful in bringing down the AT&C losses from 38.86% in 2001-02 to 28.44% in 2008-09. However, we are still far behind the target of reducing AT&C losses to 15% by 2011-12. Further, the impact of the program on financials of State Utilities has not been significant.

POLICY FRAMEWORK

Indian Power Sector is governed by **Electricity Act 2003 (EA 2003)** which provides the overall legislative framework.

EA 2003 has promoted a liberal, transparent and enabling legal framework for power development for creation of a competitive environment and reforming distribution segment of power industry. It allows open access in transmission and distribution. It provides for regulatory oversight for fixation of tariff.

Central Government has also framed following policies for overall development of the sector:

1. National Electricity Policy, 2005
2. Tariff Policy, 2006
3. Rural Electricity Policy, 2006
4. National Hydro Policy, 2008
5. Revised Mega Power Project Policy, 2009

A few of the major policy / regulatory initiatives of the recent past are:

a) Scheme for Supply of Power to Rural Households notified by Ministry of Power in April, 2010.
b) Inter-State Trading Margin Regulations, 2010
c) New Indian Electricity Grid Code (IEGC), 2010
d) Amendments to Unscheduled Interchange (UI) Regulations, 2010
e) Regulations on "Terms and Conditions for Tariff determination from Renewable Energy Sources", 2009.

RECENT INITIATIVES

(a) CERC (Terms and Conditions for Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010.

As per the Section 86 (1) (e) of the EA 2003, the State Electricity Regulatory Commissions have been authorized to specify a percentage of the total consumption of electricity in the area of a distribution licensee from renewable energy sources. As per this provision, most of the SERCs have notified the required Renewable Purchase Obligations (RPO) for the distribution licensees. In order to promote investments in the renewable energy generation in the country, CERC has issued CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 on 14.01.2010. The REC mechanism envisaged in this Regulation aims at addressing the mismatch between availability of RE resources in the states and requirement of the obligated entities to meet the renewable purchase obligations. Under this Regulation, REC will be issued to RE generators not selling electricity from RE sources through preferential tariff routes. These RE generators can sell the environment attributes of the generation in the form of RECs, which are tradable in the power exchanges. These RE Certificates can be procured by the distribution licensees to meet their renewable purchase obligations.

(b) Amendment of Coal Linkage Policy for 12th Plan Power Projects

Government of India has modified the criteria for coal linkages for power projects in 12th Plan. Now, drawal of coal will be subject to 85% of power being tied up through Long Term PPAs with Discoms through tariff based competitive bidding (except for PSU projects where PPAs were signed by 5.1.2011)

(c) Procedure for the implementation of the Mechanism of Renewable Regulatory Fund (RRF) under Indian Electricity Grid Code Regulation, 2010.

The Central Electricity Regulatory Commission has approved the procedure for mechanism of Renewable Regulatory Fund applicable for wind farms with a collective capacity of 10 MW and above and solar plant capacity of 5 MW and above. The fund has been created with a view to compensate the wind and solar energy rich States for dealing with the variable generation. This Fund shall be opened by the National Load Despatch Centre (NLDC) on a national level on the lines of UI Pool Account at the Regional level. All payments on account of Renewable Regulatory charges levied under the Regulations, and interest, if any, received for late payment shall be credited to the RRF.

(d) Sharing of Inter-state Transmission Charges and Losses Regulations, 2010.

CERC has brought in a new approach in pricing of transmission in India by introducing a regulation called CERC (Sharing of Inter State Transmission Charges and Losses) Regulation, 2010 on 15.06.2010. As per the new Regulations, the sharing of inter-state transmission charges & losses will be calculated based on Point of Connection charging method using load-flow analysis. In the current regime, the transmission charges & losses for inter-state transmission system are allocated on the basis of regional postage stamp method. As per the new Regulations, which will be effective from 1.07.2011, network users shall be charged as per their actual usage of the transmission system rather than contract paths, thereby rationalizing the pricing mechanism. This Regulation also requires that all network users including Inter State Generating Stations (ISGS), beneficiaries, State Transmission Utilities (STUs), bulk consumers, transmission licensees to sign

Transmission Service Agreement as approved by CERC containing various terms & conditions related to billing & collection of charges. However, for the first two years (2011-12 & 2012-13), the transmission charges will be calculated with 50% weightage each for the existing postage stamp method and the new Point of Connection method. This will be reviewed after two years.

(e) CERC (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011

The Central Electricity Regulatory Commission has made certain amendments to Tariff Regulations, 2009 on 21.06.2011. As per this, the following capital expenditure has been admitted by the Commission, subject to prudence check:

a. In case of gas/liquid fuel based generating stations, any expenditure which become necessary on renovation of gas turbines after 15 years of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations.

b. Capital expenditure necessitated on account of modifications required or done in fuel receipt system arising due to non-materialisation of full coal linkage in respect of thermal generating stations arising from circumstances not within the control of generating station.

OPPORTUNITIES AND THREATS

Opportunities

Increasing demand for electricity

Although, the Indian power sector is one of the fastest growing sectors in the world and energy availability has increased, the demand for power outstrips the supply. There is, therefore, ample scope for rapid capacity expansion. Although, the peak and energy deficits have reduced over the years, however, they are expected to remain high. The anticipated energy requirement in 2011-12 will be 968.659 BUs. The demand is further expected to be of the order of 1914.508 BUs by 2021-22.

Conducive Regulatory Framework for investment by Private Sector

To accelerate the development of Power Sector GoI has taken several policy initiatives which have boosted the confidence of private investors to invest in Power Sector. EA 2003 has provided impetus to the participation of Private Sector in Generation and Transmission. Further, policies on open access and tariff framework have created an enabling environment for the private sector.

Ultra Mega Power Projects

GoI launched an initiative for the development of coal based Ultra Mega Power Projects with capacity of 4000 MW each with the objective to ensure cheaper tariffs utilizing economies of scale, catering to the need of States and to mitigate the risks relating to tie up of land, fuel, water and other statutory clearances. To tie up the necessary inputs and clearances shell companies (SPVs) have been set-up as wholly owned subsidiaries of PFC. These SPVs along with various clearances are subsequently transferred to the successful developer.

So far, 4 such projects have been awarded through international competitive bidding route namely Sasan in MP, Mundra in Gujarat, Krishnapatnam in AP and Tilaiya in Jharkhand. As per Economic Survey 2010-11, two units of 800 MW each of the Mundra UMPP are expected to be commissioned in the 11th Plan. Government has decided to include an additional bidding qualification criterion stating that no bidding company or group may hold more than 3 UMPPs at the pre-commissioning stage.

UMPPs at Glance

Particulars	No. of UMPPs	Capacity (MW)
Total UMPPs Envisaged	16	64000
SPVs Incorporated	12	48000
Awarded	4	16000

(Source: Power Finance Corporation)

Transmission

With focus on increasing generation capacity over the next decade, commensurate investment would also be required in transmission. Since, power generation resources as well as load centres are unevenly distributed in the country, it is necessary to have an integrated development of transmission and distribution system. The system should facilitate transfer of power, absorption of power, taking care of the open access system, development of secure and efficient electricity market. The regional grids are being gradually integrated to form a national grid enabling inter-regional transmission of power facilitating optimal utilization of the national generating capacity thereby providing an opportunity for investment in transmission projects.

Renewable Energy

Responding to the call for action for maintaining climate and ecological balance, it is imperative to tap the renewable energy resources available in abundance in the country. For industry, this represents a significant investment opportunity across the value chain from R&D, manufacturing to project development

Renewable Energy Sources (RES) Potential

RES account for 10.60% of installed capacity and their share in the total energy basket is gradually increasing. There is high potential for generation of renewable energy from various sources- wind, solar, biomass, small hydro and cogeneration bagasse. The total potential for renewable power generation in the country as on 31.03.2010 is estimated at 90,313 MW. This includes an estimated wind power potential of 48,561 MW (54%), SHP (small-hydro power) potential of 15,385 MW (17%) and 22,536 MW (25%) from bagasse-based cogeneration in sugar mills. The estimates of Ministry of New and Renewable Energy for solar energy potential are estimated at 20-30 MW per Sq.km. for most parts of the country. *(Source : Energy Statistics, 2011 by Central Statistics Office, MOSPI)*

Under the National Action Plan on Climate Change (NAPCC), Jawaharlal Nehru National Solar Mission is one of the eight National Missions launched by Govt. on January 11, 2010 with the twin objectives of contributing to India's long-term energy security and its ecologically sustainable growth. The Mission will be implemented in 3 stages leading to an installed capacity of 20,000 MW of grid power, 2,000 MW of off-grid solar applications and 20 million sq. metre. solar thermal collector area and solar lighting for 20 million households by the end of the 13th Five Year Plan in 2022.

Hydro Potential

India is endowed with an estimated hydro power potential of more than 150,000 MW. However, installed capacity of hydro electric projects is only 37,567 MW as on 31.03.2011. Development of hydro power resources is important for energy security of the country. Private sector accounts for only about 3.8% of the installed capacity. Based on the present status of preparedness, a shelf of 109 candidate hydro projects aggregating to 30,920 MW having higher level of confidence for realizing benefits during 12th Plan has been finalised. *(Source: Hydro Development Plan for 12th Plan-CEA)*

The hydroelectric potential has been given thrust by Government of India by launching New Hydro Power Policy, 2008 offering incentives to investors in order to increase the installed capacity of hydro projects.

Nuclear Potential

Nuclear generation registered a 40.9% growth during the year 2010-11 mainly due to improved nuclear fuel conditions and additional generation from the newly commissioned nuclear unit at Kaiga in January'11. At present, the installed nuclear power capacity in the country is only 4,780 MW which is about 3% of the total power generating capacity. Inspite of recent catastrophe in Japan, nuclear energy holds the promise to reduce demand-supply gap to a great extent. Government of India has planned to have a nuclear power capacity of 20,000 MW by the year 2020 and about 60,000 MW by the year 2030.

India's Nuclear Power Generation Program has till recently been based on indigenous development of Pressurised Heavy Water Reactor (PHWR) technologies.Subsequent to Indo-US Nuclear deal the window of opportunity to deal with other technology providers has improved. Accordingly to meet the targets of GOI for the nuclear power generation capacity addition, Department of Atomic Energy (DAE) is exploring the possibilities of having PWR tie ups with other technology providers in US, France, Russia etc. (AP-1000/ EPR-1600/VVER-1000). With France, DAE is likely to tie up EPR 1600 technology for 2 nos. of units to be constructed at Jaitapur, Maharashtra, besides, augmenting the capacity based on indigenous PHWR route of unit size of 700 MW. However, VVER technology of Russia is being used in India by NPCIL for their Project under construction at Kudankulam.

With the above, we expect DAE, GOI would be able to meet its planned targets for year 2020 and beyond.

Threats

Slow investment in power sector

Although 100% FDI is permissible in power sector yet share of FDI in power sector is hovering around 5% as compared to Telecom sector which is 8% of total FDI during the period April 2000-March 2011.

(US $ million)

	2009-10	2010-11	Cummulative April 2000-March 2011
Power	1437	1252	5900
Telecom	2554	1665	10589

The reason for low FDI inflow in power sector is that there is a lack of politico-administrative support on containment of commercial losses coupled with poor financial health of state utilities in addition to capped regulatory returns on equity. Delays in land, forest and environmental clearances, resulting in cost escalation and availability of fuel are not only reasons for low inflow of FDI into power sector but also for delay in setting up power plants.

High AT&C /T&D Losses

Aggregate Technical and Commercial (AT&C) loss captures technical and commercial losses in the network and also loss due to non realization of billed amount and is an indicator of total losses in the system.

Internationally, AT&C losses stand at 4-8% in developed countries. High AT&C losses in India continue to hamper reduction in distribution costs.

Main reasons for AT&C losses include overloading of existing lines and substation equipments, absence of up gradation of old lines and equipments, poor repair and maintenance of equipments, low metering/ billing/ collection efficiency, theft and tampering etc.

AT&C losses are showing a declining trend and have come down from 38.86% in 2001-02 to 28.44% in 2008-09 because of programs like R-APDRP initiated by GoI. However, we are still far behind the target of reducing AT&C losses to 15% by 2011-12 *(Source: CEA)*

Deteriorating Financials of State Utilities

The book losses of State Power Utilities (SPUs) increased significantly to ₹ 20,920 crore during the year 2008-09 as against ₹ 14,720 crore in the year 2007-08. The losses without considering subsidy further increased to ₹ 50,585 crore during the year 2008-09 from ₹ 34,237 crores in 2007-08, a rise of 47.75%. The net losses (financial losses & subsidies) of State T&D utilities are on the increase and are projected at the level ₹ 68,643 crore for the year 2010-11 (being over 1% of GDP) and the same poses a high risk to their commercial viability. *(Source: 13th Finance Commission Report)*

Subsidy booked by utilities selling directly to consumers, increased from ₹ 19,518 crore in the year 2007-08 to ₹ 29,665 crore in 2008-09 *(Source: PFC Report on Performance of the State Power Utilities)*. The SPUs losses have persisted due to following reasons:

a) Inability of the state utilities to enhance operating efficiencies and reduce AT&C losses adequately. Thus, high AT&C losses have increased the purchase levels and supply costs.

b) Increasing Gap between Cost and Revenue as tariff increase has not kept pace with cost increases. The average cost of supply increased from ₹ 2.76/kWh in the year 2006- 07 to ₹ 2.93/kWh in 2007-08 and to ₹ 3.40/kWh in 2008-09. The average revenue (without considering subsidy booked) increased from ₹ 2.27/kWh in the year 2006-07 to ₹ 2.39/kWh in 2007-08 and to ₹ 2.62/kWh in 2008-09. The gap between average cost of supply and average revenue without subsidy was ₹0.48/kWh in 2006-07 which increased to ₹ 0.54/kWh in 2007-08 and to ₹ 0.78/kWh in 2008-09. *(Source: PFC report of SPUs)*.

Recently, some of the SERCs have increased the tariffs which will help the state utilities in bridging the revenue –cost gap.

Fuel Constraints

Power generation in India is predominantly based on fossil fuel i.e coal and gas. About 65% of the installed capacity as on 31.03.2011 uses fossil fuel. Power Generation based on coal in 2010-11 has increased by 3.99% over 2009-10. The production of coal as well as gas has not kept pace with the demand. During financial year 2010-11, there was no increase in coal production over the previous year. To meet the shortfall, an estimated 83 MT of coal was imported during 2010-11, which is further expected to increase to 142 MT during the current financial year. As per CEA, growth in coal based generation was constrained due to 92.6% materialization of the requirement of coal resulting in loss of generation of about 7.0 BUs during the year 2010-11.

National energy requirement is expected to grow to almost 4 times of present level to 2 BMT/annum by 2030-31. The domestic coal production has to grow at the rate of 7%-9% range in order to match with the growth in demand.

The gap between demand and supply of coal is further expected to increase due to various ecological concerns as well as many of the coal blocks have fallen under the “No Go Area”. The indigenous coal supply has to be augmented to match the growth in power sector since most of the thermal plants may not use coal blended with more than 15% of imported fuel because of the design of the boilers. Imported coal is also subjected to wide price fluctuations.

As far as imported coal is concerned, there are infrastructural limitations such as port and railways infrastructure. Further, there are concerns of rising global prices of coal. As bulk of the coal is imported from Indonesia and as per recent regulations by Indonesian Government, coal companies can’t sell the coal below a reference price which is adjustable every twelve months. This may result in huge uncertainty and volatility in imported coal prices. There are also concerns since Australia, another coal exporting nation, has introduced a draft law to levy taxes on export of coal. The possibility of introduction of carbon tax on coal would further push up the coal prices

Inspite of rapid growth in gas demand over the last decade, it accounts for just 10% of total primary energy consumption. However, domestic production of gas is unlikely to keep pace with demand. The current demand-supply scenario shows that there is wide gap and the same is expected to increase further in next five years. With limited additional domestic gas availability and lower production at KG D6 than earlier projected, the gap in demand and supply is expected to grow. During 2010-11, the total gas demand in the country for all sectors was about 179 MMSCMD, while the indigenous supply was less than 140 MMSCMD. As per various analysis, the gap is expected to vary between 70 and 100 MMSCMD in 2011-12 and expected to touch 150 MMSCMD by 2014-15.

Allocation of around 31 MMSCMD of KG D6 gas to power sector has helped in mitigating the shortage of existing plants. Unless gas is allocated in advance, future gas based power projects are difficult to implement. Considering the limited availability of domestic gas in the country vis-à-vis demand, RLNG will continue to play supplementary role for power generation. However, the actual fructification of the gas based capacities will depend upon the price competitiveness of domestic gas/RLNG vis-à-vis the main competing fuel i.e. Coal. Presently, the gas plants are suffering from low generation schedules from grid because of high cost of generation on gas/ RLNG vis-à-vis coal. It is understood that system can absorb additional RLNG to the extent of 10- 20%. Hence, all efforts need to be done to ensure enhanced production of domestic gas from the existing fields and the discovered fields.

Thus, non availability of coal and gas in desired quantity would have adverse impact on the overall performance of the sector. However, Government is taking initiatives for availability of inputs for the development of the power sector.

Slow development of coal mines allocated to Power Developers

In order to augment coal resources, the Government has allocated captive blocks to power developers to match rising demand. Over 90 coal blocks with geological reserves of approximately 28 Billon Tonnes were allocated to various public/private companies. Out of the above coal blocks,12 coal blocks were allocated to UMPPs with geological reserves of about 4.5 BT. Out of the total allocated blocks, only 14 blocks (as per Annual Report of Ministry of Coal) have commenced production as on 31.03.2010 as against a target of 30 blocks. Recently, GoI has issued notices to certain developers seeking reasons for inordinate delay in commencement of production. Further, GoI has also de-allocated certain blocks for delay in their development.

OTHER RISKS AND CONCERNS

1. Constraint on power equipment manufacturing capacity
2. Lack of availability of skilled manpower
3. Need for speeding up rural electrification
4. Slow Environmental & Forest Clearances for projects and coal blocks
5. Competition in many critical segments of the industry, especially in distribution, is inadequate, while State-owned distribution companies continue to underperform.

OUTLOOK

During the period 2001-02 to 2010-11, power generation in India has grown at a CAGR of 5.17%. As per 17th EPS, the energy requirement at the end of 12th Plan would be 1392 BUs. To achieve this target, generation has to grow at a CAGR of over 9.0% and hence, offers multiple opportunities of growth to public as well as private sector entities.

NTPC LEADERSHIP POSITION IN INDIAN POWER SECTOR

With approximately 18% of total installed capacity of the country, your Company contributes to around 27% of the country's generation as on 31.03.2011.

	All India	NTPC	% share
Capacity (MW)	173,626	30,830	17.76
Generation (BUs)	811.14	220.54	27.19
Capacity incl. JVs (MW)	173,626	34,194	19.69
Generation incl. JVs (BUs)	811.14	236.71	29.18

(Source: All India Data - CEA's executive summary)

Your Company is the 4th largest in Asia amongst global electric utilities as per Forbes Global 2000 ranking published in the year 2011. It is also ranked as 348th largest company in the world in the Forbes Global 2011. It has also been ranked No.1 Independent Power Producer in Asia and No.2 Independent Power Producer globally in Platts Top 250 Global Energy Company for 2009. It has also been ranked as the 10th largest electricity producer in the world and 3rd largest in Asia based on its generation during 2008-09. Your Company has been ranked 6th and is the only PSU in the top 25 companies in the Aon Hewitt Best Employers Study.

During the last financial year, operationally NTPC stations performed better than collective performance of any other sector.

PLF Comparison (%)		
	2010-11	**2009-10**
Central sector	85.12	85.64
State sector	66.70	71.13
Pvt sector	76.70	82.41
National avg.	75.08	77.68
NTPC	**88.29**	**90.81**

National Availability Factor for coal stations was 84.24% during financial year 2010-11, as against which, your Company's coal stations had AVF of 91.67%.

COMPETITION

Due to the gap between demand and supply in the Indian power sector, there has generally been a stable market for power generation companies in India. Your Company is the largest power generating company in the country having a market share of approximately 17.76% in terms of installed capacity and 27.19% in terms of national generation. The Maharashtra State Power Generation Company Ltd with an installed capacity of 9,996 MW (Source – website of Mahagenco) with market share of about 6% is the next largest entity.

The share of private sector capacity has increased to 36,761 MW as of March 31, 2011 from 29,014 MW as on March 31, 2010 and going forward, the same is expected to increase even faster as is evident from capacity added during 11th plan so far. Private sector has contributed to around 14.33% to total electricity generation in the year 2010-11 as compared to their share of 12.14% in the previous year.

EA 2003 removed licensing requirements for thermal generators, provided for open access to transmission and distribution networks and removed restrictions on the right to build captive generation plants. These reforms provide opportunities for increased private sector involvement in power generation. Specifically, non-discriminatory open access regulations of State Regulatory Commissions, which enable generators to sell directly to bulk consumers, has increased the financial viability of investment in power generation.

Further, as per the National Tariff Policy, all new projects shall be set up on the basis of competitive bidding effective from 5th Jan 2011.

Government of India has issued the Competitive Bidding Guidelines which do not bar the CPSUs from participating in the tariff based bidding process. Both CPSUs and private sector developers are participating in the tariff based bidding process for securing power projects including the Ultra Mega Power Projects. There has been positive response on the initiatives undertaken by GoI to set up large scale power projects through competitive bidding.

Since notification of the Tariff Policy, power projects totalling around 45,000 MW (including 16,000 MW of Ultra Mega Power Projects) have been awarded through tariff based competitive bidding and another 26,000 MW are under process. However, work at most of these projects is yet to start and successful implementation of these projects, therefore remains to be tested.

With proven in-house engineering capabilities built in the past and wide ranging experience of project execution and with long term PPAs of over 90,000 MW in place, we are confident that we shall be able to retain our leadership position in the industry. Further, our high operational efficiency enables us to sell power at competitive prices and achieve savings. We believe that our monitoring and maintenance techniques offer us a competitive advantage in an industry where reliability and maintenance costs are a significant determinant of profitability.

RISKS & CONCERNS

For Company

With increasing competition, the Company has to sustain its leadership position in the country by growing at an appropriate pace and at the same time strive to further improve its operational efficiency by generating at high PLF and minimizing the outages. The Company is foraying into hydro, nuclear and renewable energy sources to reduce its dependence on fossil fuels. As a step in backward integration, the Company has entered into coal mining business and is also exploring the possibilities in LNG value chain.

To sustain its leadership position in the country and befitting its "Maharatna" stature, the company has drawn an ambitious Corporate Plan up to the year 2032 with diversified power generation portfolio based on thermal, hydro, nuclear and renewable energy sources. Though our growth strategies are built upon the inherent strengths of the company, various activities undertaken to achieve the targets make us susceptible to various risks. We recognize and realize that risks are not merely the hazards to be avoided but in many cases offer opportunities which create value ultimately leading to enhancement of shareholders wealth.

To effectively manage the risks associated with our business, we have taken adequate measures to institutionalize risk management process, in the company by implementing an elaborate Enterprise Risk Management (ERM) framework. As part of implementation of the ERM framework, an Enterprise Risk Management Committee (ERMC) has been constituted with Executive Directors representing geographically regions and core functions of the company. ERMC has been entrusted with the responsibility to identify and review the risks and formulate action plans and strategies for risk mitigation on short-term as well as long-term basis. The ERMC has identified 25 key areas out of which following 7 have been classified as the top risks for the company:

- Fuel supply risks
- Project Implementation delays risks
- Risks related to coal mining and coal washeries
- Risks pertaining to Hydro Projects
- Acquisition of land related risks
- Environmental, pollution and other related regulatory norms including Ash Utilization related risks
- Risks related to recruitment and retention of skilled employees

These areas are being regularly monitored through reporting of key performance indicators of identified risks and exceptions with respect to risk assessment criteria are being reported to the top management. The ERMC meets every quarter to deliberate on strategies.

INTERNAL CONTROL

Your Company has robust internal control systems and processes in place for smooth and efficient conduct of business and complies with relevant laws and regulations. A comprehensive delegation of power exists for smooth decision making which is being further reviewed to align it with changing business environment and speedier decision making. Elaborate guidelines for preparation of accounts are followed consistently for uniform compliance. In order to ensure that all checks and balances are in place and all internal control systems are in order, regular and exhaustive internal audits are conducted by experienced firms of Chartered Accountants in close co-ordination with the

Company's own Internal Audit Department. Besides, the Company has two Committees of the Board viz. Audit Committee and Committee on Management Controls to keep a close watch on compliance with Internal Control Systems.

A well defined Internal Control Framework has been developed identifying key controls and supervision of operational efficiency of designed key controls by Internal Audit. The framework provides elaborate system of checks and balances based on self assessment as well as audit of controls conducted by Internal Audit at process level. Gap Tracking report for operating efficiency of controls is reviewed by management regularly and action is taken to further strengthen the Internal Control System by further standardizing systems and procedures. The system presents a written assessment of effectiveness of company's internal control over financial reporting by the process owners, project/office heads to facilitate certification by CEO and CFO and enhances reliability of assertion.

FINANCIAL DISCUSSION AND ANALYSIS

A detailed financial discussion and analysis is furnished below on Reported Audited Financial Statements and Adjusted Profit. The Adjusted Profit has been arrived at after adjustments on account of one-off items/extra ordinary items which have been indicated against each broad category of revenue and expense to explain better the year on year (YoY) performance.

A Results of Operations

1 Gross Income

		FY 2010-11	FY 2009-10	% Change
	Units of electricity sold (million units)	**206,582**	**205,091**	**0.73%**
	Income	Amount in ₹ Crore		
1	Energy Sales (Excl Electricity Duty)	54,704.55	46,168.67	18.49%
2	Energy Internally Consumed	64.68	55.10	17.39%
3	Consultancy & other services	169.45	153.92	10.09%
4	Other income (excluding income related to OTSS*)	1,610.20	1,857.07	-13.29%
5	Income related to OTSS *	850.61	999.12	-14.86%
6	**Total (4+5)**	**2,460.81**	**2,856.19**	**-13.84%**
	Gross Income (1+2+3+6)	**57,399.49**	**49,233.88**	**16.59%**

*OTSS-One Time Settlement Scheme

The gross income of the Company comprises of income from sale of electricity (net of electricity duty), consultancy and other services, and interest earned on investments such as term deposits, bonds (issued under one-time-settlement scheme) and dividend on mutual funds. The gross income for financial year 2010-11 is ₹ 57,399.49 Crore as against ₹ 49,233.88 Crore in the previous year registering an increase of 16.59%. This gross income excludes provisions written back. Each element of income is discussed below:

Tariffs for computation of Sale of Energy

The charges for electricity are based on tariff rates determined by the CERC. The tariff rates consist of a capacity charge for recovery of annual fixed cost based on plant availability, energy charges for recovery of fuel costs and an unscheduled interchange charge for the deviation in generation with respect to schedule, payable (or receivable) at rates linked to frequency prescribed in the regulation to bring grid discipline. The CERC sets tariff rates for each unit for each stage of a plant in accordance with the tariff regulations/norms notified by them. CERC has issued new Tariff Regulations for the period 2009-14, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, which is a balanced regulation for both consumers and investors.

Capacity Charge

The capacity charge for making plant capacity available is allowed to be recovered in full if plant availability is at least 85%. If the availability of the plant is lower than 85%, the capacity charges are recovered on a pro rata basis. The significant elements of the capacity charges permissible under the Tariff Regulations 2009 are:

- Return on equity on pre-tax basis at a base rate of 15.5%, to be grossed up by the normal corporate tax rate as applicable for the respective year on a prescribed 70:30 debt to equity ratio for new projects. For projects commissioned on or after April 1, 2009, there is an additional return of 0.5% if the new projects are completed within the timeline specified in the 2009 Regulations. In the year, in which the concerned utility pays Minimum Alternate Tax (MAT), the base rate will be grossed up by applying MAT rate.
- Interest cost incurred on normative debt at weighted average rate of interest on loan portfolio of the project
- Interest on working capital determined on a normative basis
- Depreciation up to 90% of capital costs, excluding the cost of freehold land, based upon the rates of depreciation prescribed in the Regulations, for a 12 year period from the date of commercialization. The remaining depreciable value thereafter, is to be spread over the balance useful life of the assets.

- Normative operation and maintenance costs determined by the CERC based on capacity of unit, on a per megawatt basis.
- Normative secondary fuel oil costs for coal-based stations.
- Special allowance per annum per MW for plants in operation beyond their useful life in lieu of recovery for capital expenditures on renovation and modernization.
- Compensation allowances on a per annum per MW basis to meet expenses on new capital assets, including minor capital assets, after 10 years of commercial operation.

Energy Charges

Energy charges for the electricity sold are determined on the basis of landed cost of fuel applied on the quantity of fuel consumption derived on the basis of norms for heat rate, auxiliary consumption, specific oil consumption etc.

Other Charges

Besides the capacity charges and the energy charges, the other elements of tariff are:

- Cost of hedging in respect of interest and repayment of foreign currency loans and exchange rate fluctuations for the un-hedged portion of interest and repayment of foreign currency loans on a normative basis.
- The unscheduled interchange charge payable (or receivable) at rates notified by the CERC from time to time.
- Deferred tax liability for the period upto 31-3-2009 on generation income is allowed to be recovered from the customers on materialization.

During financial year 2010-11, final tariff orders including additional capital expenditure orders for all but one station relating to the period 2004-09 have been issued. Thus, under Tariff Regulations, 2004, tariff orders have been issued for all but one station.

However, tariff orders are yet to be issued under CERC Tariff Regulations 2009-14.

Sale of Electricity

Your Company sells electricity to bulk customers comprising, mainly, electricity utilities owned by State Governments. Sale of electricity is made pursuant to long-term Power Purchase Agreements (PPAs) entered into for 25 years in case of most of our coal-fired plants and for 15 years in case of most of gas-fired plants in line with the estimated average life of the plants. The actual lives of the stations are often longer and unless, customer ceases to draw power, contracts continue to be in force until they are formally extended, renewed or replaced. With the issuance of CERC Tariff Regulation 2009, the estimated average life of the gas stations is also estimated as 25 years. Hence, the long-term power purchase agreements for new gas stations hence forth will also be for the same period.

Income from sale of electricity for the financial year 2010-11 was ₹ 54,704.55 Crore which constituted 95% of the gross income. The income from sale of electricity has increased by 18% over the previous year's income of ₹ 46,168.67 Crore. During the year, there is an increase in the commercial capacity by 990 MW comprising of unit 6 of 490 MW of NCTPP Stage-II w.e.f. 31.07.2010 and unit 7 of 500 MW of Korba Stage III w.e.f. 21.03.2011. In addition, the commercial capacity of 990 MW comprising unit 5 of 490 MW of NCTPP Stage-II and unit 7 of 500 MW of Kahalgaon Stage III is also available for the entire financial year 2010-11 as compared to part of financial year 2009-10. The increase in Sales is also partly attributable to pass-through of higher fuel cost.

Tariff Regulations, 2009 provide that the company shall continue to provisionally bill the beneficiaries with the tariff approved by the CERC and applicable as on 31st March, 2009 till approval of tariff in accordance with these Regulations. The tariff petitions have been made to CERC for all stations under Tariff Regulations 2009. Pending determination of station-wise tariff by the CERC, sales of ₹ 48,935.31 crore for financial year 2010-11 have been recognized on provisional basis (explained in note 2(a) of Notes on Accounts, Schedule-26).

For the units commissioned subsequent to 1st April 2009, namely, unit 5 of NCTPP Stage II, unit 7 of Kahalgaon Stage II, unit 6 of NCTPP Stage II and unit 7 of Korba Stage-III, CERC is yet to issue final tariff orders. Accordingly, sales of ₹ 4,528.39 crore for financial year 2010-11 relating to these units/stations have been recognized on provisional basis (explained in note 2(b) of Notes on Accounts, Schedule-26).

It is pertinent to mention that unit 6 (490 MW) of NCTPP, Stage-II has commenced commercial operation in financial year 2010-11, within the normative schedule given by CERC and is eligible for additional 0.5% Return on Equity as per Tariff Regulations, 2009.

While revising the rates of depreciation and removing the provision for Advance Against Depreciation (AAD), CERC Tariff Regulations, 2009 also provide that the balance depreciable value of the each of the existing stations as on 1st April, 2009 shall be worked out by deducting the cumulative depreciation including AAD as admitted by the CERC up to 31st March 2009 from the gross depreciable value of the assets thereby merging AAD with depreciation for tariff recovery. Accordingly, the accounting policy relating to AAD was revised during the financial year 2009-10 (please refer to Accounting Policy no. 12.1.2) and the amount of AAD required to meet the shortfall in the component of depreciation in revenue over the depreciation to be charged off in future years has been assessed station-wise and wherever an excess has been determined as on 1st April 2009, the same has been recognised as sales. During the year, AAD amounting to ₹ 79.75 Crore has been recognized as sales in accordance with accounting policy (refer note 2(e) of Notes on Accounts, Schedule-26).

As per Tariff Regulations 2009, the deferred tax liability for the period up to 31st March 2009 whenever it materializes shall be recoverable directly from the beneficiaries. Accordingly, the deferred tax liability recoverable from beneficiaries has been computed by identifying the major changes in the deferred tax liability/asset and an amount of ₹ 21.72 Crore has been included in sales (refer Schedule 17 on Sales).

If the income tax/deferred tax recoverable from or payable to beneficiaries is excluded from income from sale of electricity (pl. refer to Sch.17), it has increased by 17% over last financial year.

₹ Crore

	FY 2010-11	FY 2009-10	% Change
Energy Sales (Excl Electricity Duty)	54,704.55	46,168.67	18%
Less: Tax Recoverable from customers	338.51	-719.93	
Less: Deferred tax recoverable from customers	21.72	248.47	
Energy Sales (Excl Electricity Duty and tax recoverable from customers)	**54,344.32**	**46,640.13**	**17%**

The average tariff for the current year is 263.06 p/kWh as against 227.41 p/kWh in the previous year. The average tariff includes adjustments pertaining to previous years. If the impact of such adjustments were to be excluded, the average tariff would be 259.19 p/kWh in the current year as against 226.83 p/kWh in the previous year. The increase in the average tariff for the current year is mainly due to increase in Energy (Variable) charges by 26.21 p/kWh primarily due to increased consumption of imported coal.

There has been 100% realization of the dues during the last eight years. All the beneficiaries have opened and are maintaining Letter of Credit equal to or more than 105% of average monthly billing as per One-Time Settlement Scheme (OTSS). In order to ensure prompt and early payment of bills for supply of energy to beneficiaries, your company has formulated a Rebate Scheme by way of providing graded incentive for early payment based on the bill(s) raised on State Utilities who are the member of NTPC's rebate Scheme.

Under OTSS, tri-partite agreements are valid up to 31st October, 2016. For the period beyond October 2016, the supplies which will be made to State Utilities, the same shall be covered by an escrow arrangement. The supplementary agreements have been signed with all State Utilities which have a provision of keeping a first charge on their revenue streams for supplies made by your company. Under the Supplementary Agreements, the State Utilities have agreed to provide payment security through execution of the Hypothecation Agreement and the Default Escrow Agreement. Further, this will be over and above the LC requirement of 105% of average monthly billing.

Energy Internally Consumed

Energy internally consumed relates to own consumption of power for construction works at station(s), township power consumption etc. It is valued at variable cost of generation and is shown in sales with a debit to respective expense head under power charges. The increase in energy internally consumed is 17% over the previous year.

Consultancy and other services

Accredited with an ISO 9001:2000 certification, the Consultancy Division of your Company undertakes the consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz engineering, project management, construction management, operation and maintenance of power plants.

During the year, Consultancy Division posted an income of ₹ 167.85 crore as against ₹ 151.24 crore achieved in the last financial year. In the financial year 2010-11, it has recorded a profit of ₹ 57.07 crore as against ₹ 55.72 crore in the last financial year. A total of 55 orders valued at ₹ 153.72 Crore were secured by the Division during the year including 14 overseas assignments.

Other Income

'Other income' mainly comprises of income from bonds issued under OTSS, income from investment of surplus cash, dividend on equity investment in joint ventures & subsidiaries and miscellaneous income.

'Other income' in financial year 2010-11 was ₹ 2,460.81 crore as compared to ₹ 2,856.19 crore in the financial year 2009-10. Broadly, the break up of other income is as under:

₹ Crore

	FY 2010-11	FY 2009-10
Interest for the year on tax free bonds /Loan to State Govt.	850.61	999.12
Income on investment of surplus cash including Dividend/Income from mutual funds	1,248.49	1,410.13
Dividend from JVs and Subsidiaries/Interest from subsidiaries	38.29	20.81

₹ Crore

	FY 2010-11	FY 2009-10
Income earned on other heads such as hire charges, profit on disposal of assets, etc.	379.73	470.63
Total	**2,517.12**	**2,900.69**
Less: Transfer to EDC/ development of coal mines	24.97	37.89
Less: Transfer to Deferred Foreign Currency Fluctuation Liability	31.34	6.61
Net other income	**2,460.81**	**2,856.19**

Interest income from OTSS bonds (including loan to State Government) for financial year 2010-11 is ₹ 850.61 crore as compared to ₹ 999.12 crore in financial year 2009-10. The reduction in interest income to the extent of ₹ 148.51crore is due to redemption of OTSS bonds amounting to ₹ 1,651.45 crore and repayment of loan amounting to ₹ 47.86 crore in lieu of settlement of dues. We have earned income of ₹ 1,248.49 crore during financial year 2010-11 on account of investments made from surplus cash including Dividend/Income from mutual funds as against ₹1,410.13 crore earned last year. The income on investment of surplus cash including Dividend/Income from mutual funds has registered an 11% decrease over last financial year mainly due to reduction in interest earnings due to low interest rate regime and also due to lower average investment during the current year as against previous year.

We have earned ₹ 35.13 crore as dividend from our investments in joint venture and subsidiary companies. Another ₹ 3.16 crore has been earned as interest from loan of ₹ 21.71 crore extended to Kanti Bijlee Utpadan Nigam Limited, one of our subsidiaries. Further, an amount of ₹ 379.73 crore has been earned from various other sources mainly consisting of miscellaneous income of ₹ 153.80 crore, interest of ₹ 116.16 crore from customers and ₹ 10.81 crore being the surcharge received from customers on late payment as per CERC regulations.

Adjusted Gross Income

The gross income reported for the year includes certain revenues pertaining to previous years. The revenue from sale of electricity for financial year 2010-11 is reduced by ₹ 800.87 crore pertaining to previous years which have been recognized in sales based on the orders of the CERC /Appellate Tribunal. However, the net impact on PAT after adjusting liability towards MPGATSVA tax amounting to ₹ 255.82 crore is ₹ 545.05 crore. Similarly, for financial year 2009-10, an amount of ₹ 119.33 crore pertaining to previous years was included in the sales.

Impact of ₹ 79.75 crore on account of AAD has been explained in earlier paragraphs. Further, impact of Fixed Charges of ₹ 40.49 crore recognized based on CERC orders without considering the five issues challenged by the CERC before the Hon'ble Supreme Court of India on some issues decided by the ATE in respect of which the company has submitted that it would not press for determination of the tariff by the CERC.

The gross income of the company after such adjustments is as under:

₹ Crore

	FY 2010-11	FY 2009-10
Gross Income	**57,399.49**	**49,233.88**
Less:		
Sales of previous years	545.05	119.33
AAD Written Back	79.75	316.80
Impact of Fixed Charges	40.49	0.00
Adjusted Gross Income	**56,734.20**	**48,797.75**

2 Expenditure

2.1 Expenditure related to operations

Year	FY 2010-11	FY 2009-10
Commercial Generation -MUs	220,379	218,439

₹ Crore

Expenditures	FY 2010-11	₹ / kWh	FY 2009-10	₹/ kWh
Fuel	35,373.78	1.60	29,462.74	1.35
Employees' remuneration and benefits	2,789.71	0.13	2,412.36	0.11
Generation, administration and other expenses	2,646.01	0.12	2,094.03	0.10
Total	**40,809.50**	**1.85**	**33,969.13**	**1.56**

The expenditure incurred on fuel, employees, generation, administration and other expenses for the financial year 2010-11 was ₹ 40,809.50 crore which is 20% more than the expenditure of ₹ 33,969.13 crore incurred during the previous year. In terms of expenses per unit of power produced, it was ₹ 1.85 per unit in financial year 2010-11 in comparison to ₹ 1.56 per unit in the previous year. This increase is mainly due to increase in cost of coal and increase in operation and maintenance expenses. The increase in commercial generation due to additional capitalization has resulted in an additional operational expenditure of ₹ 1,955.38 crore. A discussion on each of these components is given below:

2.1.1 Fuel

Expenditure on fuel constituted 87% of the total expenditure relating to operations. Expenditure on fuel was ₹ 35,373.78 crore in financial year 2010-11 in comparison to ₹ 29,462.74 crore in financial year 2009-10 representing an increase of 20%. The break-up of fuel cost in percentage terms is as under:

	FY 2010-11	FY 2009-10
Fuel cost (₹/Crore)	**35,373.78**	**29,462.74**
	% break-up	
Coal	80%	76%
Gas	15%	14%
Oil	1%	5%
Naphtha	4%	5%

The higher fuel expenses were mainly on account of increase in cost of coal partly due to increased consumption resulting from additional capitalization of 990 MW and partly due to increase in price of coal. Coal India Limited (CIL) and Singareni Collieries Company Limited (SCCL) increased the prices of coal by about 10%-15% w.e.f. 16.10.2009 and 30.12.2009 respectively depending upon grade of coal. Coal India has further revised rates of A & B grade coal w.e.f 27.02.2011. Also, the stations generally consumed a greater proportion of costlier imported coal in financial year 2010-11 than in financial year 2009-10. Also, there has been increase in the price of gas and oil during financial year 2010-11. Fuel cost per unit generated increased to ₹ 1.60 in financial year 2010-11 from ₹ 1.35 in financial year 2009-10. The increase in fuel cost due to addition of commercial capacity is ₹ 1,670.99 crore.

The power plants of the company use coal and natural gas as the primary fuels. Oil is used as a secondary fuel for coal-fired plants and naphtha as an alternate fuel in gas-fired plants. Under the tariff norms set by the CERC, your Company is allowed to pass on fuel charges through the tariff, provided the company meets certain operating parameters. The company purchases coal under the long term coal supply agreements with subsidiaries of CIL and with SCCL. A model Coal Supply Agreement (CSA) was signed with CIL on May 29, 2009. Based on the revised model CSA, coal agreements have been signed with the various subsidiary coal companies of CIL by the various coal based stations except Farakka, Kahalgaon and Ramagundam-III. (explained in note 9 of Notes on Accounts, Schedule-26).

As per the provisions of the new CSA, the CSA is valid for 20 years and has a provision for review after every 5 years. The annual quantity envisaged to be supplied to the existing power stations against the various CSAs is 108.9 million tonnes for capacity which were under commercial generation as on March 2009. For units commissioned during financial year 2009-10 and financial year 2010-11 the coal is being supplied under an MOU, as per the allocation made by CEA / coal company. Presently, supply of coal for Farakka-I and Kahalgaon-I are as per the CEA nominated annual quantity of 15.0 million tonnes.

Further, CSAs for Farakka-I, Kahalgaon-I and Ramagundam-III for annual quantity of 16.0 million tonnes are expected to be signed shortly. The CSAs contain a provision for payment of incentive/levy of penalty to/from coal companies on supplies in excess/ short of 90% of the Annual Contracted Quantity (ACQ).

In an effort to encourage coal companies to supply Annual Contracted Quantity (ACQ), new CSA provides for incentive payments as a percentage of Weighted Average base price of coal in the following three slabs:

Supplies in the range of	Rate of Incentive
90%-95% of the ACQ	10%
95%-100% of the ACQ	20%
Supplies exceeding ACQ	40%

CSA also contains clauses of penalty at the same rate as that for payment of incentive for under supply/ under off-take by coal companies and power plants respectively. The price and other charges for coal, as per new CSA, will be as notified by CIL for its subsidiary companies from time to time.

During the financial year 2010-11, coal based stations consumed 136.95 Million Tonnes of coal as against 134.96 Million Tonnes in the financial year 2009-10. This was including 10.58 Million Tonnes of coal which was imported as compared to 6.76 Million Tonnes imported in financial year 2009-10.

In order to ensure uninterrupted supply of coal to its power stations, your company during financial year 2010-11 continued to source coal through e-auction and bilateral arrangements. A bilateral agreement has been reached with SCCL for supply of 5.0 million tonnes of C/D/E grade coal. These supplies are at a premium of ₹ 781/MT over SCCL's revised notified price of 30th Dec 2009. Further, a bilateral agreement has been reached with Eastern Coalfields Limited (ECL) for supply of 2.50 million tonnes of A/B/C grade coal, beyond the annual linkage quantity, to Farakka & Kahalgaon at prices which are approximately at 100% premium to the notified price. Your Company participated in 24 e-auctions (18 Spot and 6 Forward) announced by various coal subsidiaries of CIL. Against these e-auctions, about 1.22 Million MT (0.46 MMT in Spot and 0.76 MMT in Forward) of Grade 'B' to Grade 'F' coal was allotted.

The company sources gas domestically under an administered price mechanism regime. The main gas supplier is GAIL. Gas prices are fixed by the Ministry of Petroleum and Natural Gas. 13.77 Million Metric Standard Cubic Meters per Day (MMSCMD) of gas was received during the financial year 2010-11 as against 13.88 MMSCMD received in financial year 2009-10. This includes 1.17 MMSCMD of spot gas and fall back gas and 1.91 MMSCMD of KG D6 gas.

NTPC has signed Gas Supply Agreements (GSAs) with GAIL for supply of Administered Price Mechanism (APM) gas and Panna Mukta Tapti (PMT) gas to Anta, Auraiya, Dadri, Faridabad, Kawas & Gandhar for a combined quantity of 14.76 MMSCMD. The validity of the APM gas agreements is upto 6th July 2021 while the PMT gas agreements are valid upto 21st Dec 2019. As per the terms of these agreements, the gas price is regulated in terms of the Government Pricing Orders issued from time to time. The present applicable price of APM/PMT gas (at APM price) inclusive of royalty is US$ 4.2/ MMBtu as per GOI order dated 31.05.2010. The total quantity of APM & PMT gas supplied during the year 2010-11 was 3,280 MMSCM.

A Long term agreement has been signed with GAIL for supply of 2.0 MMSCMD RLNG on firm basis and 0.5 MMSCMD on fallback basis for NCR stations viz Anta, Auraiya, Dadri & Faridabad valid upto 2019. The price is as declared on a monthly basis by Petronet LNG Ltd as per directives of GOI on "pooled price basis". Around 615 MMSCM of RLNG were supplied by GAIL during the year 2010-11 under this agreement.

Government of India has allocated 4.46 MMSCMD of KG D6 gas of RIL for NCR stations of Anta, Auraiya, Dadri & Faridabad. Gas Supply & Purchase Agreements (GSPA) have been signed with Reliance Industries Ltd. (RIL) and its JV partner Niko for the supply of 2.30 MMSCMD of this gas which is valid till March 2014. The GSPA for balance quantity of 2.16 MMSCMD is under negotiation. The pricing of this gas is as decided by the Empowered Group of Ministers (EGOM), which at present is US $ 4.20 /MMBtu. The total quantity of KG D6 gas supplied during the year 2010-11 was 697 MMSCM.

To meet the shortfall in supply of gas, your Company procures Spot RLNG on limited tender basis from domestic suppliers and on 'Single Offer' basis from public sector gas marketing companies. During the year 2010-11, nine rounds of tendering have been done on spot basis and five on 'Single Offer' basis. The approximate delivered price for these supplies ranged between US$ 7.83/MMBtu to US$ 17.90/ MMBtu which has been off-taken strictly in the ascending order of prices. These RLNG supplies are being contracted on reasonable endeavor basis with no penalty on either party for short supply / short off take.

Your Company has also entered into fallback agreements with GAIL/IOCL/BPCL/GSPCL for supply of RLNG on reasonable endeavor basis. The approximate delivered price for these supplies on 'Pooled Price' basis ranged between US$ 7.87 / MMBtu to US$ 9.56 / MMBtu.

Rajiv Gandhi Combined Cycle Power Project (RGCPP), Kerala generates power on naphtha as no gas supply is available. Besides RGCPP, other gas based stations also used Naphtha depending upon the demand from customers and schedule from load dispatch centres. During the financial year 2010-11, 0.337 million MTs of naphtha was consumed as against 0.578 million MTs in the previous year.

2.1.2 Employees' Remuneration and Benefits

Employees' remuneration and benefits have increased by 15% from ₹ 2,412.36 crore in financial year 2009-10 to ₹ 2,789.71 crore in financial year 2010-11 of which ₹ 69.48 crore is due to additional commercial capacity. Employees' remuneration and benefits expenses include salaries and wages, bonuses, allowances, benefits, contribution to provident and other funds and welfare expenses. These expenses account for approximately 7% of our operational expenditure in financial year 2010-11.

The main reason for increase in employee cost is normal increments, increase in Dearness Allowance, one time expenditure towards gold coins distributed to commemorate the Maharatna Status accorded to NTPC and on account of liveries. There is an increase in the employee cost per unit of generation from ₹ 0.11 in the previous financial year to ₹ 0.13 in the current financial year.

2.1.3 Generation, Administration and Other Expenses

Generation, administration and other expenses consist primarily of repair and maintenance of buildings, plant and machinery, power and water charges, security, insurance, training and recruitment expenses and expenses for travel and communication. These expenses have remained at approximately 6% of our operational expenditure in financial year 2010-11. In absolute terms, these expenses increased to ₹ 2,646.01 crore in financial year 2010-11 from ₹ 2,094.03 crore in financial year 2009-10 registering a hike of 26%. In terms of expenses per unit of generation, it is ₹ 0.12 in financial year 2010-11 as compared to ₹ 0.10 in previous financial year. An increase of ₹ 18.24 crore is attributable to addition of commercial capacity during financial year 2010-11.

Repair & Maintenance expenses constitute 55% of total Generation, Administration and Other Expenses and have increased to ₹ 1,477.94 crore from ₹ 1,278.36 crore resulting in an increase of 15%.

The other increase in generation & administration expenses is mainly attributable to increase in water charges. Water charges have increased by 127% from ₹ 129.57 crore in financial year 2009-10 to ₹ 294.48 crore in financial year 2010-11 due to revision of water charges in certain stations.

As per CERC Regulations, the generating companies who use the inter–state transmission network or the associated facilities and services of National Load Despatch Centre and Regional Load Despatch Centres are required to share the Load Depsatch Centre charges. Accordingly, an amount of ₹ 98.35 crore was booked towards Regional Load Despatch Centre charges.

2.1.4 Adjusted Expenditure related to Operations

If the impact of one-off items/extraordinary items is adjusted, the operational expenditure for the financial year 2010-11 and financial year 2009-10 would be as follows:

₹ Crore

	FY 2010-11	FY 2009-10
Total Expenditure related to Operations	**40,809.50**	**33,969.13**
Less:		
Additional Increment/ Gold Coins	117.36	-
RLDC Charges	98.35	-
Additional Water Charges	164.91	-
Adjusted Expenditure related to Operations	**40,428.88**	**33,969.13**

2.2 Depreciation

The depreciation charged to the profit and loss account during the year was ₹ 2,485.69 crore as compared to ₹ 2,650.06 Crore in financial year 2009-10, registering a decrease of 6%. The reduction in the amount of depreciation is due to change in the accounting policy pursuant to the opinion expressed by the Comptroller & Auditor General of India as mentioned above (refer Note 16 of Schedule 26).

During the year, the Office of the Comptroller & Auditor General of India has expressed an opinion that power sector companies shall be governed by the rates of depreciation notified by the CERC for providing depreciation in respect of generating assets in the accounts instead of the rates as per the Companies Act, 1956. Accordingly, the Company revised its accounting policies relating to charging of depreciation w.e.f. 1st April 2009 considering the rates and methodology notified by the CERC for determination of tariff through Regulations, 2009. In case of certain assets, the Company has continued to charge higher depreciation based on technical assessment of useful life of those assets. Consequent to this change, depreciation for the year is lower by ₹ 279.62 crore.

During the year, the gross block has increased by ₹ 5,905.08 crore i.e. from ₹ 66,850.07 crore in the previous financial year to ₹ 72,755.15 crore in the current financial year. The increase in gross block is largely on account of increase in commercial capacity by 990 MW resulting from additional capitalization amounting to ₹ 4,640 crore mainly on account of unit 6 of NCTPP Stage-II and unit 7 of Korba Stage III. Further, depreciation for units 5 of 490 MW of NCTPP Dadri Stage-II and units 7 of 500 MW each at Kahalgaon-II were charged pro-rata during financial year 2009-10 while depreciation on the same has been charged for the entire financial year 2010-11. The impact on depreciation from additional capitalization during the financial year 2010-11 is ₹ 196.67 crore.

2.3 Provisions made (and written back)

During the financial year 2010-11, the Company had made provisions amounting to ₹ 1,552.15 crore in comparison to ₹ 10.90 crore provided for in financial year 2009-10. For the current year provisions include an amount of ₹ 1,526.45 crore towards tariff adjustment. This amount has been provided for in view of an appeal by CERC in the Supreme Court against issues decided by APTEL in favour of NTPC (refer Note 2 (d) Schedule 26) and CERC draft notification dated 3rd September 2010 (refer Note 3 (b) Schedule 26). During the financial year 2010-11, the Company had also written back provisions made in earlier years amounting to ₹ 7.81 crore in comparison to ₹ 12.77 crore of provisions written back in financial year 2009-10.

2.4 Interest and Finance Charges

The interest and finance charges for the financial year 2010-11 were ₹ 2,149.08 crore in comparison to ₹ 1,808.93 crore in financial year 2009-10. The details of interest and finance charges are tabulated below:

₹ Crore

	FY 2010-11	FY 2009-10
Interest Charges:		
Interest on borrowings	2,854.39	2,480.66
Others	75.85	38.64
Total Interest charges	**2,930.24**	**2,519.30**
Finance Charges	788.60	770.34
Exchange differences regarded as adjustment to interest costs	174.16	0.04
Total	**3,893.00**	**3,289.68**
Less: Adjustments and transfers		
Interest charges capitalised	1,695.46	1,448.37
Finance charges capitalised	26.16	32.37
Exchange differences	14.63	0.01
Transfer to Coal Mines	7.67	0.00
Interest and finance charges capitalised	1,743.92	1,480.75
Net interest and finance charges	**2,149.08**	**1,808.93**

Interest amount on long term borrowings (including Interest during Construction) has increased by 15% over last financial year due to increase in long term borrowings (net of repayment) during the year by ₹ 5,391.02 crore. The average cost of borrowing has increased marginally to 7.2985% in financial year 2010-11 from 7.1576% in previous financial year mainly due to the repayment of loan carrying lower rate of interest and raising of new loan at comparatively higher rate of interest. Our borrowings are denominated in Rupees and foreign currencies.

The exchange differences in respect of overseas borrowings relating to fixed assets/capital work-in-progress are treated in accordance with provisions of Accounting Standard (AS) 11 issued by ICAI based on guidelines issued under Companies (Accounting Standards) Rules, 2006 issued by National Advisory Committee on Accounting Standards from time to time. Out of this, the exchange differences in respect of assets during the period of construction /renovation and modernisation are capitalized by transfer to EDC.

During the financial year 2010-11, an unfavourable exchange rate variation treated as adjustment to interest costs amounting to ₹ 174.16 crores has increased the interest expenses as against ₹ 0.04 crores in financial year 2009-10. The reason for substantial increase in adverse amount of exchange rate variation is the fluctuation in the currencies of our foreign currency denominated loans against Indian rupee namely, US dollar marginally reduced by 1%, while Japanese Yen and Euro increased by 12% and 4% respectively. The USD, Japanese yen and Euro denominated loans contributed to about 67%, 29% and 4% respectively in the loan basket at the end of financial year 2010-11 as compared to 68%, 28% and 4% in previous financial year.

During financial year 2010-11, increase in interest charges (others) is mainly on account of interest paid on land compensation cases for one of our gas project.

The finance charges have increased by 2% from ₹ 770.34 crore in financial year 2009-10 to ₹ 788.60 crore in financial year 2010-11. The increase is mainly due to increase in rebate payable to customers as per the Rebate Scheme of the company from ₹ 693.73 crore in previous financial year to ₹ 711.28 crore in current financial year. In order to secure 100% realization of amounts billed, the Company had introduced a revised Rebate Scheme for the year 2010-11. The current Rebate Scheme provides for a rebate of 2% on the amounts credited to the Company's account on the 6th day of a calendar month which gets reduced on graded basis for each day's delay upto the 31st day of the month provided that entire amount is credited to the Company's account. No rebate is allowed beyond last day of the month.

For the financial year 2010-11, an amount of ₹ 1,736.25 crore (excluding ₹ 7.67 crores transferred to Development of Coal Mines) relating to interest and finance charges of projects under construction was capitalized while the corresponding amount for the previous year was ₹ 1,480.75 crore. Thus, interest and finance charges capitalized registered an increase of 17**%.**

The interest and finance charges for financial year 2010-11 after these adjustments and without taking into account the exchange differences treated as adjustment to interest costs is ₹ 2,149.08 crore.

₹ Crore

	FY 2010-11	FY 2009-10
Total Interest charges less interest charges capitalised	1,234.78	1,070.93
Total Finance charges excluding finance charges capitalized	762.44	737.97
Net interest and finance charges	**1,997.22**	**1,808.90**
Add : Adjustment of exchange diff. regarded as borrowing cost	159.53	0.03
Less: Interest cost on account of hydro project/arbitration award		28.75
Less : Transferred to Development of Coal Mines	7.67	
Total Adjusted Interest and Finance charges	**2,149.08**	**1,780.18**

2.5 Prior period income / expenditure

Certain elements of income and expenditure have been charged to the profit and loss account relating to previous years. For the financial year 2010-11 a net amount of ₹ 1,638.72 crore was booked as prior period income whereas a net amount of ₹ 77.83 crore was accounted as prior period income to the profit and loss account in the previous year. During the year, the Company has revised its accounting policies relating to charging of depreciation w.e.f. 1st April 2009 considering the rates and methodology notified by the CERC for determination of tariff through Regulations, 2009. Consequent to this change, prior period depreciation written back is ₹1,116.50 crore. Consequently, the amount of AAD required to meet shortfall in the component of depreciation in revenue over the depreciation to be charged off in future years has been reassessed and the excess amount of ₹ 727.49 crore has been recognised as prior period sales. Further, the amount recoverable form beneficiaries on account of deferred tax materialised for financial year 2009-10 has been reassessed and excess amount of ₹ 212.67 crore has been reversed as prior period sales. (explained in note 16 of Notes on Accounts, Schedule-26)

3. Profit before tax, provisions and prior period adjustments

The profit of the Company before tax and prior period adjustments for the current and the previous year, both on reported and adjusted basis, is tabulated below:

₹ Crore

	Reported		Adjusted	
	FY 2010-11	FY 2009-10	FY 2010-11	FY 2009-10
Gross Income	57,399.49	49,233.88	56,734.20	48,797.75
Less:				
Expenditure related to operations	40,809.50	33,969.13	40,428.88	33,969.13
Depreciation	2,485.69	2,650.06	2,765.31	2,650.06
Interest and Finance charges	2,149.08	1,808.93	2,149.08	1,780.18
One time FERV impact			(84.64)	
Profit before tax, prov. & prior period adjust.	11,955.22	10,805.76	11,475.57	10,398.38

4. Provision for Tax

The Company provides for current tax and deferred tax computed in accordance with provisions of Income Tax Act, 1961.

Under Tariff Regulations, 2009, w.e.f. 1st April 2009, income tax is recoverable on normative basis as Return on Equity following the applicable rate of tax for respective year. The actual income tax liability, if any, (more or less than the normative) is to be borne by the company. Accordingly, provision for current tax has been computed at the applicable rate of 33.2175% for the financial year 2010-11.

The deferred tax liability related to the period upto 31st March 2009 is recoverable from customers as and when the same materializes. However, the deferred tax liability/asset for the period after 1st April 2009 is to the account of the company.

Provision for Current Tax

A total provision of ₹ 2,553.32 crore has been made towards current tax for the year.

The amount recoverable form beneficiaries on account of deferred tax materialised for financial year 2009-10 has been reassessed and excess amount of ₹ 212.67 crore has been reversed as prior period sales with an equivalent reduction in provision for tax of earlier years.

Provision for deferred tax

Due to change in Accounting Policy of the company in respect of depreciation charged as per CERC guidelines w.e.f. 01.04.2009, the Deferred Tax Liability (net) and deferred tax recoverable from SEBs as at 31st March 2009 has been reworked. The Deferred Tax Liability arisen during the year on account of timing difference is ₹ 393.69 crore and has been debited to Profit and Loss Account

₹ Crore

FY 2009-10				
	Current tax	Deferred tax	FBT*	Total
Provision for FY 2009-10	2,470.84	209.13	-	2,679.97
Adjust. for earlier years	(525.40)	-	2.69	(522.71)
Net prov. as per P&L A/C	1,945.44	209.13	2.69	2,157.26

FY 2010-11				
	Current tax	Deferred tax	FBT*	Total
Provision for FY 2010-11	2,497.30	133.24	-	2,630.54
Adjust. for earlier years	56.02	260.45	-	316.47
Net prov. as per P&L A/C	2,553.32	393.69	-	2,947.01

* Fringe Benefit Tax

Net provision of tax for the financial year 2010-11 was ₹ 2,947.01 crore in comparison to ₹ 2,157.26 crore in the financial year 2009-10, an increase of ₹ 789.75 crore. The net tax was higher during financial year 2010-11 on account of restatement of Deferred Tax Liability & Deferred Tax Recoverable as on 31.03.2010 and impact of change in depreciation policy.

5. Profit After Tax before provisions made and written back and prior period adjustments

	Reported (₹/Crs)		Adjusted (₹/Crs)	
	FY 2010-11	FY 2009-10	FY 2010-11	FY 2009-10
Profit before tax, provisions and prior period adjustments	**11,955.22**	**10,805.76**	**11,475.57**	**10,398.38**
Tax as per P&L	(2,947.01)	(2,157.26)	(2,947.01)	(2,157.26)
Deferred Tax impact			393.69	209.00
Profit after tax (before prov. and prior period adjust.)	**9,008.21**	**8,648.50**	**8,922.25**	**8,450.12**

The profits before prior period adjustments and provisions on reported basis have grown by 4% while on an adjusted basis has increased by 6%.

6. Net Profit After Tax

The net profit after tax after provisions (made and written back) and prior period adjustments on a reported and adjusted basis are as follows:

₹ Crore

	Reported		Adjusted	
	FY 2010-11	FY 2009-10	FY 2010-11	FY 2009-10
Profit after tax (before provisions and prior period adjustments)	**9,008.21**	**8,648.50**	**8,922.25**	**8,450.12**
Provisions (net of write back)	(1,544.34)	1.87	(17.89)	1.87
Add : Prior period adjustments	1,638.72	77.83	7.40	
Net profit after tax	**9,102.59**	**8,728.20**	**8,911.76**	**8,451.99**

Prior Period adjustments include ₹ 212.67 crores representing amount recoverable from beneficiaries on account of deferred tax materialized for financial year 2009-10 which was re-assessed and excess amount was reversed as prior-period sales with equivalent reduction in provision for tax of earlier years in P&L. (refer note 16 of schedule 26 – notes on accounts)

On a reported basis, the net profit after tax for the financial year 2010-11 has increased by about 4.29% while on an adjusted basis, the net profit after tax has increased by 5.44%.

7. Segment-wise performance

For the purpose of compiling segment-wise results, the business of the Company is segregated into 'Generation' and 'Other Business'. The Company's principal business is generation and sale of bulk power. Other business includes providing consultancy, project management and supervision, oil and gas exploration and coal mining.

The profit before tax and interest in the generation business for the financial year 2010-11 was ₹ 12,094.83 crore as against ₹ 10,152.53 crore for financial year 2009-10. Excluding income tax payable/recoverable from customers amounting to ₹ 360.23 crore for financial year 2010-11 and ₹ 471.46 crore for financial year 2009-10, the above has increased by 10% mainly on account of increased generation. For the profit before tax on 'Other Business' represented by income from consultancy, the same was ₹ 50.20 crore for financial year 2010-11 and ₹ 58.16 crore for the previous financial year registering a decline of 14%.

B Financial Position

1 Net worth

The net worth of the Company at the end of financial year 2010-11 increased to ₹ 67,892.25 crore from ₹ 62,437.42 crore in the previous year registering an increase of 8.74% due to retained earnings. Correspondingly, the book value per share also increased from ₹ 75.72 to ₹ 82.34.

2 Loan Funds

The loans as on March 31, 2011 were ₹ 43,188.24 crore in comparison to ₹ 37,797.02 crore as on March 31, 2010. A summary of the loans outstanding is given below:

₹ Crore

	As at March 31		% change
	2011	**2010**	
Secured Loans			
Bonds	9,495.00	8,550.00	11%
Foreign Currency terms loans	414.47	528.65	-22%
Other	1.21	1.27	-5%
Sub-total	**9,910.68**	**9,079.92**	**9%**
Unsecured Loans			
Fixed Deposits	13.26	13.39	-1%
Foreign Currency Bonds / Notes	1,356.90	2,283.50	-41%
Foreign Currency loans	8,919.59	7,541.69	18%
Rupee term loans	22,912.81	18,078.52	27%
Bonds	75.00	800.00	-91%
Sub-total	33,277.56	28,717.10	16%
Total	**43,188.24**	**37,797.02**	**14%**

Over the last financial year, the debt has registered a growth of 14%. Debt amounting to ₹ 9,045.79 crore was raised during the year 2010-11. The amount raised through Term Loans, Bonds and Foreign Currency Borrowings was used for capital expenditure and refinancing, while amount raised through deposits have been used for working capital purposes. The domestic debt funds included term loans amounting to ₹6,625 crore and bonds aggregating to ₹ 720.00 crore.

₹ Crore

Source	Debt Raised & Utilised	Re-payment	Net
Term Loan	6,625.00	1,790.71	4,834.29
Bonds	720.00	500.00	220.00
Foreign Currency Debt	1,699.75	1,706.55	-6.80
Others (Public deposits/ finance lease)	1.04	1.24	-0.20
Total	**9,045.79**	**3,998.50**	**5,047.29**
FERV on FC Borrowings			343.93
Total			**5,391.22**

Banks and Domestic financial institutions continued to show interest in extending term loans for financing the on-going capacity expansion plans. During the year, fresh agreements for term loans aggregating ₹ 3,479.00 crore were entered into including the Loan Agreement of ₹ 2,000 crore with HUDCO Ltd. to finance capital expenditure of power generation projects, Coal Mining business and Renovation and Modernization activity. The cumulative amount of domestic loans tied up till March 31, 2011 is ₹ 52,787.35 crore.

Your Company has redeemed bonds amounting to ₹ 500 crore during the year. Repayments amounting to ₹ 1,790.71 crore were made under various term loans extended by Indian Banks and Indian Financial Institutions. Repayment of ₹ 1,706.55 crore was made during the year towards foreign currency loans. Fixed Deposits for ₹ 0.6 crore were also discharged during the year.

The credit rating of the Company as an issuer by CRISIL and ICRA continues to be highest i.e. 'AAA' and 'IRAAA' respectively. Further, the rating assigned by CRISIL, ICRA and CARE for rupee bonds program continued to be 'AAA', 'LAAA' and 'CARE AAA' respectively, being the highest rating. The ratings assigned by CRISIL for Company's Fixed Deposit Schemes is 'FAAA'. During the rating exercise of our domestic borrowings from banks including the amounts committed by them both CRISIL and ICRA has assigned the highest rating i.e. 'AAA' and 'LAAA' respectively.

During the year, Standard and Poors' and Fitch Ratings continued to maintain the 'BBB-/Stable' rating for the company. The Company's foreign currency ratings are at par with sovereign ratings of India.

The debt to equity ratio at the end of financial year 2010-11 of the Company increased to 0.64 from 0.61 at the end the previous financial year. The Debt Service

Coverage Ratio (DSCR) for the year is 2.57 and Interest Service Coverage Ratio for financial year 2010-11 is 11.42.

Formula used for computation of coverage ratios DSCR = Earnings before Interest, Depreciation and Tax/ (Interest net off transferred to expenditure during construction + Principal repayment) and ISCR = Earnings before Interest, Depreciation and Tax/(Interest net off transferred to expenditure during construction).

The maturity profile of the borrowings by the Company is as under:

₹ Crore

	Rupee Loans incl. Bonds & PDS	Foreign Currency loans	Total
Within 1 year	2,526.10	925.33	3,451.43
2 – 3 years	6,559.98	1,949.58	8,509.56
4 – 5 years	6,819.11	2,509.76	9,328.87
6 – 10 years	13,440.51	3,533.09	16,973.60
Beyond 10 years	3,151.58	1,773.20	4,924.78
Total	**32,497.28**	**10,690.96**	**43,188.24**

3 **Fixed Assets**

During the year Gross Block of the company increased by 9% over the previous year which translated to ₹ 5,905.08 Crore. This was on account of capitalization of one unit of Korba-II (500MW) Power Project and one unit of Dadri-II (490MW) Power Project. Net Block however, increased by 13%. This was due to the fact that the company revised its depreciation policy in line with opinion expressed by Comptroller & Auditor General of India (explained in Note 16 of Notes on Accounts, Schedule 26) Due to increase in construction activities, there was an addition of ₹ 6,563.95 crore in the capital-work-in-progress registering an increase of 25% over the last year. There was a decrease of 7% in Construction Stores and Advances. On overall basis, Capital Works in Progress and Construction stores and Advances increased by 19%.

₹ crore

	As at March 31		% Change
	2011	2010	
Gross block	72,755.15	66,850.07	9%
Net Block	39,235.96	34,761.29	13%
Capital Work-in-Progress	33,326.34	26,762.39	25%
Construction stores and advances	4,944.29	5,341.92	-7%
CWIP + Construction stores & Adv.	38,270.63	32,104.31	19%
Total fixed assets	**77,506.59**	**66,865.60**	**16%**

4 **Investments**

Investments consist mainly of Bonds issued under One Time Settlement Scheme, Bonds issued against outstanding dues and equity participation in joint ventures and subsidiaries. The investments also include the deployment of surplus cash generated out of operations in various treasury instruments issued by Government of India. During financial year 2010-11, the investments decreased by about 17%. Broadly, the break-up of investments is as follows:

₹ Crore

	As at March 31	
	2011	2010
Bonds issued under One time settlement scheme	8,170.29	9,821.74
Investments in Joint Ventures	3,121.63	2,480.31
Investment in subsidiaries	865.88	549.55
Investment of surplus cash in various instruments	175.04	1,943.49
Others	12.00	12.00
Total investments	**12,344.84**	**14,807.09**

Bonds issued against settlement of receivables account for 66% of total investments at the end of financial year 2010-11. Bonds under One Time Settlement Scheme (OTSS) amounting to ₹ 1,651.45 crore were redeemed during the year as per scheduled redemption. These OTSS bonds carry a 'call option' giving right to SEBs to redeem the bonds before scheduled redemption date. However, no call option was exercised by any SEB during the year 2010-11.

Your company invested ₹ 641.32 crore in following joint ventures during the year:

₹ Crore

Name of JV	Amount
NTPC-Tamil Nadu Energy Company Ltd.	200.50
Meja Urja Nigam Private Limited	35.00
National Power Exchange Ltd.	1.36
Nabinagar Power Generating Company Pvt Ltd.	58.00
National High Power Test Laboratory Private Ltd.	1.74
International Coal Ventures Ltd.	1.30
Aravali Power Co. Pvt Ltd	318.96
Energy Efficiency Services Ltd.	24.38
CIL-NTPC Urja Pvt Ltd	0.08
Total	**641.32**

The company also invested ₹ 316.71 crore in subsidiaries as under:

₹ Crore

Name of Subsidiary	Amount
NTPC Hydro Ltd.	11.91
Bhartiya Rail Bijlee Company Ltd.	142.31
Kanti Bijlee Utpadan Nigam Ltd.	162.49
Total	**316.71**

During the year one subsidiary 'Pipavav Power Development Co. Ltd' (PPDCL) was wound up and its name was struck off from the register of companies on 28.01.2011. Accordingly, investment in the PPDCL amounting to ₹ 0.38 crore was set off in full against the amount received from GPCL in the earlier years in this regard.

There was an investment of surplus funds in short term funds for ₹ 175.04 crore.

5 Current Assets

The current assets as on March 31, 2011 and March 31, 2010 and the changes therein are as follows:

₹ crore

Current Assets	As at March31		YoY	%
	2011	2010	Change	Change
Inventories	3,639.12	3,347.71	291.41	9%
Total Debtors	10,291.60	7,487.50	2,804.10	37%
Less: Provisions	2,367.29	836.04	1,531.25	183%
Net Sundry Debtors	7,924.31	6,651.46	1,272.85	19%
Cash and Bank balances	16,185.26	14,459.48	1,725.78	12%
Other Current Assets	1,046.97	844.04	202.93	24%
Loans and Advances	6,601.13	5,513.11	1,088.02	20%
Total Current Assets	**35,396.79**	**30,815.80**	**4,580.99**	**15%**

A major portion of current assets comprised of Cash and Bank balances. As on March 31, 2011, cash and bank balances stood at ₹ 16,185.26 crore being 46% of the total current assets in comparison to ₹ 14,459.48 crore as at March 31, 2010 which was 47% of the total current assets as on that date. Of this, ₹15,858.92 crore was kept as term deposits with banks as on March 31, 2011 while the term deposits for the last year was ₹ 13,825.52 crore.

The next largest component of current assets is Sundry Debtors. As on 31st March, 2011, Total Sundry Debtors amounted to ₹10,291.60 crore which is 18.7% of sales and equivalent to 68 days sales. The corresponding figure as on 31st March, 2010 was ₹ 7,487.50 crore which was 16.2% of sales and equivalent to 51 days sales.

The total sundry debtors include unbilled amount of ₹ 2,698.86 crore (previous year ₹ 1,001.15 crore) in accordance with Accounting Policy No. 12.1 as explained in Note 3(a) of Notes on Accounts, Schedule 26. The Sundry Debtors outstanding net of unbilled debtors is ₹ 7,592.74 crore and is equivalent to 51 days sales.

Provision of Doubtful debts/tariff adjustment as on 31-03-2011 is ₹ 2,367.29 crore and the details of such provision are as under:

₹ crore

S.No	Description	Amount
1.	DVB	835.97
2.	On Appeals of CERC pending disposal by Hon'ble Supreme Court	1,262.86
3.	Estimated impact of proposed amendment to Regulations,2009	263.59
4.	Others	4.87
	Total	**2,367.29**

The existing provision of ₹ 835.97 crore in respect of dues of Delhi Vidyut Board is being maintained pending resolution of the issue of its realization.

The Company reviewed the balance appearing in Sundry Debtors account as on 31-3-2010 and as a matter of abundant precaution and to present conservative view in the Accounts to various stakeholders, provision for tariff adjustment has been created for the impact of the issues challenged by CERC in the Hon'ble Supreme Court on orders of APTEL for the period 2004-09, for the issues where the Company has given an undertaking for not pressing for determination of tariff by CERC. During the year, the Company has provided an amount of ₹ 1,262.86 crore as Tariff Adjustment.

During the year, CERC issued draft notification of proposed amendment to Tariff Regulations,2009 for upfront truing up of Capital Cost as on 1-4-2009, with regard to undischarged liability for tariff determination. Hence, ₹ 263.59 crore has been provided as Tariff Adjustment for the impact of liabilities in capital cost for the years 2009-10 & 2010-11.

Loans and advances increased by 20% as compared to previous financial year on account of higher advance tax and tax deducted at source (Net of Provision for tax), claims recoverable from Government on account of scrapping of project at Loharinagpala and claims against railways.

The Loan and advances as on 31.03.2011 comprise of ₹ 2,617.90 crore towards advance tax and tax deducted at source (net of provisions), ₹ 748.82 crore being claim recoverable towards Loharinagpala (explained in Note 11 of Notes on Accounts, Schedule 26) and ₹ 781.35 crore being claims against railways.

Loan and Advances also include a loan of ₹ 574.36 crore to the Government of Delhi subsequent to the conversion of the dues of Delhi Vidyut Board under the one-time-settlement scheme. The Government of Delhi pays 8.5% tax-free interest on this loan.

The other loans and advances are mostly to suppliers and contractors and also on account of advances extended to employees for various purposes such as building of house, purchase of vehicles etc. as per the policies of your Company. The advances to employees have come down from ₹ 153.89 crore as on 31.03.2010 to ₹ 11.61 crore as on 31.03.2011 mainly due to adjustment of adhoc advances to employees pending pay revision against liability for pay revision appearing in current liabilities.

Inventories as at March 31, 2011 were ₹ 3,639.12 crore being 10% of current assets as against ₹ 3,347.71 crore as on March 31, 2010. Inventories mainly comprise of components and spares and coal which are maintained for operating plants. Components and spares were ₹1,741.25 crore as against ₹ 1,649.94 crore in previous year end. Coal inventory amounted to ₹ 1,255.50 crore as against ₹ 1,117.54 crore in previous year.

6 Current Liabilities

₹ crore

	As at March 31		YoY change	% change
	2011	2010		
Liabilities	10,320.48	7,687.58	2,632.90	34%
Provisions	2,752.43	3,070.58	-318.15	-10%
Total Current Liabilities	**13,072.91**	**10,758.16**	**2,314.75**	**22%**

The current liabilities as at March 31, 2011 were ₹ 10,320.48 crore as against ₹ 7,687.58 crore in the previous year. The current liabilities mainly comprise of creditors for capital expenditure, creditors for supply of goods and services, deposits and retention money from contractors. The creditors and retention money, deposits etc. at the end of the year stood at ₹ 9,237.65 crore as against ₹ 6,884.40 crore in the previous year.

The increase is mainly on account of increased construction activities at Barh, Rihand and Vindhyachal, amount payable to railways and to fuel suppliers. Further, there has been an increase in retention money from vendors.

Besides these, advances from customers as on 31.03.2011 was ₹ 451.25 crore as against ₹ 293.54 crore in the previous year. An amount of ₹ 252.22 crores has been shown as advance from customers pending disposal of certain issues challenged by them before Hon'ble Supreme Court. (Refer Note 2(f) of Notes on Accounts, Schedule 26.)

7 Provisions

As on March 31, 2011, your Company had provisions outstanding amounting to ₹ 2,752.43 crore as against ₹ 3,070.58 crore on 31st March 2010. This mainly comprised ₹ 1,731.97 crore (previous year ₹ 2,034.57 crore) being provision for estimated employee benefits under AS 15 (Revised 2005) -"Employee Benefits" and provision towards employee pension scheme (refer Note 5 of notes on Accounts, sch. 26).

The provision in current year is lower mainly due to reduction in provision amount after payment of pay revision arrears to employees on finalization of pay-revision of employees in non-executive category.

Further, provisions include ₹ 659.63 crore on account of proposed dividend which would be paid subject to approval of our shareholders. The income tax payable on the proposed dividend is ₹ 103.93 crore included in the Provisions of financial year 2010-11.

8 Cash flows

Cash, cash equivalents and cash flows on various activities for the past five years are tabulated below:

₹ crore

	For the year ended March 31				
	2011	2010	2009	2008	2007
Opening Cash & cash equivalents	**14,460**	**16,272**	**14,933**	**13,315**	**8,471**
Net cash from operating activities	11,095	10,611	9,688	9,786	8,066
Net cash used in investing activities	-7,659	-10,514	-7,500	-5,819	-3,146
Net cash flow from financing activities	-1,711	-1,909	-849	-2,349	-76
Change in Cash and cash equivalents	1,725	-1,812	1,339	1,618	4,843
Closing cash & cash equivalents	**16,185**	**14,460**	**16,272**	**14,933**	**13,315**

Net cash used in investing activities decreased by 27% and was ₹ 7,659 crore in financial year 2010-11 as compared to ₹ 10,514 crore in the previous year. Cash flows on investing activities arise from expenditure on setting up power projects, investment of surplus cash in various securities, investments in joint ventures and subsidiaries. Cash invested on purchase of Fixed Assets increased by 3% i.e from ₹ 10,791 crore in 2009-10 to ₹ 11,115 crore in 2010-11. During the year, there was sale of non-trade investments and redemption of OTSS Bonds. Cash flows from sale of investment (Net of purchase of investment) was ₹ 3,420 crore. However, no call option was exercised by SEBs on OTSS bonds during the financial year 2010-11. The net investment in Joint Venture companies and subsidiaries was ₹ 957.65 crore in current financial year as against ₹ 742.51 crore during previous year. Cash generated from investing activities also reduced due to reduction in interest amount on OTSS bonds.

During the year, out of cash raised from operating activities the company paid net ₹ 1,711 crore of cash for servicing financing activities as against ₹1,909 crore in the previous year. During the financial year 2010-11 the company had an inflow of ₹ 9,845 crore from long term borrowings as against ₹ 6,982 crore in the previous year. Cash used for repayment of long term borrowings during the current financial year was ₹ 4,797 crore as against ₹ 2,655 crore repaid in the previous year. Cash used for paying dividend and the tax thereon was ₹ 3,651 crore.

BUSINESS AND FINANCIAL REVIEW OF SUBSIDIARIES

Your Company has five subsidiary companies as on 31.03.2011 out of which three are wholly owned by NTPC. During the year, the Registrar of Companies, Government of Delhi and Haryana has under Section 560 of the Companies Act, 1956 struck off the name of Pipavav Power Development Company Limited (wholly owned subsidiary of NTPC Ltd.).

The detailed financial statements of the subsidiaries are included in this Annual Report elsewhere. The performance of the five subsidiaries is briefly discussed here:

(a) NTPC Electric Supply Company Limited (NESCL)

The financial highlights of the Company are as under:

Particulars	FY 2010-11	FY2009-10
	₹ Crore	
NTPC's investment in equity	0.08	0.08
Gross Income	64.05	79.96
Profit After Tax	6.01	26.59
	₹ Per Share	
Earnings Per Share	743.42	3,286.38

The company was formed on August 21, 2002 as a wholly owned subsidiary company of NTPC with an objective to make a foray in the business of distribution and supply of electrical energy as a sequel to reforms initiated in the power sector. Presently, the company is undertaking the following activities:

The company has been involved in the execution of work on turnkey basis under the Government's rural electrification program namely "Rajiv Gandhi Grameen Vidyuti-Karan Yojana" in 29 districts in 5 States, namely, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha and West Bengal covering more than 38,000 villages and approximately 27 lakh Below Poverty Line (BPL) connections. 4,315 Un-electrified/De-electrified (UE/DE) villages were made ready and 12.52 Lakh Below Poverty Line (BPL) Rural house hold connections were provided during the financial year 2010-11. The cumulative achievement till 31.03.11 is 14,433 UE/DE villages and 23.23 Lakh BPL connections.

Key on-going assignments of NESCL include Project management consultancy work for setting up 220 kV substations, switch yard and associated facilities at BPCL Kochi Refinery obtained through competitive bidding process and turnkey execution of 2x20 MVA, 66/11 kV sub-station and augmentation of 66/11 kV sub-station with new 1x30MVA Power transformer for Union Territory of Chandigarh.

The Company has proposed a final dividend of ₹ 4 crore for the year 2010-11.

Joint venture of NESCL

The company has made a foray into the distribution sector by formation of a JV company KINESCO Power & Utility Pvt. Ltd. with Kerala Industrial Infrastructure Development Corporation (KINFRA) to take up retail distribution of power in various Industrial Parks developed by KINFRA in Kerala and other SEZs and industrial areas. The new JV Company has taken over the operations from 1st Feb 2010.

As on 31.3.2011, the paid up capital of the Company is ₹ 0.10 crore and ₹ 0.26 crore of share application money is pending for allotment.

(b) NTPC Vidyut Vyapar Nigam Limited (NVVN)

The financial highlights of the Company are as under:

Particulars	FY 2010-11	FY 2009-10
	₹ Crore	
NTPC's investment in equity	20.00	20.00
Gross Income	78.95	85.13
Profit After Tax	30.06	28.39
	₹ Per Share	
Earnings per share	15.03	14.20

The company was formed on November 1, 2002 as a wholly owned subsidiary company of NTPC with an objective to undertake business of sale and purchase of electric power, to effectively utilise installed capacity and thus enabling reduction in the cost of power. During the year 2010-11, the company transacted business with various State Electricity Boards spread all over the country and traded 6,933 MUs of electricity in comparison to 5,549 MUs traded in the previous year which amounts to an increase of 25% over the previous year.

NVVN has been designated as the Nodal Agency by the Ministry of Power (MoP), Govt. of India for purchase and sale of grid connected solar power upto 1,000 MW as a part of Phase-I (2009-13) of Jawaharlal Nehru National Solar Mission (JNNSM).The role of NVVN envisages purchase of Solar Power from Solar Power Developers (SPDs) and bundling the same with equivalent capacity of unallocated power from NTPC Coal Stations to be allocated by MoP for sale to State Utilities/DISCOMs. The Board of NVVN approved the proposal for entering PPAs with 37 Solar Power Developers for a cumulative Capacity of 620 MW comprising 30 SPDs for 150 MW of Solar PV Projects and 7 SPDs for Solar Thermal Projects of 470 MW Capacity under Phase I, Batch I of the Jawaharlal Nehru National Solar Mission. PPAs have been signed with 36 SPDs.

This is in addition to the already tied up solar capacity of 84 MW under the Migration Scheme of MNRE under JNNSM.

The Company has proposed a final dividend of ₹ 15.00 crore for the year 2010-11.

(c) NTPC Hydro Limited (NHL)

The financial highlights of the Company are as under:

₹ Crore

Particulars	FY 2010-11	FY 2009-10
NTPC's investment in equity (incl. share capital deposit)	114.46	102.55
Loss	Nil	Nil
Fixed Assets including CWIP	108.73	97.95

In furtherance of its efforts to take forward the hydro capacity addition and to give exclusive thrust to small and medium sized Hydro Power Projects upto 250MW capacity, NTPC Ltd. has set up a wholly owned subsidiary company named "NTPC Hydro Ltd." in December, 2002. Presently the company is implementing the following projects:

- **Lata Tapovan hydro electric project** (171 MW) in the state of Uttrakhand. All the statutory clearances have been obtained and entire land required for the project has been physically acquired. The project has been planned to be executed on EPC route consisting of two main EPC packages. The EPC package, namely, Civil including Hydro Mechanical Works is under re-tendering process and award is envisaged during the financial year 2011-12. The second EPC package, namely, EM Works is also under bidding process. The project shall be developed as a regional power station with 12% free power to Govt. of Uttarakhand. The power generated from the project would be provided to the beneficiaries of Northern Region States. The project is slated for commissioning during 12th Plan period. The estimated cost of the project is ₹ 792 crores (includes IDC) at Oct' 2005 price level. Annual generation from the project is estimated as 869 MUs.
- **Rammam-III (120 MW) in the state of West Bengal**- All the statutory clearances have been obtained and majority of land acquisition activities have been completed. Various infrastructure developmental works are under progress. The main EPC package, namely, Civil & HM Works is currently under tendering process and award is envisaged during the year 2011-12.The project is for the benefit of West Bengal and Sikkim States and is slated for commissioning during 12th Plan. Annual generation from this project is estimated as 476 MUs.

As on 31.3.2011, the paid up capital of the Company is ₹ 113.96 crore and ₹ 0.5 crore of share application money is pending for allotment.

(d) Kanti Bijlee Utpadan Nigam Limited

As per the decision of Govt. of India, a new company named 'Vaishali Power Generating Company Ltd.' was incorporated on September 6, 2006 as a subsidiary of NTPC to take over Muzaffarpur Thermal Power Station (MTPS) (2 x 110 MW). The Company was rechristened as 'Kanti Bijlee Utpadan Nigam Limited' on 10.04.2008. The present equity contribution in the company is 64.57% by NTPC and 35.43% by BSEB.

Unit # 2 of 110 MW of stage–I was declared commercial in October 2010.Renovation and Modernization (R&M) of existing units 2X110 MW is being carried-out by BHEL.

For stage II (2x195 MW) BSEB has given consent for equity participation. Main Plant Civil, CW, Offsite Civil Works, Chimney and Chimney Elevator package has been awarded to HCC on 04.02.11.

As on 31.3.2011, the paid up capital of the Company is ₹ 88.51 crore and ₹ 256.15 crore of share application money pending for allotment.

The financial highlights of the Company are given below:

₹ Crore

Particulars	FY 2010-11	FY 2009-10
NTPC's investment in equity (incl share capital deposit)	221.88	59.39
Gross Income	51.06	-
Loss	14.58	0.08
Earnings per share (₹)	(1.66)	(0.13)

(e) Bhartiya Rail Bijlee Company Limited (BRBCL)

'Bhartiya Rail Bijlee Company Limited' was incorporated as a subsidiary of NTPC on November 22, 2007 having equity participation of 74:26 by NTPC Ltd. and Ministry of Railways, Govt. of India respectively for setting up of 4 units of 250 MW each of coal based power plant at Nabinagar, district Aurangabad, Bihar. PPA (Power Purchase Agreement) signed with Indian Railways on 16.12.2010. A Loan agreement was signed with REC for ₹ 1,498.75 crores on 23.03.2011. As on 31.3.2011, the paid up capital of the Company is ₹ 480 crore and ₹ 291.46 crore of share application money is pending for allotment.

The financial highlights of the Company are given below:

Particulars	FY 2010-11	FY 2009-10
	₹ crore	
NTPC's investment in equity (incl. share capital deposit)	509.46	367.15
Loss	0.02	0.02
	₹ Per Share	
Earnings per share	(0.00)	(0.00)

BUSINESS AND FINANCIAL REVIEW OF JOINT VENTURE COMPANIES

a) Utility Powertech Limited (UPL)

The financial highlights of the Company are as under:

Particulars	FY 2010-11	FY 2009-10
	₹ Crore	
NTPC's investment in equity	1.00	1.00
Gross Income	306.15	262.92
Profit After Tax	2.79	8.98
	₹ Per Share	
Earnings per share	6.97	22.45

UPL is a 50:50 joint venture company of NTPC and Reliance Infrastructure Limited formed to take up assignments of construction, erection and supervision in power sector and other sectors in India and abroad as well as to provide man power to power, telecom and other sectors. As on 31.03.2011, the paid up equity capital of the Company is ₹ 4 crore with 50% share of your company. NTPC's investment in share capital is ₹ 1.00 crore.

b) NTPC-SAIL Power Company Pvt. Ltd. (NSPCL)

NSPCL, a 50:50 Joint venture Company of your company and SAIL was incorporated on 08.02.1999 for running the Captive Power Plants of SAIL at Durgapur, Rourkela and Bhilai.

NSPCL owns and operates a capacity of 814 MW mostly as captive power plants for SAIL's steel manufacturing facilities located at Durgapur, Rourkela and Bhilai. Captive power plants (314 MW) of NSPCL recorded generation of 2,668 MUs at 96.98% PLF which was the highest ever since inception. Further, both 250 MW units of Bhilai Expansion (2X250MW) achieved 91.73% PLF and generated 4,018 MUs.

As on 31.03.2011, the paid up capital of the Company is ₹ 950.5 crore and out of this, 50% has been contributed by your company.

The financial highlights of this Company are as under:

Particulars	FY 2010-11	FY 2009-10
	₹ Crore	
NTPC's investment in equity	475.25	475.25
Gross Income	1,440.98	957.09
Profit After Tax	191.34	83.93
	₹ Per Share	
Earnings per share	2.01	0.88

NSPCL has recommended a final dividend of ₹ 104.56 crore of which NTPC's share is ₹ 52.28 crore.

c) NTPC-ALSTOM Power Services Private Limited (NASL)

The financial highlights of the Company are as under:

Particulars	FY 2010-11	FY 2009-10
	₹ Crore	
NTPC's investment in equity	3.00	3.00
Gross Income	28.48	28.56
Profit After Tax	0.99	1.28
	₹ Per Share	
Earnings per share	1.66	2.14

NASL is a 50:50 joint venture company between NTPC and ASLTOM POWER GENERATION AG, Germany. The company was formed on 27.09.1999 for taking up Renovation & Modernization assignments of power plants both in India and SAARC countries. During 2010-11, NASL has submitted technical bids for Residual Life Assessment (RLA) studies of Boilers and Generators at Singrauli, Vishakhapatnam and Rourkela Steel plant etc. The Company has received an order to the tune of ₹ 123.25 crore from NALCO towards Retrofitting of ESP units at Angul, Odisha. NASL is also engaged in execution of various contracts in power station of various State Electricity Boards power stations at Bhatinda, Amarkantak, Tanda, Talcher etc. As on 31.03.2011, the paid up capital of the Company is ₹ 6 crore with 50% being contributed by your company.

d) NTPC Tamil Nadu Energy Company Ltd. (NTECL)

NTPC Tamil Nadu Energy Company Ltd, was formed as a 50:50 joint venture between your company and Tamil Nadu Electricity Board (TNEB) on May 25, 2003 to develop and operate 1500MW power project at Vallur. The project is named as Vallur Thermal Power Project and is expected to use Ennore port infrastructure facilities. Mega Power Status was accorded to the project (3x500 MW) on 12.03.08.

The construction work at site is in full swing. Commissioning activities for unit No. 1 of Phase-I has been taken up from 1st Mar'11. For Unit #2 of Phase-I, TG erection has commenced on 28.03.11. For Phase –II unit, ESP Erection started on 21.01.11.

The paid up capital of the Company is ₹ 1,162 crore and out of this, 50% has been contributed by your company. Further as on 31.03.2011, the amount of Share Capital Deposit pending for allotment is ₹ 120 crore out of which NTPC's share is ₹ 60 crore.

e) Ratnagiri Gas and Power Pvt. Limited (RGPPL)

Ratnagiri Gas and Power Private Ltd has been formed as joint venture between NTPC, GAIL, MSEB Holding Co. Ltd. and Indian Financial institutions with NTPC having a stake of 30.17% for taking over and operating erstwhile Dabhol Power Project assets consisting of 1,967.08 MW Gas based combined cycle Power Block and 5 MMTPA LNG Block. The assets were transferred to RGPPL in October 2005 and the Power Block, spearheaded by your company, has been fully revived and under commercial operation since May 19, 2009. The LNG Block, spearheaded by GAIL, is yet to be commissioned with some marine facilities still to be completed for bringing in the commissioning cargo.

The total generation from Power Block during 2010-11 was 11,706 MUs against a CERC target of 67% availability/11,000 MUs. GoI has allocated full quantum of domestic gas from KG basin required for Power Blocks (about 8.5 MMSCMD). RGPPL had commenced power generation using domestic gas from KG D-6 basin from September 30, 2009. The current drawl is around 7.6 MMSCMD. The rehab of 5 gas turbines out of 6 commissioned has been completed till date.

As on 31.03.2011, the paid up capital of the Company is ₹ 2,297 crore and out of this, ₹ 692.90 crore (30.17%) has been contributed by your company.

The financial highlights of the Company are as under:

₹ crore

Particulars	FY 2010-11	FY 2009-10
NTPC's investment in equity (*incl. share capital deposit)	692.90	692.90*
Gross Income	4,565.50	3,770.34
Profit	504.91	48.83
	₹ Per Share	
Earnings per share (Basic)	2.20	0.24

f) Aravali Power Company Private Limited

Aravali Power Company Private Limited (A Joint Venture Company of NTPC Ltd., Indraprastha Power Generating Co. Ltd. [IPGCL] of Delhi Govt. and Haryana Power Generating Co. Ltd. [HPGCL] of Haryana Govt.) is setting up Aravali Super Thermal Power Project of 1,500 MW (3x500 MW), a coal fired power plant, in Jhajjar District of Haryana. The project is being set up by NTPC on concept-to-commissioning basis. NTPC Ltd. would also operate and maintain the station on Management Contract basis for at least 25 years. The power from this Project will be shared on 50:50 basis, between Haryana and NCT of Delhi.

Unit-I started commercial operation w.e.f. from 05.03.2011. Construction activities for Unit No. II and Unit No. III are in full swing.

As on 31.03.2011, the paid up capital of the Company is ₹ 1,317.05 crore with 50% being contributed by NTPC Ltd. Further as on 31.03.2011, the amount of Share Capital Deposit pending for allotment is ₹ 650.94 crore out of which NTPC's share is ₹ 318.96 crore.

₹ crore

Particulars	FY 2010-11	FY 2009-10
NTPC's investment in equity (incl. share capital deposit)	977.48	658.52
Gross Income	47.43	-
Profit (Loss)	(37.64)	(0.33)
	₹ Per Share	
Earnings per share(Basic)	(0.29)	-

g) NTPC-SCCL Global Venture Pvt. Ltd

NTPC Limited along with Singareni Collieries Company Limited formed a 50:50 joint venture Company under the name and style of "NTPC-SCCL Global Ventures Private Limited" on July 31, 2007 to undertake various activities in coal and power sectors including acquisition of coal/lignite mine blocks, development and operation of integrated coal based power plants and providing consultancy services. Both NTPC and SCCL hold 50% equity each.

As on 31.03.2011, the paid up capital of the Company is ₹ 0.10 crore, out of which 50% has been contributed by your company.

h) Meja Urja Nigam Private Limited

NTPC has formed a JV Company with Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) under the name "Meja Urja Nigam Private Limited" on April 2, 2008 for setting up a power plant of 1,320 MW (2X660 MW) at Meja Tehsil in Allahabad district in the state of Uttar Pradesh.

All statutory clearances are available for the project. For STG package, LOI has been issued to Toshiba on 27.01.2011. For Balance of Plant, NIT done for 27 packages and bids opened for 20 packages.

As on 31.03.2011, the paid up capital of the Company is ₹ 146.86 crore and out of this, 50% has been contributed by NTPC Ltd. Further as on 31.03.2011, out of Share Capital Deposit pending for allotment amounting to ₹ 22.00 crore, ₹ 11.00 crore being 50% of the total Share Capital Deposit has been contributed by your company.

i) NTPC BHEL Power Projects Pvt Ltd. (NBPPL)

"NTPC BHEL Power Projects Pvt Ltd." was formed on April 28, 2008 as a JV Company with Bharat Heavy Electrical Ltd (BHEL) for carrying out Engineering Procurement and Construction (EPC) activities in the power sector and to engage in manufacturing and supply of equipment for power plants and other infrastructure projects in India and abroad. Foundation stone laid for power equipment manufacturing Plant at Mannavaram in Sept'2010.

BHEL has given Balance of Plant packages for Palatana

Combined Cycle Power Plant in Tripura and Namrup Combined Cycle Power plant in Assam.

As on 31.03.2011, the paid up capital of the Company is ₹ 50.00 crore, out of this, 50% has been contributed by your company.

Particulars	FY 2010-11	FY 2009-10
	₹ crore	
NTPC's investment in equity	25.00	25.00
Gross Income	108.84	4.22
Profit (Loss)	9.26	(0.76)
	₹ Per Share	
Earnings per share(Basic)	1.85	(0.94)

j) **BF-NTPC Energy Systems Limited**

"BF-NTPC Energy Systems Limited" (BFNESL) was formed on June 19, 2008 with Bharat Forge Limited (BFL) to establish a facility to take up manufacturing of castings, forgings, fittings and high pressure piping required for power projects and other industries, Balance of Plant (BOP) equipment for the power sector. 90.17 acres land has been acquired at Solapur for setting up the factory and award of topography & geotechnical works for the site is expected shortly.

As on 31.03.2011, the paid up capital of the Company is ₹ 12.00 crore with 49% i.e. 5.88 crore being contributed by your company.

k) **Nabinagar Power Generating Company Private Limited**

'Nabinagar Power Generating Company Private Limited' (NPGCL) was incorporated as a JV Company on September 9, 2008 with equal equity contribution from Bihar State Electricity Board for setting-up of a coal based power project at New Nabinagar in district Aurangabad of State of Bihar. The project will have a capacity of 1,980 MW (3X660 MW). The Company will also undertake operation & maintenance of the project after its commissioning.

Feasibility Report of the project was approved by NPGCL Board on 02.07.09.Land acquisition activities have been initiated. MoEF has accorded environmental clearance for stage – I (3x660 MW) on 27.12.2010. In-principle approval for Coal Linkage received from the MOC.

As on 31.03.2011, the paid up capital of the Company is ₹ 306.00 crore of which 50% capital was contributed by your company.

l) **National Power Exchange Limited (NPEX)**

'National Power Exchange Limited' (NPEX) was incorporated as a JV Company with NHPC Ltd., Power Finance Corporation Ltd. and Tata Consultancy Services Ltd. on December 11, 2008 to set up and operate a Power Exchange at National level. This Power Exchange would 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. An in-principle approval by CERC to set up and operate a national level power exchange was received on July 1, 2009. New Regulations for power exchange have been issued by Central Electricity Regulatory Commission on 20th Jan 2010. The Company has initiated action for compliance and aligning itself to these regulations.

NPEX has submitted the revised Rules and Bye Laws for CERC approval on 30.03.2011.

The Company has an authorized share capital of ₹ 50.00 crore. During the financial year 2010-11, paid-up share capital has been increased from ₹ 5.00 crore to ₹ 13.13 crore. New shareholders have been inducted to have a diversified shareholding as per Regulations. Percentage shareholding of Tata Consultancy Services has been reduced from 50% to 19.04%. Holding of Government and non-Government entities is maintained at 50:50.

m) **International Coal Ventures Private Limited (ICVL)**

A JV Company was incorporated on May 20, 2009 under the name "International Coal Ventures Private Limited" (ICVL) in association with Steel Authority of India (SAIL), Coal India Limited (CIL), Rashtriya Ispat Nigam Limited (RINL) and NMDC Limited (NMDC). SAIL, CIL, RINL, NMDC and NTPC shall contribute in the equity share capital of the Company in the ratio of 2:2:1:1:1 respectively. The Company has been incorporated for the purpose of carrying on business for overseas acquisition and/ or operation of coal mines or blocks/ companies for securing coking and thermal coal supplies. ICVL is pursuing coal opportunities from countries like Australia, Indonesia, Mozambique, South Africa and USA. As on 31.03.2011, the paid up capital of the Company is ₹ 9.8 crores

n) **National High Power Test Laboratory Private Limited (NHPTLPL)**

Your Company has formed a JV Company on May 22, 2009 under the name "National High Power Test Laboratory Private Limited" (NHPTLPL) in association with NHPC Limited (NHPC), Power Grid Corporation of India Limited (PGCIL) and Damodar Valley Corporation (DVC). All JV partners have contributed in the equity share capital of the Company. The Company has been incorporated for setting up an On-line High Power Test Laboratory for short-circuits test facility in the Country. The project Feasibility Report has been submitted by Technical Consultants, CSEI, Italy.

As on 31.03.2011, the paid up capital of the Company is ₹ 10.50 crore which includes ₹ 2.62 crore being 25% of paid up equity capital contributed by NTPC Ltd.

o) Energy Efficiency Services Pvt. Limited

A JV company has been formed on December 10, 2009 under the name "Energy Efficiency Services Limited" with Power Finance Corporation Limited (PFC), Powergrid Corporation of India Limited (PGCIL) and Rural Electrification Corporation Limited (REC) to carry on and promote the business of Energy Efficiency and climate change including manufacture and supply of energy efficiency services and products. NTPC, PFC, PGCIL and REC hold shares in the equity share capital of the Company equally.

As on 31.03.2011, the paid up capital of the Company is ₹ 2.50 crore and the share application money pending for allotment in the Company is ₹ 97.50 crore.

p) Transformers and Electricals Kerala Limited (TELK)

In line with the Business Collaboration and Shareholders Agreement executed between NTPC Limited, Government of Kerala and Transformers and Electricals Kerala Limited (TELK), 44.6% of paid-up capital of TELK was acquired from Government of Kerala at a total value of ₹ 31.34 crore. The shares were credited in NTPC's Demat Account on 19.06.2009. TELK is engaged in manufacturing and repair of heavy duty transformers. During the year 2010-11, TELK produced 5168 MVA transformers. After a long span of 30 years, TELK paid dividend @ 20 % for the year 2009-10.

As on 31.03.2011, the paid-up capital of the Company is ₹ 42.97 crore with ₹ 31.34 crore contributed by your company for acquiring 44.60% of the paid-up capital of TELK.

Particulars	FY 2010-11	FY 2009-10
	₹ Crore	
NTPC's investment in equity (incl. share capital deposit)	31.34	31.34
Gross Income	204.42	208.55
Profit	11.74	29.68
	₹ Per Share	
Earnings per share (Basic)	2.73	6.91

q) CIL NTPC Urja Private Limited

A Joint Venture Company between NTPC Limited and Coal India Limited (CIL) was incorporated on April 27, 2010 under the name "CIL NTPC Urja Private Limited". Both NTPC and CIL will contribute equally in the equity share capital of the Company. This Company has been formed with the aim of undertaking the Development, Operation & Maintenance of Coal Blocks at Brahmini and Chichro Patsimal in Jharkhand and Integrated Coal Based Power Plant(s).

The company has decided to commence exploration of Brahmini North (North side of Brahmini river) in first phase during first quarter of 2011-12. Detailed exploration work shall commence after section 4 notification. The job of exploration and preparation of Geological Report has been assigned to Central Mine Planning & Design Institute Limited.

As on 31.03.2011, NTPC's share capital deposit pending allotment is ₹ 0.08 crore.

r) Anushakti Vidhyut Nigam Limited

A Joint Venture Company between your company and Nuclear Power Corporation of India Limited (NPCIL) was incorporated on January 27, 2011 under the name "Anushakti Vidhyut Nigam Limited". NPCIL and NTPC would hold 51% and 49% of the equity share capital respectively. The Company has been formed for the purpose of development of nuclear power projects in the country within the framework of Atomic Energy Act, 1962.

Consolidated Financial Statements of NTPC Ltd, its Subsidiaries and Joint Venture Companies

The consolidated Financial statements have been prepared in accordance with Accounting Standards (AS)-21 - " Consolidated Financial Statements" and Accounting Standards(AS) 27 -"Financial reporting of Interests in Joint Ventures" and are included in this Annual report.

A brief summary of the results on a consolidated basis is given below:

₹ crore

	FY 2010-11	FY 2009-10
Gross Income	60,008.18	51,203.56
Profit before Tax	12,392.33	11,049.11
Profit after Tax	9,348.23	8,837.65
Net Cash from operating activities	12,074.90	11,948.93

CAUTIONARY STATEMENT

Statements in the Management Discussion and Analysis and in the Directors' Report, describing the Company's objectives, projections and estimates, contain words or phrases such as "will", "aim", "believe", "expect", "intend", "estimate", "plan", "objective", "contemplate", "project" and similar expressions or variations of such expressions, are "forward-looking" and progressive within the meaning of applicable laws and regulations. Actual results may vary materially from those expressed or implied by the forward looking statements due to risks or uncertainties associated therewith depending upon economic conditions, government policies and other incidental factors. Readers are cautioned not to place undue reliance on these forward-looking statements.

For and on behalf of the Board of Directors

Place: New Delhi — (Arup Roy Choudhury)
Date: August 04, 2011 — Chairman & Managing Director