

C E R C

Annual Report 2005-06



CENTRAL ELECTRICITY REGULATORY COMMISSION

6th & 7th Floor, Core-3, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi-110 003

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Foreword

Dear stakeholders,

Power sector in the country has been passing through a challenging phase of reform and restructuring. The investor's confidence is being gradually restored and the stakeholders have been looking towards the Electricity Regulatory Commissions with optimism for fair and transparent regulation of the sector. The Central Electricity Regulatory Commission as the principal regulator has been playing a pro-active role in judiciously balancing the interests of the consumers as well as investors.

The year 2005-06 has been an eventful year for the Central Commission in terms of discharging its responsibilities under the statute. The Commission issued several orders and regulations having long-term implication during 2005-06 with due regard to the demands of accountability, transparency and professionalism. The Indian Electricity Grid Code was issued after wide consultation with stakeholders. The Grid Code has put in place a framework facilitating the operation, maintenance, development and planning of an economic and reliable regional grid. The Commission had issued Terms and Conditions of Grant of Licence for inter-State Trading in Electricity in 2004. Based on experience, the Commission brought about certain amendments to these regulations with the objective of ensuring and safeguarding consumer interest. Another important regulation issued by the Commission during this period relates to fixation of trading margin. It was observed that the trend of trading margins being charged by the electricity traders had been on the rise. In order to protect the interests of the consumers against adverse effect of this trend, the Commission fixed trading margin of 4 paise/unit.

The role of the Central Commission has assumed a new dimension under the Electricity Act, 2003, especially after the formation of the Forum of Regulators. Chairperson, CERC is the Chairperson of the Forum which is entrusted with the responsibility of



bringing harmonization of regulatory action across the country. During this year, with the active involvement of the Central Commission, consensus was arrived at on several critical issues including measures to harness surplus captive generation, operationalisation of open access in distribution, incentivising renewables, etc.

It was a matter of great privilege for the Central Commission that the Chairperson of the Central Commission was elected as the Chairman of South Asian Forum of Infrastructure Regulation (SAFIR) for the period from 17.6.2005 to 30.6.2006. SAFIR is a network of infrastructure regulators of the regions (comprising Bangladesh, Bhutan, Nepal, Srilanka, India and Pakistan), connected international institutions, and individuals that are active in the field. During this period, he could plan a significant role in carrying forward the ideals and goals of SAFIR.

The year 2005-06 was beset with challenges of various kinds and the Central Commission with the active support of the Members, Officers and Staff and active cooperation and participation of the stakeholders discharged the responsibilities to their best ability.

The Commission looks forward to the continued support of all stakeholders in its mission towards sustainable development of the power sector.

(Ashok Basu)
Chairperson



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THE COMMISSION

The conceptualization of independent Regulatory Commission for the electricity sector dates back to early 1990s, when the National Development Council (NDC) Committee on Power headed by Shri Sharad Pawar, the then Chief Minister of Maharashtra recommended in 1994, constitution of “independent professional Tariff Boards at the regional level for regulating the tariff policies of the public and private utilities”. The Committee reiterated that “the Tariff Boards will be able to bring along with them a high degree of professionalism in the matter of evolving electricity tariffs appropriate to each region and each State”.

The need for constitution of the Regulatory Commission was further reiterated in the Chief Minister’s Conference held in 1996. The Common Minimum National Action Plan for Power evolved in the Conference inter-alia “agreed that reforms and restructuring of the State Electricity Boards are urgent and must be carried out in definite time frame; and identified creation of Regulatory Commissions as a step in this direction”.

Thus was enacted the Electricity Regulatory Commissions Act, 1998 paving way for creation of the Regulatory Commissions at the Centre and in the States.

The 1998 Act was enacted with the objective of distancing Government from the tariff regulation. The Act provided for Electricity Regulatory Commissions at the Centre and in the States for rationalization of electricity tariff, transparent policies regarding subsidies etc. Under the provisions of this Act, the Central Government constituted the Central Electricity Regulatory Commission (CERC) in July, 1998. The ERC Act, 1998 has since been replaced by the Electricity Act, 2003. The CERC created under the provisions of the ERC Act, 1998 has been recognized as the Central Electricity Regulatory Commission under the Electricity Act, 2003.

The Commission functions in a quasi-judicial manner. It has the powers of civil courts. It consists of a Chairperson, three full time Members and the Chairperson of the Central Electricity Authority (CEA) as Ex-officio



Member. In recognition of the need for a multi-disciplinary approach while addressing issues related to independent regulation, the Act prescribes that the Chairman and Members shall be persons having adequate knowledge and experience in engineering, law, economics, commerce, finance or management. It also prescribes a broad mix of disciplines to be represented in the Commission. The Chairperson and Members are appointed by the President of India on the recommendation of a selection committee constituted by the Central Government as prescribed under the Act. The Act also provides for the appointment of a Secretary of the Commission whose powers and duties are defined by the Commission.

The Electricity Act, 2003 has significantly enlarged the spectrum of responsibility of CERC. Under the ERC Act, 1998 only the tariff fixation powers were vested in CERC. The new law of 2003 has entrusted on the CERC several other responsibilities in addition to the tariff fixation powers, for instance, the powers to grant licence for inter-State transmission, inter-State trading and consequently to amend, suspend and revoke the licence, the powers to regulate the licensees by setting performance standards and ensuring their compliance etc.





THE MANDATE

As entrusted by the Electricity Act, 2003 the Commission has the responsibility to discharge the following functions:-

Mandatory Functions

- (a) to regulate the tariff of generating companies owned or controlled by the Central Government;
- (b) to regulate the tariff of generating companies other than those owned or controlled by the Central Government specified in clause (a), if such generating companies enter into or otherwise have a composite scheme for generation and sale of electricity in more than one State;
- (c) to regulate the inter-State transmission of electricity ;
- (d) to determine tariff for inter-State transmission of electricity;
- (e) to issue licences to persons to function as transmission licensee and electricity trader with respect to their inter-State operations;
- (f) to adjudicate upon disputes involving generating companies or transmission

licensee in regard to matters connected with clauses (a) to (d) above and to refer any dispute for arbitration;

- (g) to levy fees for the purposes of the Act;
- (h) to specify Grid Code having regard to Grid Standards;
- (i) to specify and enforce the standards with respect to quality, continuity and reliability of service by licensees;
- (j) to fix the trading margin in the inter-State trading of electricity, if considered, necessary;
- (k) to discharge such other functions as may be assigned under the Act.

Advisory Functions

- (i) formulation of National Electricity Policy and Tariff Policy;
- (ii) promotion of competition, efficiency and economy in the activities of the electricity industry;
- (iii) promotion of investment in electricity industry;
- (iv) any other matter referred to the Central Commission by the Central Government.





OUR MISSION

The Commission intends to promote competition, efficiency and economy in bulk power markets, improve the quality of supply, promote investments and advise Government on the removal of institutional barriers to bridge the demand supply gap and thus foster the interests of consumers. In pursuit of these objectives the Commission aims to –

- * Formulate an efficient tariff setting mechanism, which ensures speedy and time bound disposal of tariff petitions, promotes competition, economy and efficiency in the pricing of bulk power and transmission services and ensures least cost investments.*
- * Improve the operations and management of the regional transmission systems through Indian Electricity Grid Code (IEGC), Availability Based Tariff (ABT), etc.*
- * Facilitate open access in inter-state transmission.*
- * Facilitate inter-state trading.*
- * Promote development of power market.*
- * Improve access to information for all stakeholders.*
- * Facilitate technological and institutional changes required for the development of competitive markets in bulk power and transmission services.*
- * Advise on the removal of barriers to entry and exit for capital and management, within the limits of environmental, safety and security concerns and the existing legislative requirements, as the first step to the creation of competitive markets.*





PROFILE OF THE CHAIRPERSON AND MEMBERS OF THE COMMISSION



A. K. Basu

*Chairperson and Chief Executive
(April, 2002 - Continuing)*



Shri.A.K. Basu is presently Chairperson, Central Electricity Regulatory Commission.

Shri Basu had a brilliant academic career. He was First in order of Merit among all candidates in School Final (Matriculation) Examination, West Bengal, in 1958. He stood First in the First Class in B.A. (Honours in Economics) Examination, Calcutta University in 1962, from Presidency College.

He joined the Indian Administrative Service in 1965 and was allotted West Bengal Cadre. In Government of West Bengal, he has held several important positions, including Commissioner of Calcutta Municipal Corporation, Education Secretary, Labour Secretary, and Principal

Secretary, Food and Civil Supply. He was the Chief Electoral Officer of the State from 1983 to 1987.

Shri Basu has worked in various capacities in Government of India. He was Deputy Secretary, Ministry of Home Affairs during 1976-77. He worked as Special Assistant to the Union Minister of Education, Social Welfare & Culture, during 1977 to 1980. He was Special Secretary, Ministry of Home Affairs, Government of India, during 1996-97.

Shri Basu has had a long association with industry and infrastructure sectors. He was Development Commissioner, Iron & Steel, and then Joint Secretary, Ministry of Steel, Government of India, during 1988 to 1993. He served as Additional Secretary &



Advisor (Industry & Minerals), Union Planning Commission during 1995-96, dealing with Plans and Projects of nearly 20 economic and infrastructure Ministries of Government of India. He was Secretary, Ministry of Steel, Government of India, from August, 1997 to May, 2000. Shri Basu served as Secretary, Ministry of Power, Govt. of India from June 2000 till March 31, 2002. During this period, he pioneered several important initiatives for reforms and restructuring of the Indian Electricity Sector, including distribution reforms through the Accelerated Power Development and

Reforms Programme, formulation of the Electricity Bill 2003, one-time settlement of dues of the Central Utilities, ranking study for hydro projects, energy conservation and demand side management, restructured programme for rural electrification etc.

Shri Basu was appointed Chairman, Central Electricity Regulatory Commission, in April 2002; this is a statutory position created under the Electricity Regulatory Commissions Act, 1998.

He has travelled extensively in India and abroad in connection with official business.





Shri K.N. Sinha

Member

(May, 2001 - Continuing)



Shri K.N. Sinha joined the Central Electricity Regulatory Commission as its Member on 11th May, 2001. Before joining the Commission, Shri Sinha was Member (Planning), Central Electricity Authority and ex-officio Additional Secretary to Government of India.

He obtained a Bachelors Degree in Electrical Engineering from Birla Institute of Technology, Ranchi in 1962. Immediately after graduation, Shri Sinha joined the then Uttar Pradesh State Electricity Board as an Assistant Engineer and was assigned the job of design and engineering of Ramganga Multipurpose River Project. He joined the Central Power Engineering service in 1964. Shri Sinha continued academic pursuit to upgrade his professional skills and obtained a Masters' Degree in Economics from the University of Himachal Pradesh in 1989, and a Post Graduate Diploma in Financial

Management from Indira Gandhi National Open University, New Delhi in 1995. In 1980, he was awarded a UN Fellowship for training in Management of Thermal Power Stations and basic modern management course on Rural Electrification at National Rural Electric Co-operative Association, Washington, USA.

Shri Sinha has made significant contribution in the power development of the country. In his early days of his career, as an Executive Engineer with the Government of Manipur, he introduced "Spot billing" and "Cash collection at the doors" – concepts relevant in a hilly region of the country where the consumers live in far flung areas. As Member-Secretary of the 13th Electric Power Survey Committee and Chairman of 16th Electric Power Survey Committee, he brought out the 13th and 16th Electric Power Survey Reports, both being path-breaking documents



introducing new concepts and approach, making the electrical energy demand projections more meaningful and realistic. He was part of the group responsible for designing the technical and techno-financial framework of legislation for inviting Private Sector participation in power generation. As Member (Planning), CEA, he finalised two landmark documents – “The Fuel Map of India” and “Power on Demand by 2012”, both the documents being the basis for power planning in the country in the time frame up to 2012. Shri Sinha has been responsible for introducing / redesigning a series of systems and publications in the Central Electricity

Authority. He set up the procedure, methods and framework of examination and vetting of tariff proposals of Central PSUs in the power sector. He was the co-chairman of the Indo-Nepal Power Exchange Committee dealing with the tariff charges for international exchange of power between India and Nepal. He streamlined the procedure for project appraisal and techno-economic clearance to power schemes – a statutory function of the CEA under Electric (Supply) Act, 1948. He was Chairman of the Standing Committee on Project Appraisal and co-chairman of Standing Committee on Firm Financial Package Appraisal.





Shri Bhanu Bhushan

Member

(February 2004 – Continuing)



Shri Bhanu Bhushan joined the Central Electricity Regulatory Commission as a Member on 4th February 2004. He holds a first class (Honours) degree in Electrical Engineering from Banaras Hindu University. He has worked for the Indian power sector since graduating in 1966, in the Renusagar Power Company Limited, Central Water & Power Commission, Indian Consortium for Power Projects, Bharat Heavy Electricals Limited, Desein (New Delhi) Pvt Ltd, National Thermal Power Corporation and Power Grid Corporation of India.

During his long career, Shri Bhushan specialized in the design of thermal and combined cycle power plants, having played a key role in the engineering of many pioneering power plants in India. These plants have performed admirably, without any design-related problems, at least partly

due to his personal involvement in technical details.

He joined PGCIL at its inception in 1991, and rose to be its Director (Operations) in 1997, by virtue of his technical expertise and dedicated work. His responsibilities included supervision of O&M of PGCIL's country-wide EHV network (to maintain an availability of over 99%) and operation of the five Regional Load Dispatch Centres. He is an acknowledged authority on Availability tariff, and the originator of the concept of frequency-linked load dispatch and tariff for unscheduled interchanges and voltage-linked pricing of reactive energy. These have been commended by World Bank, approved by CERC and implemented at inter-State level in India during 2002-03, to improve the grid parameters, enable generation according to merit-order, and provide the framework for power trading. He has authored many



important chapters of the Indian Electricity Grid Code, and has specified and guided the indigenous development of special energy meters for inter-utility exchanges.

He coordinated the major ADB-funded study on Bulk power tariffs by ECC of USA in 1993-94. He was Member-Secretary of Sankaraguruswamy Committee, and was involved in finalization of the Electricity Laws (Amendment) Bill 1998, which recognized transmission as a separate activity. He also chaired a CBIP Committee, which has formulated a well-received recommendation on EHV protection. He is a Senior Member

of IEEE and a Member of CIGRE and its Study Committee C1. For his contribution in the field of power systems, he received the CBIP Diamond Jubilee PM Ahluwalia Award for 1996. Administrative Council of CIGRE bestowed upon Shri Bhanu Bhusan the title of “Distinguished Member” in the year 2004. Shri Bhanu Bhushan also received Lifetime Achievement Award in the Power System Conference held in Chennai in December, 2004. He has written many technical papers, and delivered innumerable talks on problems of integrated grid operation, their solutions, inter-utility tariff, power sector reforms etc.





Shri Akbar Hameed Jung

Member

(February, 2005 - continuing)



Shri Akbar Hameed Jung joined the Central Electricity Regulatory Commission as a Member on 18th February 2005. Before joining the Commission Shri Jung was Secretary, Ministry of Civil Aviation and Chairman, Air India Limited w.e.f 1st June 2000 to 28th February 2002. He served as Special Secretary, Ministry of Power from 20.12.1999 to 31.5.2000.

Shri Jung acquired one year training at Birmingham University, U.K. for Development Administration and Dynamics of Change. He has done a two-month Training Course in Public Enterprise Management at Harvard, USA. He has also done Personnel Management in IIPA and Administrative Staff College in Public Enterprise and Project Financing conducted

by the Economic Development Institute of the World Bank.

While Shri Jung was Additional Secretary and Financial Adviser, Ministry of Steel & Mines from August 1997 to 19th December, 1999, he remained on the Board of SAIL, Kudremukh Iron Ore Company, Vizag Steel Plant, NALCO, BALCO, Hindustan Zinc Limited and Hindustan Copper Ltd. His responsibilities involved Disinvestment of PSUs, Financial Restructuring, Trade & Purchase of vast amount of raw material, finalization of contracts. As Financial Adviser, responsibilities, inter-alia involved financial and business restructuring of Public Enterprises, Budgetary control and offering finance advice to the Secretaries/Ministries on important proposals.



He held the post of Additional Deputy Comptroller & Auditor General from August 1996 to July 1997 and supervised Accounts of the States & Centre & In-charge of Revenue Audit-Direct Taxes of the Government of India mainly Income Tax & States Sales Tax. He served as Joint Secretary, Ministry of Power from July 1991 to July 1996 and remained on the Board of NTPC, PFC, and Power Grid Corporation. During this tenure his job was to look after Transmission (Power Grid) and Power Generation (NTPC), DVC, Coordination of coal movement for SEBs. He was In-charge of management of the five Power Grids. He had close interaction with World Bank.

Shri Jung was Social Security Adviser to Government of Afghanistan for three years between 1984-1987. He was Accountant General – Maharashtra and Director General, Central Revenues, New Delhi. He worked as FA & CAO & later as Central Provident Fund Commissioner under the Ministry of Labour. He also served as Deputy Secretary in the Ministry of Home Affairs – In-charge of Para Military Forces like BSF, CRPF, ITBP, CISF and IB. In CAG Office he was In-charge of Personnel and was posted to London for Audit of European Missions.





Shri Rakesh Nath

Chairperson, CEA and Member Ex-officio,

CERC

(October, 2005 - continuing)



Shri Rakesh Nath was appointed as Chairperson, CEA in October, 2005. He was appointed on the Board of NPCIL on November 3, 2005.

Shri Rakesh Nath, Chairperson, Central Electricity Authority is Member (Ex-officio), CERC since October, 2005. He has over 32 years of experience in power sector in various capacities in different organizations viz. Central Electricity Authority, Bhakra Beas Management Board, Power Trading Corporation, Northern Regional Electricity Board, Western Regional Electricity Board, National Thermal Power Corporation and Rajasthan State Electricity Board. He has varied experience in Operation & Maintenance of Thermal & Hydro Power Stations and Transmission Systems, Maintenance of Canal System, Regulation of

Water Supply, Operation of large Interconnected Regional Power Grids.

Shri Rakesh Nath was appointed as Chairman, Bhakra Beas Management Board (BBMB) in the year 2001 and was responsible for administration, operation and maintenance of Bhakra Beas hydro station with installed capacity of 2866 MW, the largest hydro complex in Northern Region. During his tenure, BBMB achieved a record peak generation and availability of plants increased substantially. During his tenure as whole Time Director of Power Trading Corporation during the year 2000/2001, he initiated important transactions of trading of power from surplus to deficit areas of the country turned the Trading Corporation into a profit earning Company. He visited Islamabad in November, 1998 as a Member



of Indian delegation on trading of power with Pakistan and visited Kathmandu in September, 2001 as a Member of Indian Team to promote Indo-Nepal power trade. He participated in talks with Government of Pakistan at New Delhi in January/February, 1999.

Shri Rakesh Nath has been the Member Secretary of NREB and WREB, the two largest regional grids of the country and also Member of various other Committees appointed by the Government of India to enquire into grid failures in different regions and to suggest the remedial measures. He

was Convener of Working Groups set up by the Government of India to prepare guidelines for inter-regional power exchange which paved the way for structuring inter-regional power transfers across the country.

Shri Rakesh Nath attended courses in power system operation & control in UK in 1984 and in Sweden in 1993. He participated as member in proceedings of Expert Committee on Sedimentation, an International Committee on Large Dams (ICOLD), in Brazil in September, 2002. He was also deputed to attend International Conference on Water Power held at Buffalo, USA in August, 2003.





HUMAN RESOURCES OF THE COMMISSION

The Commission has a very wide mandate under the Act. The efficiency of the Commission in discharging its responsibilities depend upon the quality and functional specialization of its staff with the requisite expertise and experience in engineering, economics, financial management, accounting, law, environment, management information system and other related skills. The details of key human resources are provided in **Annexures I and**

II. In addition, the Commission intends to utilise the human resources with their wide range of expertise and experience available within the Government, industry and research institutions. To supplement the in-house skills and experience available to it, the Commission engages consultants and for this purpose it has framed regulations. The details of Staff position in the Commission and recruitments during the year 2005-06 are given in the table below:

STAFF POSITION AS ON 31 MARCH, 2006

S.No.	Name of the Post	No. of Posts sanctioned	No. of Posts Filled	Vacant Posts
1.	Secretary	1	1	-
2.	Chief	4	3	1
3.	Joint Chief	5	3	2
4.	Deputy Chief	13	4	9
5.	Integrated Financial Advisor	1	-	1
6.	Assistant Chief	16	6	10
7.	Bench Officer	2	2	-
8.	Assistant Secretary	2	1	1

Table Contd.....



S.No.	Name of the Post	No. of Posts sanctioned	No. of Posts Filled	Vacant Posts
9.	Pay & Accounts Officer	2	1	1
10.	Principal Private Secretary	4	4	-
11.	Private Secretary	5	5	-
12.	Assistant	6	5	1
13.	Personal Assistant	7	4	3
14.	Stenographer	4	3	1
15.	Receptionist-cum-Telephone Operator	1	1	-
16.	Senior Peon/Daftry	2	-	2
17.	Peon	4	2	2
18.	Driver	4	4	-
	TOTAL	83	49	34

Pertinently, the original staff sanctioned strength of the Commission was 63. It was only during 2005-06 that additional 20 posts were created with the approval of the Government of India. All these posts could

not be filled during the current financial year. The vacancies against these posts together with some past vacancies make the total number of vacancies as 34 during 2005-06.

RECRUITMENT DURING 2005-06

S.No.	Name of the Post	No. of posts filled
1.	Joint Chief	3
2.	Deputy Chief	1
3.	Assistant Chief	2
4.	Private Secretary	1
5.	Stenographer	1
	Total	8





REGULATORY PROCEDURES AND PROCESSES

The Central Commission in discharge of its functions under the provisions of the Electricity Act, 2003 :

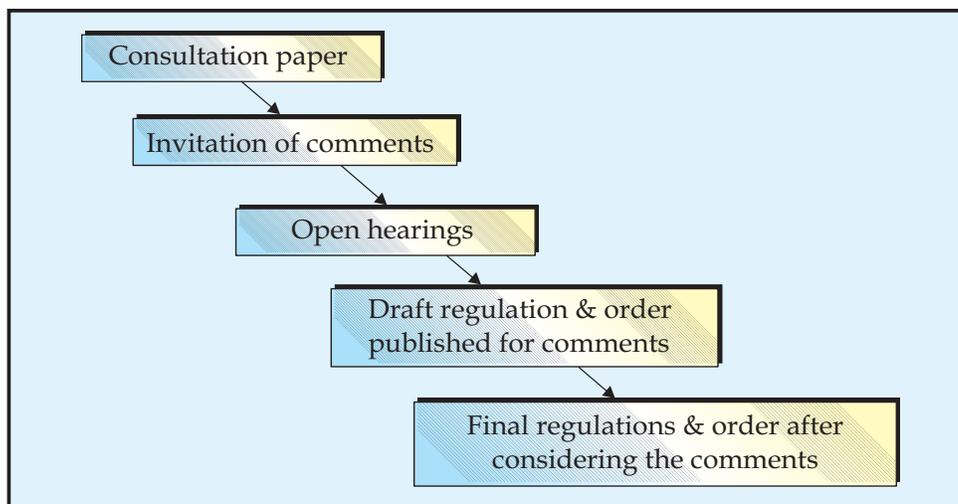
1. Notifies Regulations and
2. Issues orders on petitions relating to
 - ◆ Grant of licence
 - ◆ Determination of tariff
 - ◆ Review and miscellaneous petitions.

1. Procedure for notifying regulations

The Commission follows a detailed and

transparent process before issuing a Regulation. To start with, a Consultation Paper is developed on the issue on which a Regulation is proposed to be made. Quite often the consultation paper is prepared at the staff level and is also labeled as Staff Paper. The Consultation Paper/Staff Paper is then given wide publicity through electronic and print media inviting comments and suggestions from the stakeholders. On receipt of the comments, open public hearings are held to discuss the issues threadbare. Based on the comments received and the discussions in the public hearing, draft Regulations are formulated. As per the requirement of the Act, the draft Regulations then undergo the process of 'previous

PROCEDURE FOR REGULATIONS



publication'. This implies that the draft Regulations are published for comments from the stakeholders. It is only after receipt and consideration of the comments that the Regulations are finally published/notified in the Gazette of India.

2. Procedure for orders on petitions

Petitions/Applications are made before the Commission primarily for

- ◆ tariff determination for generation and transmission;
- ◆ grant of licence for inter-State Transmission and inter-State trading in electricity.

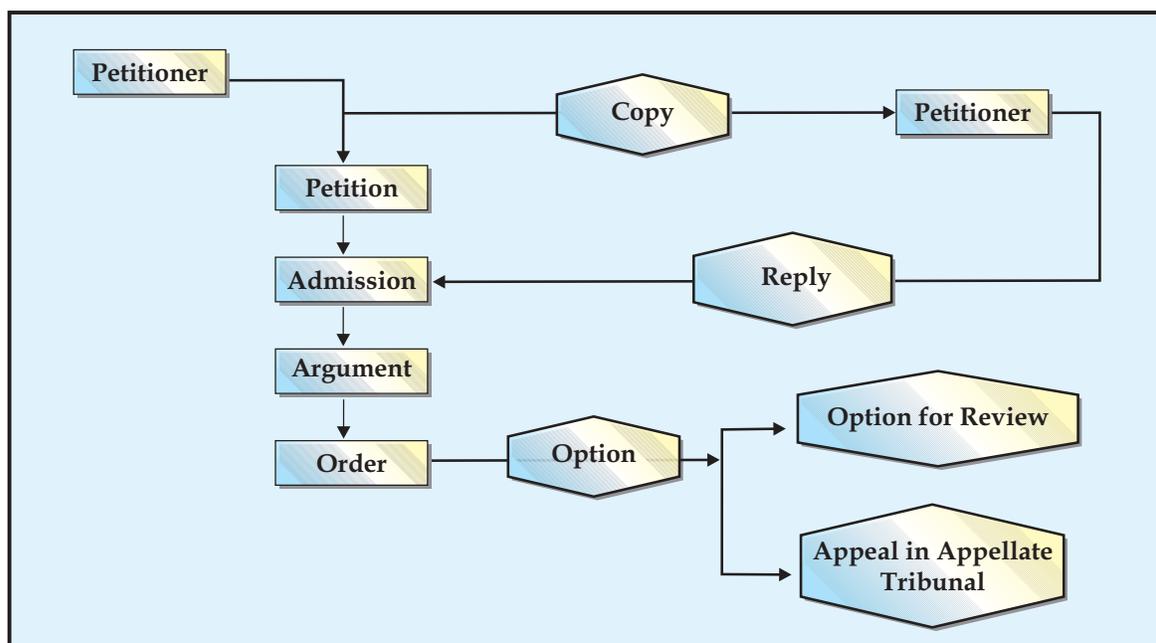
Apart from the above, the following petitions/applications are also filed before

the Commission:-

- ◆ Miscellaneous Petition
- ◆ Review Petition

The applicants file petitions with prescribed fee and serve a copy of their petition to all concerned. The applicants are also required to publish their application on their website and give notice in newspapers inviting objections and suggestions from the public. Thereafter, public hearings are held where the petitioners and the respondents argue their case before the Commission. The Commission passes final orders on the petition after hearing all concerned. The petitioners and the respondents are allowed under the law to file for review before the Commission or appeal against the orders of the Commission before the Appellate Tribunal of Electricity.

Procedure for Orders on Petition





2.1 Process and Principles of Tariff Determination

Prior to the creation of CERC, the tariff of central generating companies namely NTPC, NHPC, NLC and NEEPCO were being determined by Government of India through project specific notifications. The Central Electricity Regulatory Commission came into existence in July, 1998 under the Electricity Regulatory Commissions Act, 1998. The determination of tariff inter alia of central generating companies was entrusted to CERC. In order to discharge this task, the Commission was required to finalise terms & conditions of tariff. After going through transparent process of hearing all stakeholders, the Commission finalised and notified Terms & Conditions of tariff initially for a three-year period i.e. 2001-04 in March 2001. Commission notified new Terms & Conditions of tariff for a further five-year period i.e. 2004-09 in March 2004. The above notifications provide for determination of generation tariff station-wise and transmission tariff line or system-wise.

The tariff is determined as per the terms & conditions of tariff as applicable from time to time. The terms & conditions contain the financial norms and technical norms. The tariff is usually called the cost plus tariff because the capital cost of the project is the starting point for tariff calculations. It would be more appropriate to call it regulated tariff because other than actual capital expenditure, most of the financial & technical parameters

adopted for tariff are normative and not actuals. The variable charges of thermal stations are corrected for fuel price variation as per monthly weighted average price and heat value of fuel.

The tariff calculations are quite elaborate, as various elements going into the tariff are computed individually to arrive at the full tariff. The tariff is different for each generating station depending on its admitted capital cost, base fuel price & GCV and applicable norms of efficient operation. The exercise is time consuming but nevertheless essential to ensure that the utilities function in an efficient and economic manner and do not misuse their dominant position to extract high prices from the buying utilities.

The tariff of thermal generating stations consists of two parts: -

- 1) Annual Fixed Charges (AFC)
- 2) Variable Charges

The Annual Fixed Charges consist of five elements namely, Return on Equity, Interest on Loan, Depreciation & Advance against Depreciation (AAD), O&M and Interest on Working Capital and is computed based on prudent capital expenditure admitted by the Commission. Commission may disallow or limit a capital expenditure if not found justified giving reasons in the tariff order. All the stations regulated by CERC have to follow 'day ahead' scheduling procedure and declare their availability on 'day ahead' basis.



The annual availability of the station is the weighted average of the declared availability for each day of the year. The full recovery of Fixed Charges in case of thermal stations is linked to achieving Target Availability. There would be pro-rata reduction in the recovery of Fixed Charges below the level of Target Availability. The beneficiaries of the generating stations are required to pay the AFC irrespective of the quantum of electricity drawn.

The variable charges for thermal stations are payable based on norms of operation i.e. station efficiency in terms of heat rate i.e. heat energy required for producing one unit of electrical energy, specific fuel oil consumption and auxiliary energy consumption. Fuel cost is calculated based on the specified norms and considering actual heat value (GCV) and prices of fuel on month to month basis. Central Commission does not have any control over the quality and price of fuel used for power generation. The variable charges are payable corresponding to scheduled generation. The beneficiaries may prefer their drawal

schedule on the basis of merit order of the stations depending upon the variable charges.

In case of hydro stations, there is no fuel component and the AFC is notionally divided into capacity charge and variable charge. The full recovery of capacity charges for a hydro generating station is linked to achieving target availability corresponding to water availability called the Capacity Index. The concept of capacity Index ensures use of storage type hydro generating stations during peak hours and discourages spillage of water in case of run of the river hydro generating stations. The notional variable charge for the hydro generating station is the average least variable cost of the thermal generating stations in the region. This facilitates full despatch of hydro generating stations in merit order.

Scheduling of all inter-State generating stations regulated by CERC is done by the respect Regional Load Despatch Centres on day-ahead basis as per the following time line:

09.00 A.M.	:	Declaration of availability for the next day by Generating Station.
10.00 A.M.	:	RLDC informs the entitlement to each beneficiary to the respective SLDC.
03.00 P.M.	:	SLDC send their requisitions along with bilateral to RLDC.
05.00 P.M.	:	RLDC issues dispatch schedule of each Generating Station and drawal schedule of each beneficiary.
10.00 P.M.	:	Deadline for requesting changes in the schedules.
11.00 P.M.	:	RLDC issues final dispatch and drawal schedules.
12.00 A.M.	:	The schedules come into effect.



Any deviations from the above schedules are treated as “Unscheduled Interchanges” (UI). The commercial accounting of UI is done through a variable frequency linked rate.

The utilities are also entitled to incentive for the station performance as per the incentive formula. Failure to provide availability below the pre-set target attracts pro-rata penalty.

The tariff of transmission line/sub-station/

transmission system consists of annual fixed charges linked to target availability. The transmission utility is also entitled to incentive for achieving availability higher than the target availability.

The tariff of central generating stations and Inter-state transmission systems are annexed at the end of the Report. The Annual Fixed Charges have been converted into Paise/kWh to give a clear comparative picture of tariffs.





ACTIVITIES DURING THE YEAR

During the year 2005-06, the Commission dealt with 341 petitions - 191 petitions carried forward from the previous year and 150 petitions filed during 2005-06. Of the total, 184 petitions were disposed of during 2005-06. Details of Petitions are documented in **Annexure-III**.

IMPORTANT ORDERS AND REGULATIONS DURING 2005-06:

1.0 The Indian Electricity Grid Code (IEGC)

1.1 The revised Indian Electricity Grid Code (IEGC) issued by CERC came into force w.e.f. April 1, 2006. The Grid Code was finalized by the Commission after wide consultation with the stake-holders. The draft Code was published on web in July, 2005 and 22 stakeholders including CEA, Power Grid, NTPC, NHPC and numbers of SEBs and SERCs had given their comments. The Grid Code was revised in light of various provisions of Electricity Act, 2003. The salient features of revised Grid Code are given below:

- ◆ The IEGC brings together a single set of technical rules, encompassing all the

utilities connected to or using the Inter-State Transmission System (ISTS) and provides the following:

- ◆ Documentation of the principles and procedures which define the relationship between the various users of the Inter-State Transmission System as well as the Regional and State Load Despatch Centres.
- ◆ Facilitation of the operation, maintenance, development and planning of economic and reliable Regional Grid.
- ◆ Facilitation for beneficial trading of electricity by defining a common basis of operation of the Inter-State Transmission System applicable to all the users.
- ◆ A new chapter on Inter-Regional Energy Exchanges has been added with a view to enhance the grid security and energy balancing among the five electrical regions in the country.
- ◆ The Regional Power Committees shall also have representations from IPPs and electricity traders in addition to



generating, transmission and distribution utilities, the CEA and Regional Load Despatch Centres.

- ◆ With the improvement in frequency regime after implementation of Availability Based Tariff (ABT) in all regions in the country, it has become possible to introduce Free Governor Mode of Operation (FGMO) of generating units which automatically corrects the frequency fluctuations. However, the generators have shown certain difficulties and to overcome them, an expert team involving CEA has been constituted. The team is visiting various power stations in the country and testing various control models for FGMO implementation. The Commission shall separately announce the timetable for implementation of Free Governor Mode of Operation in the country.
- ◆ In order to improve grid voltages, the revised Grid Code proposes to apply reactive energy charges @ 5 paise per unit of reactive power on power flows on all inter-state transmission lines. The rate shall be escalated by 5 per cent every year thereafter.
- ◆ Reorganization of the State Electricity Boards (SEBs) would lead to formation of a large number of independent entities (generating companies, transmission licensees and distribution licensees) in each State and

consequently a very large number of such intra-State entities in each region. The Grid Code provides that the operation of all entities within the State would be coordinated by the concerned State Load Despatch Centre (SLDC), who in turn would coordinate with Regional Load Despatch Centre (RLDC) on real time basis.

- ◆ In order to ensure clear chain of accountability, each State as a whole shall be treated as single entity in the regional grid for the purpose of:
 - ▶ Allocations from Inter State Generating Station (ISGS)
 - ▶ Daily scheduling and despatch.
 - ▶ Accounting of unscheduled interchange (UI)
 - ▶ Accounting of reactive energy.

1.2 The Grid Code covers whole gamut of activities ranging from transmission planning to day to day scheduling. The various provisions related to planning of inter state transmission, connection conditions, system security aspects, outage planning for generation and transmission, emergency procedures for grid restoration etc., have been retained.

1.3 As per the Electricity Act, 2003, every State Electricity Regulatory Commission is required to issue a State Grid Code consistent with the Grid Code specified by the CERC. As such, CERC has taken a lead in revising



the Grid Code so that it can serve as a guiding principle for the SERCs.

1.4 The Indian Electricity Grid Code lays down the rules, guidelines and standards to be followed by the various agencies and participants in the system to plan, develop, maintain and operate the power system, in the most efficient, reliable, economic and secure manner, while facilitating healthy competition in the generation and supply of electricity.

2.0. Amendments of regulations on grant of licence for inter-state trading

2.1 The Commission had issued the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for grant of Trading Licence and other related matters) Regulations, 2004 in February, 2004. In the light of the experience gained over a period of time, it was thought appropriate to make certain amendments. Accordingly, the draft amendments to the principal regulations on grant of licence for inter-state trading were published to invite suggestions/comments/objections from the stakeholders. After considering the comments of the stakeholders, the Commission notified the amendments on 13.4.2004 in the official gazette. The salient features of the amendments are as under:

- ◆ The definitions of “associate”, “economic offence”, “net worth” and “relative” have been included.

- ◆ The principal regulation has been amended to solicit additional information about the insolvency of the applicant or promoters or directors or associates of the applicant, relating to cases resulting in conviction or fraud or economic offence and also the details of civil and criminal cases pending since through insertion of an additional provision (Regulation 6A), these could under certain circumstances, depending on the facts, be considered as disqualifications for grant of licence. The disqualifications are meant to protect the general public from the activities in electricity sector of any undesirable person. The regulation would enable the Commission to take note of the past conduct of the persons associated with the applicant and keep them away from trading activities. In this manner, the public would be protected against repetition of past conduct by any undesirable person.
- ◆ In case a licensee intends to increase the volume of electricity to be traded in a year, he should increase his net worth in keeping with his proposal and obtain prior approval of the Commission.
- ◆ In case a licensee moves from one category to another category based on the volume of electricity traded, the technical and capital adequacy requirement should apply accordingly.
- ◆ The forms have been revised to make them more specific and targeted.



3.0 Trading Margin Regulation-2006

3.1 In a move aimed at protecting the consumers as well as providing reasonable return to traders, the Central Electricity Regulatory Commission (CERC), in exercise of the powers under section 79(1)(j) of the Electricity Act, 2003 has fixed the trading margin to 4 Paise/kWh for electricity traders who have been given licences for engaging in inter-state trading in electricity. Accordingly the Commission has issued CERC (Fixation of Trading Margin) Regulations on 23.01.2006 (and published in the Official Gazette dated 27.01.2006). In this margin, transmission charges, application fees, Unscheduled Interchange (UI) charges and transmission losses are excluded.

3.2 The Commission found that nearly 90% of trading during 2004-05 was done at a trading margin of 5 P/kWh or less, but the same had increased to a weighted average of 10 Paise/kWh in the first half of the 2005-06. Up to the year 2004-05, trading margin of 5 P/kWh or less was a pre-dominant trend. However, trading margins shot up in the first half of the 2005-06 and 68% of volume traded by the electricity traders carried a margin of 6 Paise/KWh or more in spite of the fact that the Commission had simplified the Open Access regulations in 2005. The instance of highest trading margin in a single transaction in 2004-05 was 43 Paise/kWh and in the first half of the 2005-06, it was 128 Paise/kWh.

3.3 The Commission fixed trading margin in view of the rising trend in trading margins being charged by the electricity traders. The Commission had originally proposed a trading margin of 2 P/kWh and invited comments from various stakeholders in September, 2005. A total of 24 stakeholders including ten traders and six distribution utilities had sent their comments and suggestions. The electricity traders were generally not in favour of fixing of trading margin but on the contrary the buyer distribution utilities and consumers had welcomed the proposal of fixing trading margin. After taking into account the comments and suggestions of various stakeholders, the Commission came to the conclusion that there was a need to fix trading margin and it would be reasonable to limit it to 4 Paise/KWh.

4.0 TARIFF DETERMINATION

4.1 Tariff of Thermal Generating Stations of National Thermal Power Corporation

4.1.1 The National Thermal Power Corporation (NTPC) has a total Installed





capacity of 24202 MW as on 31.3.2006 consisting of 20185 MW on coal and 4017 MW based on Natural gas/Liquid fuel. A capacity of 1000 MW have been added during the current financial year i.e. a 500 MW Unit each at Rihand in Stage-II (1st unit of stage-II) and at Talcher in Stage-II (4th unit of stage-II). The four station namely Tanda TPS, Talcher TPS, Simhadri TPS and the Kayamkulam GPS are

supplying power to single State of UP, Orissa, AP and Kerala respectively. The other generating stations of NTPC are regional stations supplying power to the regional constituents in the ratio of pre-specified allocation. The Installed capacity and the date of commercial operation of each of the generating station of NTPC are given below:

Sl. No.	Name of the Generating Station	COD of the Station	Installed Capacity (MW) as on 31.3.2006
Coal Based thermal generating Stations of NTPC			
A.	Pit head Generating Stations	-	-
1	Rihand STPS	1.1.1991	1000.00
2	Rihand St-II	15.8.2005	500.00
3	Singrauli STPS	1.5.1988	2000.00
4	Vindhyachal STPS St-I	1.2.1992	1260.00
5	Vindhyachal STPS St-II ¹	1.10.2000	1000.00
6	Korba STPS	1.6.1990	2100.00
7	Ramagundam STPS	1.4.1991	2100.00
8	Ramagundam STPS St-III	25.3.2005	500.00
9	Talcher STPS St-I	1.7.1997	1000.00
10	Talcher STPS St-II ⁴	1.8.2005	2000.00
11	Talcher TPS ¹	1.7.1997	460.00
12	Kahalgaon STPS ¹	1.8.1996	840.00
	Sub Total		14760.00

Table Contd...



Sl. No.	Name of the Generating Station	COD of the Station	Installed Capacity (MW) as on 31.3.2006
B. Non-Pit head Generating Stations			
1	FGUTPP TPS St-I	13.2.1992 (Date of Take over)	420.00
2	FGUTPP St-II	1.1.2001	420.00
3	NCTP Dadri	1.12.1995	840.00
4	Farrakka STPS	1.7.1996	1600.00
5	Tanda TPS ¹	14.1.2000 (Date of Take over)	440.00
6	Badarpur TPS ³	1.4.1982	705.00
7	Simhadri ¹	1.3.2003	1000.00
	Sub Total		5425.00
	Total Coal		20185.00
Gas /Liquid Fuel Based Stations of NTPC			
1	Dadri CCGT	01.04.1997	829.78
2	Faridabad	01.01.2001	431.00
3	Anta CCGT	01.03.1990	419.33
4	Auraiya GPS	01.12.1990	663.36
5	Gandhar GPS ¹	01.11.1995	657.39
6	Kawas GPS ¹	01.09.1993	656.20
7	Kayamkulam CCGT	01.03.2000	359.58
	Total Gas		4016.64
	Total NTPC (Coal+Gas)		24201.64

4.1.2 The tariff determination process for the central generating stations were delayed in general due to the stay granted by the Hon'ble High Court of Delhi on the regulation on

terms & condition of tariff for the period 2001-04 in March 2001 which was vacated in Oct 2001 after transfer of all appeals against the above regulation in different High courts

to Delhi High courts. The central generating companies filed the revised tariff petitions thereafter. In the meanwhile Commission decided to award tariff for the period prior to 1.4.2001 for all the thermal generating stations and the Central generating companies were directed to file the petitions which were filed in 2002. These petitions were taken up on priority and disposed off after following due process of hearing all the stakeholders in 2002-03 & and early 2003-04. The tariff for the period 2001-04 could be taken up thereafter. The tariff for the period 2001-04 were awarded for most of the stations in 2004-05. The hearings in case of Kawas Gas based Power Station, Gandhar Gas based Power Station and Kahalgaon Super Power Station were concluded during the financial year 2004-05 and orders were reserved in want of certain additional information/clarifications. Commission awarded the tariff for these generating stations for the period 2001-04 on priority basis during the financial year 2005-06.

4.1.3 Tariff of Kawas Gas based Power Station and Gandhar Gas based Power Station in the Western Region:

The Commission passed the final tariff orders for the tariff period 01.04.2001 to 31.03.2004 in respect of Kawas Gas based Power Station and Gandhar Gas based Power Station in the Western Region vide orders dated 1st April, 2005 and 7th April, 2005 respectively. The orders provided for one time relaxation in



target availability for both stations in an integrated manner (i.e. achieving of 80% machine availability and PLF of 65%) due to non availability of sufficient gas for operation at 80% PLF for these stations and absence of dual fuel firing arrangement in Gandhar GPS. Commission awarded the following tariff for the period 2001-04:

	Particulars	2001-02	2002-03	2003-04
1	Gandhar GPS Tariff for 2001-04 vide order dated 1.4.2005			
	A Annual Capacity Charge (Rs. Lakhs)	50615	49099	47893
	B Energy Charge (Paise/kWh) On Natural Gas	98.62	98.62	98.62
2	Kawas GPS Tariff for 2001-04 vide order dated 7.4.2005			
	A Annual Capacity Charge (Rs. Lakhs)	24797	25057	25341
	B Energy Charge (Paise/kWh)			
	i. On Natural Gas	107.21	107.21	107.21
	ii. On Liquid Fuel (Naptha)	323.17	323.17	323.17



4.1.4 Tariff of Kahalgaon Super Thermal Power Station of NTPC in Eastern Region.

The Kahalgaon Super Thermal Power Station of NTPC was setup under the bilateral agreement with the USSR. The main plant equipments like Steam turbine, Boiler and associated auxiliary systems along with control & instrumentation packages were to be supplied by the original equipment manufacturers of USSR. During the execution of the project, USSR disintegrated which effected the supplies from the OEMs of erstwhile USSR. Identification of new suppliers

and arranging of the balance material thereafter, led to delay in commissioning and escalation of the capital cost. The failure of the petitioner to provide the revised cost approval held up the tariff determination for the Kahalgaon STPS for the period 2001-04. The Commission passed the final tariff order vide order dated 4th August, 2005 after submission of revised cost approval of the project. The delay in commissioning and the escalation in the cost were held to be beyond the control of the project authorities. Commission awarded the following tariff for the period 2001-04:

	Particulars	2001-02	2002-03	2003-04
A	Annual Capacity Charge (Rs. Lakhs)	37469	37397	36837
B	Energy Charge (Paise/kWh)	86.28	86.28	86.28

4.1.5 Determination of impact of additional capital expenditure incurred during 2001-04:

Having completed the process of tariff determination for the NTPC stations for the period 2001-04, Commission was required to take up the tariff determination process for the period 2004-09 based on new terms and conditions of tariff. However, in the meanwhile NTPC had filed petitions for the revision of fixed charges on account of additional capitalization during 2001-04 for its thermal generating stations. NTPC also filed tariff petitions for the period 2004-09. Commission therefore, dealt with 15

petitions of revised fixed charges on account of additional capitalization first and passed the final orders during the current financial year. In these petitions Commission admitted additional capital expenditure after applying prudence check and arrived at the capital cost to be considered for the purpose of tariff for the period 2004-09.

The Commission passed the final orders in 15 petitions pertaining to determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 in respect of NTPC's stations namely Kayamkulam GPS, FGUTPP Stage-II, Vindhayachal STPS Stage-II, Faridabad GPS,



Simhadri TPS, Dadri GPS, Vindhayachal Stage-I, Farakka STPS, Rihand STPS, Ramagundam STPS, Anta GPS, NCTPS Dadri, Singrauli STPS, Korba STPS and Tanda STPS.

The additional capital expenditure in respect of these stations with the exception of Tanda TPS was less than 20% of the capital cost as on 31.3.2001 admitted by the Commission for the purpose of tariff. Therefore, in terms of clause 1.10 of the notification dated 26.3.2001, the Commission decided not to revise the fixed charges for the period 2001-04. In case

of Tanda TPS, Commission decided to revise the fixed charges because the additional capital expenditure was more than 20% of the admitted cost. However, the Commission went into the admissibility of capital expenditure to be included in the capital base as on 1.4.2004 for the purpose of tariff for the period 2004-09. The Commission after the prudence check allowed following additional capitalization in respect of above stations to be included in the capital base as on 1.4.2004 as indicated in the Table below:-

Sl. No.	Name of Station	Capacity (MW)	Capital cost as on 1.4.2001 Rs. Crore	Additional capitalisation during 2001-04 Rs. Crore	Capital cost as on 1.4.2004 Rs. Crore
A	B	C	D	E	F
1	FGUTPP St-II	420.00	1234.82	23.13	1257.95
2	Vindhyachal STPS St-II	1000.00	2392.11	55.22	2447.33
3	Simhadri STPS ¹	1000.00	3180.76	128.36	3309.12
4	Vindhyachal STPS St-I	1260.00	1398.49	59.67	1458.16
5	Ramagundam STPS	2100.00	2235.28	14.08	2249.36
6	NCTPS, Dadri	840.00	1641.81	72.35	1714.16
7	Kayamkulam GPS	358.98	1125.31	10.08	1135.39
8	Faridabad GPS	431.59	902.90	38.01	940.91
9	Dadri GPS	829.78	866.32	13.41	879.74
10	Anta GPS	419.33	451.67	1.02	452.69
11	Singrauli STPS	2000.00	1086.96	50.93	1137.89
12	Tanda TPS ²	440.00	607.00	177.47	784.47
13	Farakka STPS	1600.00	3017.32	18.25	3035.57
14	Rihand STPS St-I	1000.00	2372.27	59.73	2432.00
15	Korba STPS	2100.00	1473.89	213.02	1686.91

Note: ¹ Capital cost in column D is as on 1.4.2003

² Capital cost in column D is as on date of take over i.e. 14.1.2000.



The Commission has concluded the hearing in four other petitions for the revision of fixed charges, in respect of Talcher TPS, Kahalgaon TPS, Gandhar GPS and Kawas GPS on account of additional capitalization during 2001-04 and has reserved the orders.

In case of Tanda TPS, Commission also revised the annual capacity charges for the period 1999-2000 to 2003-04 vide order dated 24th October 2005 as the admitted additional capitalization was more than the 20% of the admitted capital cost. The revised capacity charges are as follows:

(Rs. in Lakhs)

Particulars	1999-2000*	2000-01	2001-02	2002-03	2003-04
Revised capacity charges	18124	18034	17163	17834	18464

*The amount relates to full year. For part of the year there shall be proportionate reduction.

4.1.6 As regards tariff petitions for the period 2004-09, NTPC had sought additional time to submit the audited accounts up to November 2004. Commission allowed the time to NTPC for the same. NTPC revised the tariff petitions based on the admitted additional capitalization. Commission undertook process of tariff determination for the period 2004-09 thereafter. The Commission concluded the hearings in tariff Petitions of NTPC for the period 2004-09 in respect of its coal based and Gas/Liquid fuel based thermal generating stations except for

Tanda TPS, Talcher TPS, Kahalgaon TPS, Kawas GPS and Gandhar GPS and has reserved the final orders.

4.2 Tariff of thermal generating stations of Neyvelli Lignite Corporation

4.2.1 The Neyvelli Lignite Corporation (NLC) has a total Installed capacity of 2490 MW as on 31.3.2006 based on lignite fuel. The Installed capacity and the date of commercial operation of each of the generating station of NLC are given below:

Sl. No.	Name of the Generating Station	COD of the Station	Installed Capacity (MW) as on 31.3.2006
1	TPS-I	21.02.1970	600.00
2	TPS-II Stage-I	23.04.1988	630.00
3	TPS-II Stage-II	09.04.1994	840.00
4	TPS-I (Expansion)	05.09.2003	420.00
	Total Lignite		2490.00



4.2.2 Thermal Power Station-I supplies power to single State of Tamil-Nadu whereas. Thermal Power station- II Stage-I & II and Thermal Power Station-I (Expansion) are regional stations supplying power to the constituents of southern region in the ratio of pre-specified allocation.

4.2.3 Tariff of NLC Thermal Power Station-I

The tariff for the Thermal power station-I was being charged on single part basis as per the Bulk power supply agreement between NLC and TNEB. The single part tariff was on NFA concept. The BPSA expired on 31.3.2002 but none of the parties approached Commission for the approval of tariff. NLC filed the tariff petition on 31st March 2004 for the determination of tariff for the period 2001-04. Since both the parties were agreeable to extending the terms of BPSA for the tariff period 2002-04, Commission vide order dated 31.8.2005 directed that the tariff for the period 2002-04 should be determined in terms of Bulk Power Supply Agreement between the NLC and TNEB which was valid till 31.3.2002 for the period 2003-04. The above tariff order was reviewed on a review petition filed by TNEB. The Commission directed in the review petition that capacity of the station shall be 600 MW instead of 560 MW and ROE shall be 16% instead of 12%. Subsequent to this, NLC filed tariff petition for the period 2004-09. The Commission undertook the determination process on net fixed asset concept. The lignite transfer price is an issue before the Commission and the

Commission is yet to take a view in the matter. Commission has constituted a Single Member Bench under Shri A.H.Jung, Member in case of Thermal Power Station-II. Meanwhile, the Commission decided to allow provisional two-part tariff based on lignite transfer price as per earlier BPSA with the TNEB.

4.2.4 Tariff of Thermal Power Stations-II stage-I and stage-II.

The Commission was unable to under take the tariff determination for the thermal power station-II of NLC due to stay granted by the Tamil Nadu High Court on the CERC regulation for the period 2001-04. The Commission undertook the tariff determination process for the project after vacation of stay by Delhi High Court after transfer of case from Tamil Nadu High Court to Delhi High Court. Commission decided to continue with the Net Fixed Asset (NFA) concept.

The lignite transfer price was a major issue for the NLC station. Under the direction of Ministry of Coal, NLC was determining lignite transfer prices in the respective year on their own which were not acceptable to the Southern Region beneficiaries. The Commission's approach was to allow time to both NLC and TNEB to resolve the lignite transfer price issues among themselves. But when the matter was not resolved the Commission directed that the matter be reviewed by Ministry of Coal after taking due



consideration of the views of the beneficiaries. Ministry of Coal after going into the concerns expressed by beneficiaries finalized the detailed principles and norms for the determination of lignite transfer price vide their order 30th January, 2006.

NLC based on the above order of Ministry of Coal worked out the revised lignite transfer prices, which were still not acceptable to the beneficiaries. The Commission therefore has constituted a Single Member Bench under Shri A.H. Jung, Member to reconcile the difference and make suitable recommendations to the Commission. Pending finalization of lignite transfer price, the Commission allowed provisional tariff based on 80% of the lignite transfer price claimed by the NLC.

4.2.5 Tariff of Thermal Power Station-I (Expansion) of NLC in Southern Region :

The Thermal Power Station-I (Expansion) was commissioned on 5th September 2003. It supplies power to the southern region beneficiaries. Commission had concluded the hearing of the tariff petition in the last

financial year 2004-05. Commission passed the final tariff order for the tariff period 2001-04 in respect of NLC STPS-I expansion (2x210 MW) vide order dated 07.04.2005. The tariff was based on Net Fixed Asset (NFA) concept as prevailing in other NLC stations. Commission awarded the following tariff from COD of Unit-I to 31.3.2004:

Particulars	9.5.2003 to 4.9.2003	5.9.2003 to 31.3.2004
A Annual Capacity Charge (Rs. Lakhs)	4786	14532
B Energy Charge (Paise/kWh)	141.83	134.36

4.3 Tariff of thermal generating stations of North-Eastern Electric Power Corporation

4.3.1 The North-Eastern Electric Power Corporation (NEEPCO) has a thermal Installed capacity of 375 MW as on 31.3.2006 based on Natural gas as fuel. The Installed capacity and the date of commercial operation of each of the generating station of NEEPCO are given below:

Sl. No.	Name of the Generating Station	COD of the Station	Installed Capacity (MW) as on 31.3.2006
1	Agartala GPS	01.08.1998	84.00
2	Assam GPS	01.04.1999	291.00
	Total		375.00



4.3.2 Tariff of Agartala Gas Power Station and Assam Gas Power Station in North Eastern Region:

The **Agartala Gas Power Station and Assam Gas Power Station in North Eastern Region** were commissioned in August 1998 and April 1999 respectively. Both these stations supplies power to the beneficiaries of North-Eastern region. Agartala Gas Power Station runs on open cycle and Assam Gas Power Station runs on combined cycle mode. Both the stations have small capacity gas turbines. By the time these stations were commissioned, the Central Commission had come into existence under the Electricity Regulatory Commission Act 1998. NEEPCO filed the tariff petitions for the approval of tariff for these stations in Jan 2000. In respect of AGTPP, a provisional tariff @ 190 paisa per kwh, for the power drawn, was adopted by North Eastern Regional Electricity Board (NEREB). So far as AGBPP is concerned, a provisional tariff was adopted @ 225 paisa per kwh of power sold had been agreed to at NEREB. The provisional tariff in both these cases which came into force with effect from 1.2.1998, was subject to finalisation of tariff by the competent authority. It bears notice that the Central Government had not notified the tariff for either of these projects prior to constitution of the Commission. Thus, a provisional single part tariff has been prevailing in the North Eastern Region since 1.2.1998 and continued by virtue of interim orders of the Commission. The petitions for approval of two-part tariff were based on the

terms and conditions contained in Government of India, Ministry of Power notification dated 30.3.1992, issued under Section 43A of the Electricity (Supply) Act, 1948, omitted with effect from 15.5.1999.

Commission was however, not in a position to determine the tariff on account of failure of NEEPCO to submit the revised cost approval of Government and the absence of operational norms. Commission after coming into existence had started the process of specifying terms & condition of tariff. Commission after hearing all concerned, finalized the terms & condition of tariff for the tariff period 2001-04 in Dec 2000 and notified the same on 26th March 2001. NEEPCO and the beneficiaries of the North-Eastern region did not participate in the process of specifying terms & conditions of the tariff. As a result Commission could not specify the operation norms for the small capacity gas turbine plants. NEEPCO thereafter, requested CERC to specify norms for the small capacity gas turbine stations. Commission after going through the transparent process of hearing specified the norms for small gas turbines on 25th September 2002 in a suo-motu Petition No.56/2002. With the finalization of operational norms for the small gas turbine stations ground was clear for the determination of the two part tariff by the Commission. Since considerable time had elapsed since the commissioning of the station, determination of two part tariff also



required that availability of the station is certified by the NEREB and also involved payment of corresponding capacity charges. Beneficiaries of the stations argued that they are not in a position to get the power in the changed scenario of fixed capacity charge liability from the back date. Further, NEREB was not in a position to certify the availability for the past period. Commission therefore, vide order dated 5th Feb 2003 confirmed the single part tariff of 225 paise/kWh and 190 paise/kWh respectively for these stations for the period up to 31.3.2003 with a direction to file tariff petition for the period 2003-04. NEEPCO filed the tariff petition for the determination of tariff for the year 2003-04 in respect of these two stations in June 2003. Both these projects had witnessed delay in commissioning and escalation of capital cost. After the due process of hearing, Commission came to the conclusion that the delay in commissioning and escalation in capital cost in case of Assam GPS was beyond the control of the project authorities and that the delay in commissioning and escalation in capital cost not beyond the control of the project authorities in case of Agartala GPS.

Commission passed the tariff orders in respect of Assam GPS and Agartala GPS vide order dated 22nd August, 2005 and 9th September, 2005 respectively for the year 2003-04. Commission awarded the following tariff for the period from 1.4.2003 to 31.3.2004:

Particulars		Agartala GPS	Assam GPS
A	Annual Capacity Charge (Rs. Lakhs)	6017	27454
B	Energy Charge (Paise/kWh)	83.52	40.53

4.4. Tariff of Badarpur Thermal Power Station

4.4.1 The Badarpur Thermal Power Station is owned by Government of India and operated by NTPC under an Operation & Maintenance contract. The station has got a capacity of 705 MW consisting of three units of 95 MW and two units of 210 MW. The entire power from the station is supplied to the State of Delhi. The tariff of the station was on single part basis since its inception and was last revised by GoI in 1987. The revised single-part tariff of 61.38 paise/kWh was based on Net Fixed Asset concept and consisted of capacity charge of 17.64 paise/kWh & energy charge component of 43.71 paise/kWh based on following relaxed norm of plant load factor, station heat rate, auxiliary energy consumption and specific fuel oil consumption.

Parameters	Unit	Norm
Plant Load Factor (PLF)	%	57.08
Station Heat rate	kCal/kWh	3189.00
Auxilliary Energy Consumption	%	12.00
Specific Fuel Oil Consumption	ml/kWh	22.50



4.4.2 Government of India filed the tariff petition for the first time in April 2004 for the determination of tariff for the period 2004-09. The terms and conditions for determination of tariff applicable from 1.4.2004 to 31.3.2009 notified by the Commission did not specify the operational norms to be applied to BTPS. Commission therefore, directed GoI to file performance data of the station for the last five year to take a view on the operational norms and certain other information. In the meanwhile, Commission also decided to bring the station under the purview of Availability Based Tariff and the Commission vide order dated 1.4.2005 allowed the following provisional two-part tariff for the Badarpur TPS to be charged w.e.f. 1.4.2005 subject to adjustment on finalization of tariff by the Commission.

- (a) Annual fixed charges - Rs.220.00 Crore
- (b) Energy charge - Rs.158.87 paise/kWh of energy sent out

The UI charges for the deviation from the schedule were to be levied in terms of CERC notification dated 29.3.2004.

Deliberations before the Single Member Bench

4.4.3 After furnishing of operational data and additional information/clarification, the Commission vide order dated 29th April 2005 constituted a single member Bench under Shri A.H.Jung, Member CERC to resolve following preliminary issues before the

Commission takes up the exercise of actual determination of tariff:

- (a) Whether to follow the “net fixed assets” concept or “gross fixed assets” concept;
- (b) Debt-equity ratio to be considered;
- (c) Gross block to be considered as on 1.4.2004;
- (d) R&M expenditure and the expenditure to meet environmental norms to be considered;
- (e) O&M expenses to be considered in tariff; and
- (f) Operational norms of gross station heat rate, auxiliary energy consumption, specific fuel oil consumption and target availability/PLF to be applicable.

4.4.4 The single Member bench vide order dated 7th July 2005 after hearing the parties made the following recommendations:

- (i) Continue to adopt the Net Fixed asset Concept
- (ii) Debt :Equity ratio of 70:30
- (iii) Actual capital expenditure of Rs.430.76 Crore as on 31.3.2004 (Gross Fixed Assets as per balance sheet for the year 2003-04) with corresponding Net Fixed Asset is Rs. 229.78 Crore as on 31.3.2004. This is after deducting cumulative depreciation of Rs.200.98 Crore recovered up to 31.3.2004 indicated by the petitioner from the gross block of Rs. 430.76 Crore. Further, any



additional capitalisation can be allowed in the capital base after the expenditure has actually been incurred and hence anticipated additional capitalisation indicated by the petitioner should not be considered for the determination of tariff at this stage.

- (iv) On the issue of R&M expenditure, Bench observed that R&M of stage-I of 95 MW units shall be serviced on NFA concept. However, in case, the units of Stage-I are replaced with new 250 MW unit then the R&M expenditure could be considered on GFA concept. As regards R&M of Stage-II, Bench observed that the same may be

considered with life extension after actually incurring the R&M expenditure.

- (v) Since O&M expenses for the station were very high, Bench recommended an O&M expenditure of Rs 120.25 Crore per year during the tariff period without any escalation on year to year with the direction that the petitioner i.e. GoI to rationalize manpower deployed at the stations to rationalize O&M expenses in future.
- (vi) The bench after examining the last five years operation data reviewed the operation norms for the station and recommended the following norms:

Particulars	As claimed by Petitioner	As Recommended by the Bench
Target Availability (%)	70.00	75.00
Target PLF (%) for Incentive	70.00	75.00
Gross Station Heat Rate (Kcal/kWh)	2885.00	2885
Auxiliary Energy Consumption (%)	12.00	11%
Specific fuel oil consumption (ml/kWh)	3.50	2.60

The Recommendations of the one member bench were deliberated by the Commission in the hearing held in September 2005 and the order was reserved.

4.5 Tariff for the Generating stations and Transmission system of Damodar Valley Corporation

4.5.1 The Damodar Valley Corporation (DVC) is a Corporation established under the Damodar Valley Corporation Act, 1948

enacted by the Parliament. DVC is a body promoted by the Central Government in consultation with the provincial Governments, namely, Government of West Bengal and the Government of Bihar. After the re-organisation of the State of Bihar, the provincial Governments of Bihar was replaced with the Government of Jharkhand. The representatives of the provincial Governments of Jharkhand and West Bengal are on the Board of DVC. In terms of provision



of DVC Act, the three participating Governments had contributed a sum of Rs. 214.72 Crs up to the year 1968-69. Thereafter, DVC has ploughed back the surplus revenues earned by it from its operation in stead of distributing the same to the participating Governments.

4.5.2 Section 12 of the DVC Act provides for the following functions of the DVC and it reads as under:

- (a) The promotion and operation of schemes for irrigation, water supply and drainage,
- (b) The promotion and operation of schemes for the generation, transmission and distribution of electrical energy, both hydroelectric and thermal,
- (c) The promotion and operation of schemes for flood control in the Damodar river and its tributaries and the channels, if any, excavated by the Corporation in connection with the scheme and for the improvement of flow conditions in the Hooghly river,
- (d) The promotion and control of navigation in the Damodar river and its tributaries and channels, if any,
- (e) The promotion of afforestation and control of soil erosion in the Damodar Valley, and
- (f) The promotion of public health and the agricultural, industrial, economic and

general well-being in the Damodar Valley and its area of operation.

4.5.3 DVC has multifarious functions in the Damodar Valley. DVC has the obligation to undertake development of Damodar Valley, which falls in the provinces of West Bengal and Jharkhand. The activities of DVC are not restricted to generation and sale/supply of electricity. The functions of the DVC include promotion and operation of schemes for irrigation, water supply and drainage, flood control and improvement of flow conditions in the Hooghly river, navigation in the Damodar river and its tributaries and channels, afforestation and control of soil erosion in the Damodar Valley and promotion of public health and agricultural, industrial, economic and general well being in the Damodar Valley under its areas of operation.

4.5.4 The petition for the determination of tariff was filed by the DVC on 10.6.2005 on the direction of the Commission in petition No.168/2004 (Suo-motu) vide order dated 29.3.2005. The order of the Central Commission in petition No.68/2004 (Suo-Motu) held as follows:

“The respondent is a statutory authority constituted under Section 3 of the Damodar Valley Corporation Act, 1948. Its functions, inter alias, include promotion and operation of schemes for the generation, transmission and distribution of electrical energy. In terms of Section 79 of the Electricity Act, 2003, the tariff for sale of electricity



by the respondent and the inter-state transmission of electricity undertaken by it is to be regulated in accordance with the terms and conditions for determination of tariff notified by the Commission. The respondent was, therefore, advised to make an appropriate application for determination of tariff.”

The Commission had further held as follows:

“The Commission also makes it clear that it has no intention of fixing consumer tariff for distribution as it is within the domain of respective SERCs.”

4.5.5 Prior to this, the charges for supply of electrical energy were being determined by DVC itself under section 20 of DVC Act. The DVC had made the Petition under sections 61, 62 and 86 of the Electricity Act, 2003 for approval of the revenue requirements and for determining the matters concerning the tariff for electricity activities undertaken by them.

Deliberations before the Single Member Bench

4.5.6 Since there were number of complicated issues involved, the Commission constituted a one Member Bench under Shri K.N.Sinha, Member to examine various tariff issues and make recommendations to the Commission by mid December 2005.

4.5.7 One Member Bench heard the petitioner and respondents on 28.10.2005 and directed petitioner to file additional information/clarifications vide order dated 3.11.2005. The petitioner filed the additional

information/details vide affidavit dated 24.11.2005. One Member Bench during the hearing on 16.1.2006 deliberated on various tariffs issues except O&M cost to decide on principles and methodology to be adopted. O&M cost was deliberated in the subsequent hearing on 13.2.2006 and reserved the order on various tariff issues.

4.6. Miscellaneous Petitions

4.6.1 Relaxation of Target Availability in respect of Kawas GPS and Gandhar GPS for the period 1.4.2004 to 31.3.2009

NTPC through a petition had prayed for relaxation of target availability in respect of Kawas GPS & Gandhar GPS on the lines of relaxation granted for the period 2001-04. Commission vide its order did not agree to extent the relaxation of target availability norm in respect of Kawas GPS and Gandhar GPS for the period 2004-09. Commission observed that the stage has come when the responsibility of arranging fuel has to be born by the generator.

4.6.2 Revision of norms of target availability in respect of Farakka STPS for the period 2002-03 to 2004-05

NTPC through two separate petitions had prayed for relaxation of target availability for the period 2002-03 to 2004-05 on account of acute shortages and poor quality of coal. The CERC norms provide for target availability of 80% for the recovery of full fixed charges. The actual availability achieved at the



generating station during these years was 75.03%, 70.12% and 70.53% respectively. Commission refused to relax the norms of target availability holding that the NTPC had the sufficient time available to arrange for the sufficient quantity of fuel and thus implying that the responsibility of arranging fuel has to be born by the generators.

4.6.3 Petition for claiming abnormal O&M expenses

NTPC had filed above 10 petitions for claiming abnormal O&M expenses for its thermal generating stations and in all these petitions, the main reason for the abnormal expenses was the expenditure of salary & wages on account of pay revision and payment of its arrears in 2000-2001. Commission, however, did not allow the abnormal expenses in these petitions on the ground that the fact of pay revision and payment of arrears was known to the NTPC at the time of filing such petitions and therefore, raising this as a ground for claiming abnormal expenses can not be allowed. The Commission therefore, rejected these petitions.

4.6.4 Approval of provisional tariff for Ramagundam stage-III and Rihand stage-II.

The Commission vide order dated 10.5.2005 allowed following provisional tariff for Ramagundam stage-III and Rihand stage-II units:

Ramagundam stage-III (500 MW):

- A.** Provisional annual capacity charges vide order dated 10.5.2005
- | | |
|---------|-----------------|
| 2004-05 | Rs.241.71 crore |
| 2005-06 | Rs.235.14 crore |
- B.** Energy charges of 118.72 paise/kWh during stabilisation period and 109.92 paise/kWh after stabilization subject to Fuel price variation.

Rihand stage-II units (1000MW):

- A.** Provisional annual capacity charges vide order dated 21.9.2005 of Rs. 229.25 Crore for the period starting from 15.8.2005 as the annual fixed charge, on provisional basis for Unit-I.
- B.** Energy charges of Rs. 85.24 paise/kWh shall be applicable from 15.8.2005 to 12.2.2006 that is, during the stabilization period and thereafter @ 78.31 paise/kWh up to the date of commercial operation of Unit-II subject to fuel price variation.

4.6.5 Renovation and Modernisation of Auraiya Gas Power Station (663.36 MW)

4.6.5.1 The NTPC had filed an application for “in-principle” approval to the renovation and modernisation scheme for Auraiya Gas Power Station.

4.6.5.2 The NTPC had submitted that the Auraiya GPS with 4 gas turbines and 2 steam turbines was declared under commercial



operation during December 1990. The gas turbines will be completing 15 years of operation, the prescribed useful life for the purpose of depreciation under the regulations notified by the Commission. It is further stated that as per the recommendations of Original Equipment Manufacturer (OEM), critical components of the hot gas path such as turbine blades, rotor, vanes, etc need to be renovated after one lakh equivalent operating hours. NTPC has stated that during inspections of the gas turbines, most of critical equipment of the hot gas path was found to be beyond refurbishment and, therefore, needed to be replaced. Therefore, according to the NTPC, renovation and modernisation of Auraiya GPS has become essential. The proposed renovation and modernisation is likely to extend the life of the station for a further period of 8 to 10 years to enable NTPC to continue the supply of power at the present performance level.

4.6.5.3 The R&M scheme proposed by NTPC involved expenditure at an estimated cost of Rs.416.27 Crore as on March 2004 price level, which included IDC of Rs.36.53 Crore, and contingency of Rs.18.08 Crore. In addition capital spares worth Rs.98.20 Crore was also proposed to be procured. The capital expenditure on R&M was proposed to be incurred over a period of 5 years starting from 2003-04 and completing in year 2008-09. The petitioner during the hearing on 23.6.2005 had submitted that they are seeking “in principle” approval of the Commission to

proceed with the R&M of the station and are not seeking the approval of the cost of R&M expenditure.

4.6.5.4 The Commission found that there is no explicit consent of the beneficiary respondents for undertaking R&M. The Commission also noted that the existing allocation for the supply of gas is sufficient to run the station at around 70% PLF. Further, the R&M scheme involves not only replacement of hot gas path component and gas turbine but also installation of new system like evaporating cooling system and RLA study of steam turbine and WHR Boiler and purchase of capital spares worth Rs.98.20 Crore over and above the R&M scheme of Rs.416.27 Crore.

4.6.5.5 On the issue of consent to the R&M scheme the respondents had submitted that in the absence of net tariff as a result of R&M they are unable to take a view. The reservations of the beneficiaries were on the following two issues:

- i. The investment on the station has been mostly returned through depreciation. The capital expenditure on R&M should not lead to increase in tariff in term of fixed charges.
- ii. Sufficient gas is not available to run the station on full load. In such a situation, a substantial capacity is required to run on liquid fuel. Most of the respondents were not willing to take power on liquid



fuel due to its very high cost. Respondent PSEB submitted that petitioner is planning new gas based stations but is not trying to procure additional gas for the existing gas based stations.

4.6.5.6 Commission took note of the concern of the respondents with regard to the capital cost to be adopted for the purpose of tariff in a case like this (where the investment on station has been recovered through depreciation). But decide to deal with this issue at the time of determination of tariff after admitting the capital expenditure on R&M and all relevant facts.

4.6.5.7 On the issue of supply of gas for the station, petitioner clarified that GAIL (Supplier of Gas) is gradually reducing the supplies of gas to gas based stations of NTPC and they have no control over such action of GAIL. There was no regulator for gas to deal with this issue. GAIL had reduced the gas supplies under the “Administrative Price Mechanism” by 2.5 mcmd but was ready to give an allocation of 4.0 mcmd of new gas at a higher price. NTPC submitted that they are making all efforts to procure the additional quantity of gas but it is very difficult for them to give a firm commitment of supply of gas at this stage. At the same time the beneficiaries were not willing to buy electricity based on liquid fuel.

On the above consideration Commission vide order dated 7th July, 2005 decided that

still, the country is short of generating capacity and existing capacity should not be allowed to deteriorate. Under the circumstances, Commission felt that the beneficiaries will have claim on full capacity of the renovated plant and pay corresponding fixed charges in case the petitioner is able to arrange adequate supply of gas by the time renovation is completed. In case NTPC is not able to arrange adequate quantum of gas, they would be at liberty to sell the liquid fuel based plant capacity to any person at a price not exceeding the apportioned fixed charges. Since the northern region was facing severe shortages of power, the Commission granted “in principle” clearance to proceed with the R&M with Life Extension of the Auraiya GPS subject to the following conditions:

- I. Firming up of R&M scheme in the most economic manner.
- II. Approval of the Board of Directors of NTPC for the expenditure to be incurred on R&M
- III. Items of the scheme would be admitted subject to prudence.
- IV. Only reasonable amount of spares to be capitalised for tariff.
- V. Furnishing of Extended life along with reference date for the purpose of recovery of depreciation.
- VI. Tariff for the station shall be determined afresh on merit considering depreciation & equity already recovered and other relevant facts.



4.7 Other Miscellaneous Petitions

The Commission also dealt with petition relating to petition of NTPC regarding allocation of capital expenditure on corporate office regional offices and other centralized offices to capital cost of different projects. Capital cost and the petition filed by Gujarat Urja Vikas Ltd. seeking direction to NTPC for arranging Gas/LNG for augmenting power supply from Kawas and Gandhar GPS.

4.8 In principle approval of capital cost and financing plan for the proposed (1000 MW) for the Mangalore project of Nagarjuna Power Corporation Ltd.

4.8.1 Nagarjuna Power Corporation Limited (NPCL), a public limited company promoted by the Nagarjuna group filed a petition (40/2005) for determination of tariff for its proposed power project (2x507.5 MW) at Mangalore for a period starting from 1.9.2008 onwards for unit-I and a composite tariff of the plant for period starting from 1.1.2009 onwards based on terms and conditions of tariff notified by the Commission on 26.3.2004 (as amended on 3.9.2004) for the tariff period 2004-09. The expected COD of Unit-I and Unit-II were end of August '2008' for Unit-I and end of December '2008' for Unit-II respectively.

4.8.2 The petition was for the determination of provisional tariff but the Commission vide order dt. 25.10.05 held as follows:-

“The present application for approval of provisional tariff cannot be taken up for

consideration at this stage since under the 2004 regulations the provisional tariff is to be determined based on the expenditure (capital cost) incurred up to the date of making the application. In the case before us even the financial closure has not been achieved and, therefore, determination of provisional tariff at this stage is not being considered.”

4.8.3 Commission however, by this time had amended the Regulation 2004 specifying Terms and condition of tariff and its new proviso of section 17 provide for the “In-principal” acceptance of capital cost and financing plan.

4.8.4 The project envisages installation of 2x507.5 MW units based on imported coal at a capital cost of US\$ 40.0 million + Euro 66.0 million + Rs. 3745.86 Crore, including IDC and financing charges of Rs.350.14 Crore. This totalled to Rs.4299.12 Crore at the exchange rates of Rs.43.72/US\$ and Rs.57.33/Euro Rs.4299.12 Crs. The project is located at sea coast and has following site specific features having implication on capital cost of the project:

- i Coal jetty for receiving imported coal,
- ii Sea water intake and discharge structure,
- iii External coal handling system at the jetty for unloading, storage, handling and loading imported coal,
- iv Impervious layer for coal and ash storage areas as ordered by the Environment Authorities,



- v Desalination plant for treating sea water for power generation,
- vi Installation for FGD as per stipulation in environmental clearance.

4.8.5 The special site specific features has a cost implication of about Rs.445 Crore as compared to any other Green field Power Project. The capital cost of proposed Mangalore Power Project of Rs.4299.82 Crore was found reasonable after taking into account these additional features, reduction in taxes and duties being a mega power project and reduction in internal coal handling system and ash handling system due to use of imported coal.

The Commission vide order dated 25th October 2005 accorded “in principle” approval of the capital cost and the Financing plan.

4.9 In principle approval of capital cost and financing plan for the proposed (1128 MW) for the SUGEN project of Gujarat Torrent Power

4.9.1 M/s Torrent Power Generation Limited, made the application for ‘in principle’ approval of the capital cost and financing plan for 1100 MW power project proposed to be installed in Surat Distt., State of Gujarat. The application was made under Regulation 17 of the CERC (Terms and Conditions of Tariff) Regulations 2004, as amended. According to proviso to Regulation 17, any person intending to establish, operate and maintain a generating station may make an application before the

Commission for ‘in principle’ acceptance of the project cost and financing plan in accordance with the procedure specified in the Central Electricity Regulatory Commission (Procedure for making application for determination of tariff, publication of the application and other related matters) Regulations, 2004.

4.9.2 The proposed SUGEN power project will consist of 3 x 376 MW modules having advance class gas turbine (Siemens make) along with associated WHC recovery boilers, generator with single shaft configuration. The project is proposed to be set up at Akhakhhol Village, Kamrej Taluka Surat District, Gujarat. The site located at a distance of approx. 2.5 kms off the National Highway No.8, connecting Mumbai and Delhi and is about 28 kms from Surat city.

4.9.3 The power from the project is proposed to be sold to Torrent Power AEC Ltd. (TPAEC), Torrent Power SEC Ltd. (TPSEC) and PTC India Ltd. (PTC). The proposed allocation of capacity amongst the above three entities is as follows:

TPAEC	-	564 MW
TPSEC	-	282 MW
PTC	-	100 MW
Total		946 MW

The balance 182 MW is proposed to be sold on short-term contract basis.



4.9.4 The proposed project have received all necessary approvals/clearances for the setting up of the project like approval of Govt. of Gujarat, Environments clearances of Gujarat Pollution Control Board and Ministry of Environment and Forests (MoEF), Clearance of State Forest Deptt., Pollution Clearance from the Chimney Height etc. Project has also been accorded a Mega Power vide MoP letter dated 1.9.05.

4.9.5 The petitioner has entered into PPAs for the supply of power for the proposed project with the above three entities namely TPAEC, TPSEC and PTC. The PPAs with the beneficiary have been vetted by Gujarat Electricity Regulatory Commission (GERC) and their observations have also been incorporated through supplementary PPAs with the two distribution companies.

4.9.6 The scheduled COD of the different modules/units of the proposed project are as follows:

Unit - I	-	August, 2007
Unit - II	-	December, 2007
Unit - III	-	February, 2008

4.9.7 The capital cost of the project is indicated as US \$ 349.58 Million plus Rs.1508.30 Crore including IDC and financing charges of Rs. 194.40 Crore Equivalent to Rs. 3096.0 Crore at a FE rate of Rs.45.42/US \$.

4.9.8 The petition was heard by the Commission on 31.1.2006. The issue before

the Commission was whether it has jurisdiction to regulate the tariff under section 79 of the Electricity Act 2003. The power generated from the generating station to be set up by the petitioner is proposed to be sold to Torrent Power AEC Limited, Ahmedabad (first respondent) (282 MW) and Torrent Power SEC Limited, Surat (second respondent) (564 MW), the sister companies of the petitioner granted licence for distribution of electricity. Another 100 MW is proposed to be sold to PTC (third respondent) and the residual power on short-term contract basis. The petitioner had annexed a copy of the Ministry of Power letter dated 1.9.2005 along with a certificate dated 31.8.2005. According to this certificate, the proposed generating station is an inter-State thermal power plant and the power purchasing States have constituted the Regulatory Commissions with full powers to fix tariff and that these States have undertaken, in principle, to privatize distribution in all cities in that State each of which has a population of more than one million. The certificate, however, does not disclose the names of the “power purchasing States”, though State of Gujarat is one such State. The petitioner has clarified that it has executed an agreement with PTC for sale of power in the States outside the State of Gujarat and it is “expected” that PTC will be able to identify the States before the stage of making application for approval of tariff is arrived at.

4.9.9 With a view to affording the beneficiaries and the consumers the opportunity of representation on the proposed capital cost which ultimately forms the basis for computation of tariff, this Commission preferred that the States which propose to buy the power may be identified at the stage of making of application for 'in principle' acceptance of the capital cost and the financing plan. It was therefore, necessary to obtain the consent of such parties in advance for transparency in the matter of in principle acceptance of the capital cost. At the hearing representative of the petitioner submitted that PTC proposes to enter into an agreement with Madhya Pradesh State Electricity Board for sale of power generated at SUGEN CCPP. However, nothing was on record before the Commission. In any case if the power from the generating station of the petitioner was to be sold to Madhya Pradesh State Electricity Board, the concerned SEB would have to be impleaded and notices published in the newspapers. Commission therefore, vide order dated 10.2.2006 directed, the petitioner to make efforts to get the agreement/ consent for sale/purchase of power between PTC and MPSEB and apprise the Commission about the progress made in this regard. Commission also took note that as per the tariff policy notified by the Central Government on 6.1.2006, all future requirements of power should be procured competitively by the distribution licensees, subject to certain exceptions mentioned

therein. The Commission had sought clarification from Ministry of Power about its understanding of the expression "future procurement". Commission therefore, allowed 60 days time to the Petitioner to complete above formalities.

4.10 Petitions Relating to Hydro Power Stations :

4.10.1 CERC is regulating tariff of the following Central Sector hydro power generating companies:



- i) National Hydroelectric Power Corporation Ltd. (NHPC),
- ii) North Eastern Electric Power Corporation Ltd. (NEEPCO),
- iii) Satluj Jal Vidyut Nigam Ltd (SJVNL),
- iv) Narmada Hydro Electric Development Corporation (NHDC)
- v) Damodar Valley Corporation (DVC).

The Commission dealt 30 petitions of hydro power stations during the year which include 28 petitions/ review petitions relating to generation tariff of above hydro power generating companies and one each of



Uttranchal Jal Vidyut Nigam Ltd. (UJVNL) and Tripura State Electricity Corporation Ltd. as per details given below:

1. Petitions relating to Additional Capital expenditure for the period 2001-04

The Commission approved additional capital expenditure in respect of seven hydro power

stations of NHPC viz. Chamera stage-I, Uri, Tanakpur, Bairasiul, Salal, Rangit and Loktak.

Following additional capital expenditure/de-capitalization was approved for the above projects which formed base capital cost as on 1.4.2004 for determination of tariff for the period 2004-09 :

(Rs. crore)

Sl. No.	Project	Capital Cost as on 1.4.2001	Add.Capitalization/ De-capitalization approved during 2001-04	Capital Cost as on 1.4.2004
1	Chamera stage-I	2034.45	(-) 17.34	2017.11
2	Uri	3363.83	9.79	3373.62
3	Tanakpur	378.64	10.55	389.19
4	Bairasiul	178.66	2.46	181.12
5	Salal	938.99	(-) 24.68	914.31
6	Rangit	478.57	12.98	491.55
7	Loktak	136.20	5.82	142.02

The additional capitalization allowed by the Commission relate to expenditure incurred on balance payments pertaining to construction period now settled due to award of arbitration or court judgments, welfare measures for the project employees located at the remote locations, safety and security related expenses, replacement of worn out equipment in lieu of advancement in technology, improvement in efficiency and performance of the plant etc.

The Commission while issuing orders

relating to above petitions directed that since additional capital expenditure during the tariff period 2001-04 does not exceed 20% of the approved capital cost, no revision of tariff is to be granted. However, cost of servicing of investment on such additional expenditure is to be reimbursed to the petitioner. Thus the impact of capitalization/de-capitalization of the expenditure on return of equity and interest on loan for the period 01.04.2001 to 31.03.2004 shall be paid to the generating company while approving tariff for the period 2004-09.



2. Petitions for approval of generation tariff for the period 2001-04

- i) Final tariff of Kopili (250 MW) and Khandong HEP (50 MW) of NEEPCO were approved by the Commission.
- ii) Chamera-II hydro station (300MW) of NHPC was commissioned during 2003-04. The Commission approved final tariff of the station for the period from 02.11.2003 to 31.03.2004.

3. Petitions for approval of generation tariff for the period 2004-09

- i) The Commission approved generation tariff of Chamera Stage-I, Salal, Uri, Tanakpur, Bairasiul, Rangit and Chamera Stage-II hydro power stations of NHPC for the period 2004-09.

Annual fixed charge of Hydro Power Stations

Station	Annual Fixed charges (Rs. Crore)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Baira Siul	54.74	48.60	49.92	51.29	52.71
Salal	185.74	170.59	169.98	173.30	176.74
Tanak Pur	47.14	47.42	47.49	45.56	46.59
Chamera-I	196.01	184.90	187.42	190.03	192.76
Uri	446.90	393.32	469.32	309.15	274.17
Chamera-II	285	286.34	333.55	338.46	327.37
Rangit	73.13	49.96	52.60	45.82	46.25

- ii) All the eight units of Indira Sagar HE project (1000 MW) of NHDC were commissioned on 30.03.2005 but dam works with radial gates were yet to be completed. The Commission approved provisional generation tariff of Indira Sagar HE project for the period 01.04.2004 to 31.03.2005. Although all

the eight machines of ISP were commissioned, dam was completed up to crest level of 245.13 meters compared to its full reservoir level of 262.13 M. Because of partially constructed dam, total head for generation was low resulting in availability of lower peak power MW output compared to maximum output of 1000 MW likely to be achieved when dam would have been completed. The Commission in the order dated 12.05.2005 (Petition No. 64/2004) allowed proportionate reduction in Annual Fixed Charges.

- iii) The Commission heard NHDC's petition in respect of Indira Sagar HE project (ISP) for approval of final tariff for the period 14.01.2004 to 31.03.2005 and provisional tariff for the period 01.04.2006 to 31.03.2009. Since the completion cost of the project on the date of commercial operation of the station was yet to be certified by statutory auditors, the Commission directed NHDC to file amended petition after certification of cost along with additional information / clarifications based on Commission's observations.
- iv) Kopili HEP stage-II (1x25 MW) was commissioned on 25.7.2004. The Commission approved provisional tariff from the date of commercial operation i.e., 27.07.2004 to 31.03.2006 and directed the petitioner to file fresh petition for approval of final tariff from 27.07.2004 to 31.03.2009 along with approval of design energy of the station from CEA.



- v) Dauliganga HE station stage-I (4x70 MW) of NHPC was commissioned w.e.f. 01.11.2005 (all units). Commission approved the provisional tariff @ Rs.1.83 /kwh from date of commercial operation of Ist unit 01.10.2005 to 31.03.2006. The single part tariff was converted into two parts and Annual Fixed Charge of Rs.180.55 crore was allowed.
- vi) Provisional tariff of Nathpa Jhakri HEP (6x250 MW) of SJVNL for the period from 01.04.2004 to 31.03.2006 was approved by the Commission @ Rs.2.35 /kwh. The single part tariff was converted into two part and Annual Fixed Charge of Rs.1335.25 crores and Rs.1414.83 crores were allowed by the Commission for the years 2004-05 and 2005-06 respectively.
- vii) Provisional tariff of Doyang HE station (3x25 MW) of NEEPCO was approved by the Commission at the rate of Rs.2.431 / kwh and Rs.2.552 /kwh for the years 2004-05 and 2005-06 respectively. The single part tariff was converted into two part and Annual Fixed Charge of Rs.48.13 crores and Rs.50.52 crores were allowed by the Commission for the years 2004-05 and 2005-06 respectively. The Commission further directed the petitioner to approach the Central Govt. for approval of revised financial package at an early date so that tariff beyond 31.03.2006 can be considered in terms of notification

which governs the terms and conditions of tariff in all other cases.

- viii) Petition was filed by DVC on the direction of the Commission because in terms of Section 79 of the Electricity Act 2003, the tariff for sale of electricity by the DVC and the inter-state transmission of electricity undertaken by it is to be regulated in accordance with the terms and conditions for determination of tariff notified by the Commission. Hearings were held and the petitioner was directed to submit additional information / clarifications on various aspects.

4. Review Petitions

The Commission received four review petitions in respect of NEEPCO and NHPC stations as follow:

- a. NEEPCO filed a review petition against the Commission's Order dated 30.09.2005 on the petition filed by the Tripura State Electricity Corporation regarding excessive charges billed by NEEPCO in the post ABT period from 01.11.2003 to 31.03.2004 in respect of Ranganadi HEP and Doyang HEP. Review of Commission's order was not admitted.
- b. NEEPCO filed review of Commission's order dated 16.08.2005 in respect of final tariff order of Kopili & Khandong HE stations for the period 2001-04 . The Commission admitted review of Kopili HEP on account of cost considered for tariff purpose, error in escalation factor



considered for calculation of O&M expenses and financial charges etc.

- c. NHPC filed a review of the Commission's order dated 28.02.2005 in Suo Motu petition regarding escalation factor to be applied for calculating O&M expenses for the period 2001-04. The petition was dismissed at admission stage.
- d. NHPC filed a review petition against Commission's order in respect of Chamera HEP stage-II for the period from 02.11.2003 to 31.03.2004 on account of certain clerical errors in the said order. The review was admitted.

5. Important Issues adjudicated by the Commission

5.1 Tripura State Electricity Corporation filed a petition regarding excessive charges billed by NEEPCO in the post ABT period from 1.11.2003 to 31.3.2004 in respect of Ranganadi and Doyang HEPs of NEEPCO. The Commission in its order dated 30.09.2005 provided relief to the beneficiaries of above projects by directing NEEPCO to reimburse an amount of Rs.33.20 crores in respect of Ranganadi and Rs.5.56 crores for Doyang HEP respectively which were charged excess by NEEPCO during the post ABT period from 01.11.2003 to 31.03.2004.

5.2 One of the important issues on which the Commission adjudicated was relating to jurisdiction of the Central Commission for determination of generation of tariff of five inter-state hydro generating stations namely Dhakrani (33.75 MW), Dhalipur (51 MW),

Chibro (240 MW), Khodri (120 MW) and Kulhal (30 MW) owned and operated by the petitioner Uttranchal Jal Vidyut Nigam Limited (UJVNL), for the years 2005-06 to 2008-09. The petition was filed by UJVNL under Sections 62 and 79 of the Electricity Act, 2003.

5.3 The tariff of these five hydro stations was earlier determined by the Uttranchal Electricity Regulatory Commission vide order dated 16.12.2004. Aggrieved by several aspects of UERC order, UJVNL filed a writ petition against the said order before the High Court of Uttranchal and the High Court issued an interim order dated 29.04.2005 staying the operation of said UERC order but allowing the tariff to be charged at the rates earlier approved by UPERC i.e., 37 p/kwh. Subsequently on 25.08.2005, Uttranchal High Court after hearing all parties concerned decided to transfer matter to the Appellate Tribunal for Electricity, treating it as statutory appeal while keeping the aforesaid interim order in force.

The petitioner UJVNL submitted that an agreement was signed between the State of Uttranchal (erstwhile Uttar Pradesh) and the State of Himachal Pradesh on 21.11.1972 for supply of power from its 5 inter-state hydro stations, which inter-alia, state as under:

- i) Certain components/portions of the Yamuna Hydrel scheme come under the territory of the State of Himachal Pradesh and Uttar Pradesh Govt. utilizes the waters contributed partly



from the catchment area in Himachal Pradesh.

- ii) The usage rights of the water of the Yamuna and its tributaries (including river tons) emanating from the Himachal Pradesh territory, upstream of Yamuna Hydel scheme will be conveyed by H.P exclusively to U.P for the purpose of power development but subject to any existing facility of irrigation, running of water mills and transport of timber enjoyed by the people of H.P being safeguarded. The H.P Govt. reserved the right to develop power themselves from any river or stream inside their own territory, provided such development does not reduce the natural flow and supply of water or otherwise adversely affect the Yamuna Hydel scheme.
- iii) H.P shall share 25% of the total energy generated from power stations of Yamuna Hydel Scheme Stage I and Stage II viz Dhakrani, Dhalipur, Chibro, Khodri projects and 20% of the electricity generated at Kulhal hydro project, less energy consumed in the operation and maintenance of these power stations.
- iv) The share of energy of H.P of Yamuna Hydel Scheme will be made available to H.P at the bus bars against payment at the cost of generation.
- v) H.P shall not share the capital cost of the said scheme.

5.4 The main issues deliberated in the petition filed by UJVNL are

- a) Whether the supply of share of energy from these five inter-state hydro plants under the said agreement between the state of Uttranchal (erstwhile Uttar Pradesh) and the State of Himachal Pradesh can be termed as inter-state “sale” in the commercial sense; OR
- b) The sharing of power from these five hydro plants is some sort of compensation given to Himachal Pradesh in lieu of usage rights of water of river Yamuna and its tributaries (including river Tons) emanating from Himachal Pradesh state, which have been conveyed by the state of Himachal Pradesh exclusively to the then state of U.P. and now Uttranchal for the purpose of power development in Uttranchal ;
- c) Whether these five hydro plants have a composite scheme for generation and sale of electricity in more than one state i.e. Uttranchal and Himachal Pradesh in the present case, as per the provisions of section 79 (1) (b) of the Electricity Act, 2003.
- d) Since the tariff for these hydro stations was determined by State Govt./ State Commission all along, whether the intention of the legislature while enacting the Electricity Act, 2003 was to transfer power from the State to the Centre in respect of such projects.

5.5 In the above context, the Commission made studies in respect of the following



similar inter-state agreements which are also in force on the river valley projects :

- i) Inter- state Agreement dated 19.01.1979 between Govt. of Himachal Pradesh & Govt. of Punjab regarding Ranjit Sagar HE project (Thein Dam project);
- ii) Agreement between Govt. of Punjab & Govt. of J&K regarding Ranjit Sagar HE project (Thein Dam project);
- iii) Agreement between Govt. of Sikkim & Govt. of West Bengal regarding Ramman HE project.

5.6 After studying the all above agreements including the agreement of Yamuna hydel scheme concerning five hydro projects of UJVNL, the Commission made the following observations :

- i) In the above agreements, the usage rights of waters of the main river and its tributaries emanating from the upstream state have been conveyed by the upstream state exclusively to the downstream state in which the hydro project has been constructed and is in operation.
- ii) The agreement binds the upstream state not to reduce the natural flow and supply of water which would otherwise affect the said hydel project. In lieu of allowing usage rights of waters of the main river and its tributaries emanating from the upstream state, the state in which the hydro station has been constructed is supplying mutually

agreed percentage of energy to the upstream state at the rate equivalent to the cost of generation at the bus bars.

- iii) Since the upstream state is not sharing the cost of the hydro project, the rate of supply of energy to the non-participating state (HP, J&K, Sikkim in above agreements) would be lower than that to the owner state of hydro station. Thus it appears to be some sort of compensation for usage rights of water rather than sale on purely commercial sense
- iv) The issue of composite scheme: As regard the interpretation of the expression “composite scheme” as provided in Section 79 (1) (b) of the Electricity Act, 2003, although the expression has not been defined in the Act, the Commission is of the view that ‘composite scheme’ is one in which a generating station is originally conceived for the purpose of meeting the power requirements of more than one State. The generating station could be set up in one State but the beneficiaries would be pre-identified and can be in more than one State. Traditionally the Central generating stations have been set up as composite scheme. Such generating stations had, at their very inception, inter-state beneficiaries identified and consequently the sale from such stations involved more than one State.

5.7 It also follows from the above, that a ‘composite scheme’ is an inter-state scheme



under which tariff applicable to all the beneficiaries of the project would also be same. However, in the case of five inter-state plants of UJVNL in question, it has been submitted by the petitioner vide Affidavit dated 19.12.2005 that as per the agreement UJVNL will supply 25 % of the electricity generated in Dhakrani, Dhalipur, Chibro, Khodri and 20% of the electricity generated in Kulhal hydro stations to HPSEB at costs excluding returns (excluding cost of serving debt, return on equity and taxes). Hence the electricity supplied to HPSEB is at the lower rate than that for UPCL.

5.8 It is well established that tariff for these projects was earlier decided by UPERC and then by UERC even though the Electricity Regulatory Commission Act, 1998 had similar provisions with regard to functions and powers of CERC.

5.9 Provisions with regard to this matter as contained in Electricity Regulatory Commissions Act, 1998 and Electricity Act, 2003 remaining similar, the Commission is of the view that nothing has changed in the law to materially affect the jurisdiction of Uttranchal Electricity Regulatory Commission in this matter.”

5.10 In view of above, the Commission vide order dated 29.03.2006 in Petition No. 103/2005 decided that approval of generation tariff of five inter-state hydro generating stations viz. Dhakrani, Dhalipur, Chibro, Khodri and Kulhal owned and operated by the Uttranchal Jal Vidyut Nigam Limited does not come under the jurisdiction of CERC.

6.0 Petitions relating inter-State transmission

The Commission dealt 110 petitions relating to inter-state transmission. PGCIL has filed 11 tariff petitions pertaining to tariff period 2001-04 and 61 tariff petitions pertaining to tariff period 2004-09 including approval of additional capitalization during 2001-04 period in some of the petitions, approval provisional tariff in some of the petitions, etc. RLDCs filed 6 petitions on matter of non-payment of UI dues. There were 11 other petitions of miscellaneous nature. There were also petitions relating to trading applications for inter-state trading of power. The Commission also dealt with the petition filed by RETL for grant of Transmission License.

In case of Transmission, the amount of additional capitalization is small as compared to thermal & hydro. This expenditure relates to expenditure incurred on balance payments pertaining to pre-commissioning stage. The Commission while issuing orders relating to such petitions directed that since additional capitalization expenditure during the tariff period 2001-04 does not exceed 20% of the approved capital cost, no revision of tariff is to be granted. However, cost of servicing of investment on such expenditure is to be reimbursed to the petitioner. Thus the impact of capitalization/de-capitalization of the expenditure on return on equity and interest on loan for the period 1.4.2001 to 31.3.2004 shall be paid to the transmission company while approving tariff

for the period 2004-09. The same stand was taken by Commission for thermal and hydro cases.

6.1 Approval of Transmission Tariff Petitions for the period 2004-09

The Commission approved transmission tariff for the period 2004-09 in various petitions filed by PGCIL. The details are summarized and enclosed at **Annex-VIII**.

6.2 Approval of charges for Unified Load Despatch & communication (ULDC) Scheme

6.2.1 The Commission approved the ULDC charges for Northern, Southern and

North-Eastern regions. The charges were approved for the period from date of commissioning to 31.03.2004.



The ULDC scheme covers investment in RLDCs and SLDCs. The approved annual ULDC charges, approved capital cost and DOCO of Northern, Southern and North-Eastern regions are given below:

Region	Revised Approved Cost (in Rs. Crores)	Annual ULDC charges for Central portion (in Rs. Crores)	DOCO
Northern Region	658.92	48.79	01.08.2002
Southern Region	683.80	23.16	01.07.2002
North-Eastern Region	263.81	9.32	01.08.2003

6.2.2 The scope of the work in each of the regions is mainly to

- i) Establish Control Centres in States and at Regional level for SCADA (Supervisory Control and Data Acquisition) and EMS (Energy Management System) at
 - a) RLDC
 - b) CPCC in NR & SR
 - c) SLDC & Sub-SLDC
- ii) Remote Terminal Units (RTUs)

- iii) Associated dedicated communication network comprising fibre optic, microwave and PLCC system
- iv) Auxiliary Power Supply (APS) comprising UPS, DG, DC power supply system
- v) Other infrastructural facilities such as air-conditioning, fire-fighting, construction/renovation of building etc.

6.2.3 Due to nature of equipment/services under the Scheme, the high initial cost and



financial position of the constituents, a concept similar to levelised tariff was used entailing uniform charges over period of assumed life of the Scheme of 15 years for recovery of capital cost. The components namely, O&M expenses and Interest on Working Capital were not levelised.

6.2.4 The calculation of ULDC charges was done by adopting the following principles:

- (a) Annual capital cost recovery based on the levelised tariff for 15 years,
- (b) IWC and O&M charges not levelised,
- (c) O&M charges payable initially @ 7.5 % of the admitted cost and to be adjusted retrospectively.

6.2.5 The pertinent point here is that the full capital cost shall be recovered over a period of 15 years and thereafter the assets shall be transferred to the respective constituents.

6.3 RLDC Petitions

6.3.1 NRLDC filed petitions 9/2005 and 151/2005 on maintenance of grid security by taking appropriate actions in line with relevant clauses of the IEGC.

6.3.2 The petition 151/2005 was against Power Development Department (PDD), J&K for endangering the Northern Grid security by continuous violations of sections 6.2(l) and 7.4.4 of IEGC. NRLDC sought directions to J&K to avoid overdrawals from the Northern Regional Grid and also to pay the current as

well as the past outstanding UI dues with up-to-date interest. NRLDC also sought directions for other constituents of Northern Region for strict compliance with the provisions of IEGC. The Commission was informed that amount of Rs. 473 Crores excluding interest was outstanding against J&K for the period up to 12.02.2006. J&K had continued with heavy overdrawal during the months of December, 2005 and January, 2006. The cheques (payment advice to treasury) for an amount of Rs. 100 Crores earlier issued by J&K had remained unpaid. J&K informed the Commission that they had already issued cheques of total of Rs. 100 Cr on 28.02.2006 and the balance outstanding amount would be liquidated by 31.03.2007. J&K also assured the Commission that current UI charges would be paid on weekly basis as and when due and no arrears would be accumulated. The Commission accepted the time schedule given by J&K for settlement of the existing dues as well as the current dues. It was made clear to J&K that any violation of time schedule given by them would attract penal action under the law.

6.3.3 ERLDC filed petitions 23/2005 and 24/2005 on non-payment of UI dues by JSEB & BSEB respectively. ERLDC in petition 23/2005 sought directions to Jharkhand State Electricity Board (JSEB) for payment of outstanding UI charges within 15 days with interest thereon and to accord highest priority to payment of weekly UI charges. A sum of Rs 121 Crores on account of UI charges (excluding interest) was outstanding from



JSEB. As per an undertaking given by JSEB before the Commission the outstanding dues was to be paid in 6 monthly installments of Rs 22 Crores each commencing on 10.7.2005 and in this manner the entire amount was to be fully paid by 10.1.2006. JSEB made all the payments towards all pending UI charges with interest to the ER pool.

6.3.4 WRLDC filed petition 29/2005 & 31/2005 on non-payment of UI charges by MPSEB & CSEB respectively. Western Regional Load Despatch Centre (WRLDC) in petition 29/2005 sought directions to MPSEB for making payments of the total dues on account of UI charges, together with interest thereon with a further prayer that for the alleged deliberate failure of MPSEB to comply with the Commission's directions, suitable penalty be imposed on it. MPSEB brought to the notice of the Commission that all the UI payments along with interest have been made and only Rs. 8 Crores was pending. The Commission directed that the entire outstanding amount including interest should be paid by MPSEB latest by 30.06.2005 and MP should manage its affairs in such a manner that it does not allow accumulation of arrears of UI charges.

6.4 Miscellaneous Petitions

6.4.1 DTL filed a petition 33/2005 for non-payment of UI charges by Power Development Department, J&K and UPPCL. DTL sought directions from the Commission to J&K and UPPCL to clear all the arrears with interest within time frame to be specified by

the Commission. An amount of Rs. 138.72 Crores as on 09.03.2005 was due to DTL from UI pool account operated by NRLDC because of non-payment of UI charges by J&K and UPPCL. UPPCL undertook that amount of Rs. 117 Crores along with interest would be deposited latest by 31.07.2005. Regarding J&K, the Commission was informed that there were no new arrears against State Govt. for the period after 30.01.2005. For arrears, the Commission directed that State Govt. would pursue the matter with Central Govt. for expeditious settlement.

6.4.2 GRIDCO filed petition 11/2003 and 12/2003 for payment of outstanding dues by APTRANSCO for the period October-December 2000 & March-April 2002 AND September-December 2001 respectively. GRIDCO in its petition sought directions to APTRANSCO for payment of certain dues of bilateral sale of power to APTRANSCO with interest at the rate of 24% from the date of filing of these petitions. The Commission observed that the issue raised does not fall under the clause (c) of section-13 of the 1998 Act which mandates the Central Commission to regulate the inter-state transmission of energy including tariff of the transmission utilities. The dues claimed were for bilateral sale of power by GRIDCO to APTRANSCO and not for inter-state transmission tariff. Therefore, the Commission held that the clause (h) of section-13 of the 1998 Act could not be invoked and the GRIDCO and APTRANSCO were to settle the issue themselves.



6.4.3 Shri Gajendra Haldea filed a Review petition 45/2005 in petition 20/2004. The petition 20/2004 was filed by Power Trading Corporation of India Limited (now PTC India Ltd.) for grant of license for inter-state trading in electricity. In petition 20/2004, Shri Haldea had filed objections and the same were considered by the Commission in its final order dated 30.6.2004. Shri Haldea pleaded that the issues raised by him were not effectively dealt by the Commission in its order dated 30.6.2004 and sought a review of the order dated 30.6.2004. The Commission explained the legal position by stating that under section 94(1) of the Electricity Act, the Commission is vested with the same powers as are vested in civil court under the Code of Civil Procedure as regards review of its decisions, directions and orders. Section-114 read with order 47 of the code relate to power of a civil court on review of orders. Under Rule-1, order-47 of the code, any person considering himself aggrieved by a decree or order may apply for review of the judgment or order, under the following circumstances:

- a) Upon discovery of new and important matter or evidence, which, after exercise of due diligence, was not within his knowledge or could not be produced by him at the time the decree was passed or order was made, or
- b) On account of some mistake or error apparent on the face of the record or
- c) For any other sufficient reason.

The Commission observed that no case for review of order dated 30.6.2004 has been

made out by Shri Haldea as the grounds on which review has been sought fall outside the limitation imposed by Rule-1, Order-47 of the Code.

6.5 Application for grant of transmission licence to Reliance Energy Transmission Limited

RETL filed an application for grant of licence for inter-state transmission system, forming part of Western Region System Strengthening Scheme-II (Scheme).

The Scheme has been formulated considering the long-term transmission requirements of Western Region and to allow inter-regional exchanges of power. It is considered to be vital to facilitate import and export of bulk power to and from the Western Region that may ultimately lead to the formation of the National Grid by integrating the existing regional grids. The Scheme entails about 800 circuit kms of 765 kV lines, 6300 circuit kms of 400 kV lines, augmentation of 17 existing sub-stations and setting up of four new sub-stations.

The Commission recognized the fact that the application of RETL shall open up the very important issue of entry of private sector in the transmission business, which so far has been the exclusive preserve of the Central and State Government Companies and Boards. The Commission deliberated various facts which underscore the need for private sector participation in the development of transmission sector. During the course of hearing it transpired that the primary role for



attracting private investment in transmission rests with the Central Government which is required to issue of guidelines on competitive bidding in transmission sector in accordance with the Electricity Act 2003. These guidelines were not issued till disposal of the petition.

The Commission found that the CTU has already started action for implementing the transmission lines forming part of the Scheme through JV route and has travelled a considerable distance in that direction including issuance of RfQ document. In the RfQ document, transmission lines forming part of the Scheme have been divided into four separate sets, stated to be based on the suggestions of CEA and WREB. Further, the JV partners were expected to own equity in the range of 51% to 74% whereas the balance equity was to be owned by the CTU. The Commission do not intend to reverse this process since it would delay the implementation of the Scheme. For this same reason, the Commission made a departure from the advice of CEA that the new substations should form part of packages identified for implementation of the Scheme.

The Commission agreed with CEA that execution of 765 kV lines and even in the field of 400 kV Quad lines, should be entrusted to the CTU, particularly when the packages of the Scheme with 765 kV and 400 kV Quad lines are critical and delay in their completion can adversely affect delivery of power or may lead to insecure operation of the Western

Regional Grid which may finally integrate into the National Grid. The Commission opined that the CTU should continue with execution of sets A and D, involving 765 kV lines and 400 kV Quad lines, either of its own or through JV route where its expertise will be available to the advantage of the JV. In arriving at this decision the Commission was guided by the fact that any further subdivision of the four sets identified by the CTU would require complete revision of RfQ document, and this will only delay the execution of the Scheme. This may render it impossible to complete the construction of the Scheme by 2008-09 as indicated by the CEA.

The Commission came to the conclusion that the Sets B and C, which do not involve 765 kV line or 400 kV Quad line, can be entrusted to private parties, with adequate past experience in the field. For this purpose, the Commission did not consider it practicable to ask the applicant and the CTU to quote project cost, as suggested by CEA, without a common bidding document. Further, this would have restricted the competition to these two entities. Therefore, on this aspect the Commission departed from the advice of CEA.

The Commission felt that a stage has been reached, where transmission projects can be developed by 100% equity contribution from private sector for the Sets B and C. This will release precious equity resources of the CTU for deployment in other vital projects and will be in tune with the broad policy of the Government, to attract private investment in



transmission. Therefore, CTU was advised to modify its bidding documents for Sets B and C. CTU was advised to define qualifying requirement etc so as to elicit maximum interest and participation of the private sector and enable 100% equity participation by the private sector players. RETL was given liberty to participate in the selection process by the CTU.

The other issue was regarding procedure to be adopted for selection of private party. The Commission recommended that the CTU shall devise the process to ensure the co-ordinated development of an efficient, co-ordinated and economical transmission lines (Sets B and C) in connection with the Scheme. For this purpose, the CTU was given liberty to approach the Commission for its approval of the processes and procedures for implementation of the Scheme by private party.

6.6 Approval of procedure for building Transmission System through Competitive Bidding

The Commission accorded approval on 22nd September, 2005 to the procedure for selection of bidders for building transmission lines forming part of the Western Region System Strengthening Scheme-II, package 'B' and 'C', through competitive bidding with hundred percent private sector participation. The procedure was proposed by the Central Transmission Utility (Power Grid) as per advice of the Commission in the order dated 29th July, 2005, while disposing of the application of the Reliance Energy Transmission Limited (RETL).

The Commission advised the Central Transmission Utility (Power Grid) to modify its bidding procedure of packages 'B' and 'C' to enable 100% equity participation by the private sector players so that equity resources of Power Grid could be better utilized elsewhere. As per the approved procedure, Power Grid shall invite competitive bids with 100% private equity for eight number 400 KV transmission lines spanning a distance of about 1500 Kms in the states of Maharashtra and Gujarat. The successful bidder would be selected on the basis of the lowest completed cost subject to his meeting the specified qualifying requirements in terms of experience, capability and financial standing.

7. INTER-STATE TRADING IN ELECTRICITY

The Commission has notified the Central Electricity Regulatory Commission (Procedure, Terms & Conditions for grant of Trading Licence and other related matters) Regulations, 2004, dated 30.01.2004 followed by an Amendment to these regulations dated 03.04.2006. As per these regulations, the Commission has, so far, awarded 19 licences to various companies for inter-state trading in electricity, out of which, 6 licences were awarded during the year 2005-06. Of the total, 10 licences are awarded under category A, 6 licences are awarded under category F, 2 licences are awarded under category C and 1 licence awarded under category B. The licences awarded during 2005-06 are as follows:



Sr.No.	Name of the Trading Licensee	Category of Licence
1	Subash Kabini Power Corporation Ltd	A
2	Maheshwari Ispat Ltd	A
3	Special Blasts Ltd	A
4	Instinct Advertisement & Marketing Ltd	A
5	Essar Electric Power Development Corporation	C
6	Suryachakra Power Corporation (P) Ltd	A

During the year 2005-06, one of the trading licensees has changed its name and three of the licensees have been allowed change of category of licence. As regards the change of name, "Sumex Organics Private Limited" has been renamed as "Vinergy International Private Limited" w.e.f. 06.10.2005. The Commission has allowed change category from A to F in the case of Tata Power Trading Company Ltd w.e.f 09.06.2005 and Reliance

Energy Trading Ltd w.e.f. 17.08.2005 and C to F in the case of Lanco Electric Utility Ltd. w.e.f. 25.01.2006.

7.1 Volume and Price of Electricity Traded

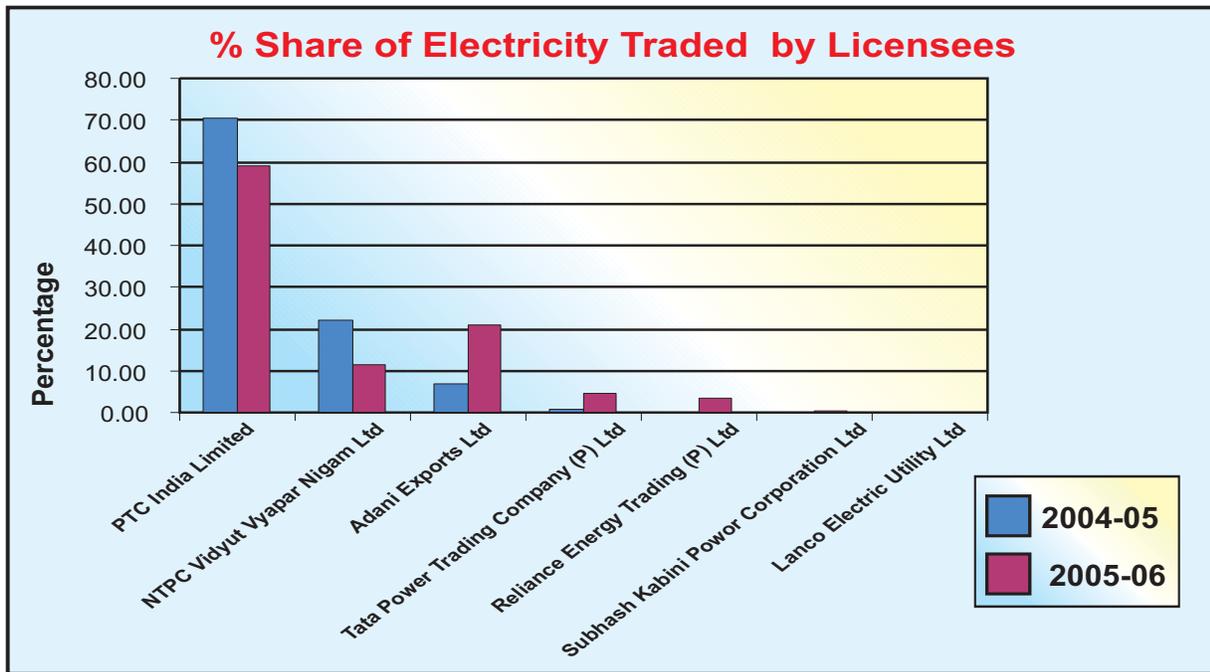
Of the total 19 licensees, only 7 licensees are undertaking trading in electricity at present. The volume of electricity traded by these licensees is as follows:

VOLUME OF ELECTRICITY TRADED BY THE TRADING LICENSEES

Sr. No.	Name of the Trading Licensee	2004-05		2005-06	
		Volume of Trade (MUs)	% to total volume	Volume of Trade (MUs)	% to total volume
1	PTC India Limited	8358.26	70.55	8357.60	58.90
2	NTPC Vidyut Vyapar Nigam Ltd.	2616.25	22.08	1642.45	11.58
3	Adani Exports Ltd.	802.57	6.77	2979.81	21.00
4	Tata Power Trading Co. (P) Ltd.	69.45	0.59	673.42	4.75
5	Reliance Energy Trading (P) Ltd.			482.52	3.40
6	Subhash Kabini Powor Corpn. Ltd.			41.29	0.29
7	Lanco Electric Utility Ltd.			11.22	0.08
	Total	11846.53	100.00	14188.31	100.00

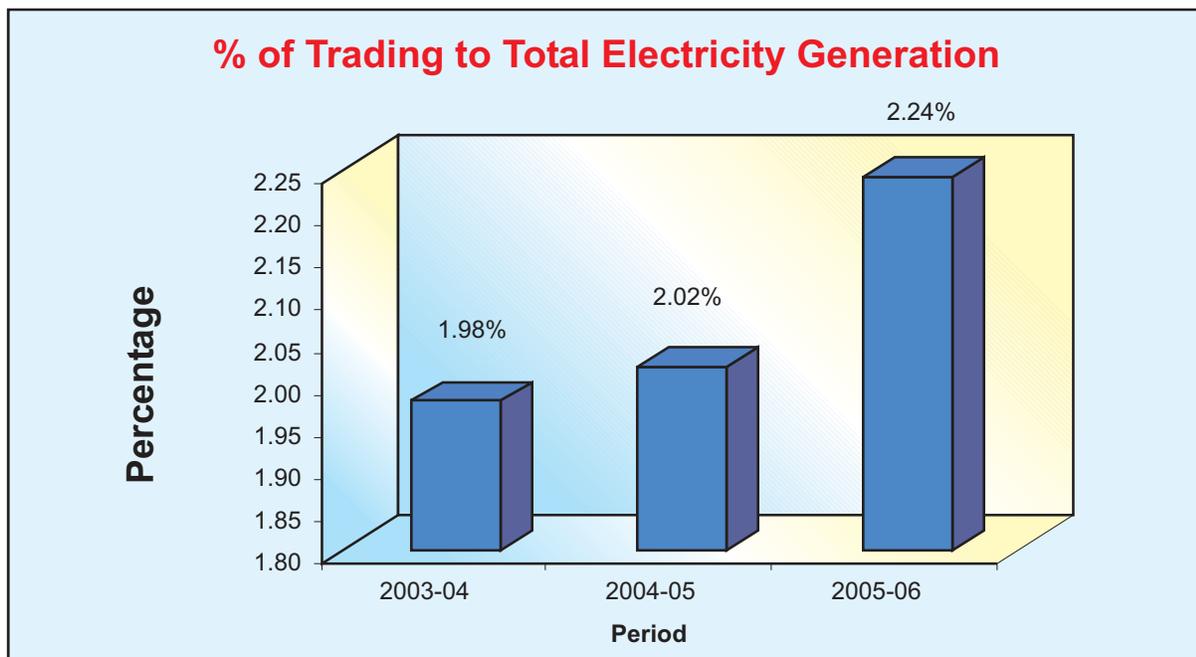


The percentage share of electricity traded by the trading licensees during 2004-05 and 2005-06 was under :-



The volume of electricity traded by the licensees has increased from 11846.53 MUs in 2004-05 to 14188.31 MUs in 2005-06. The growth in the volume traded was 20%. However, the traded volume constitutes only

2.52% of the total electricity generation in India (632 Billion Units) during the year 2005-06. The percentage share of trading to total electricity generation during the 2003-04, 2004-05 and 2005-06 was as under :-

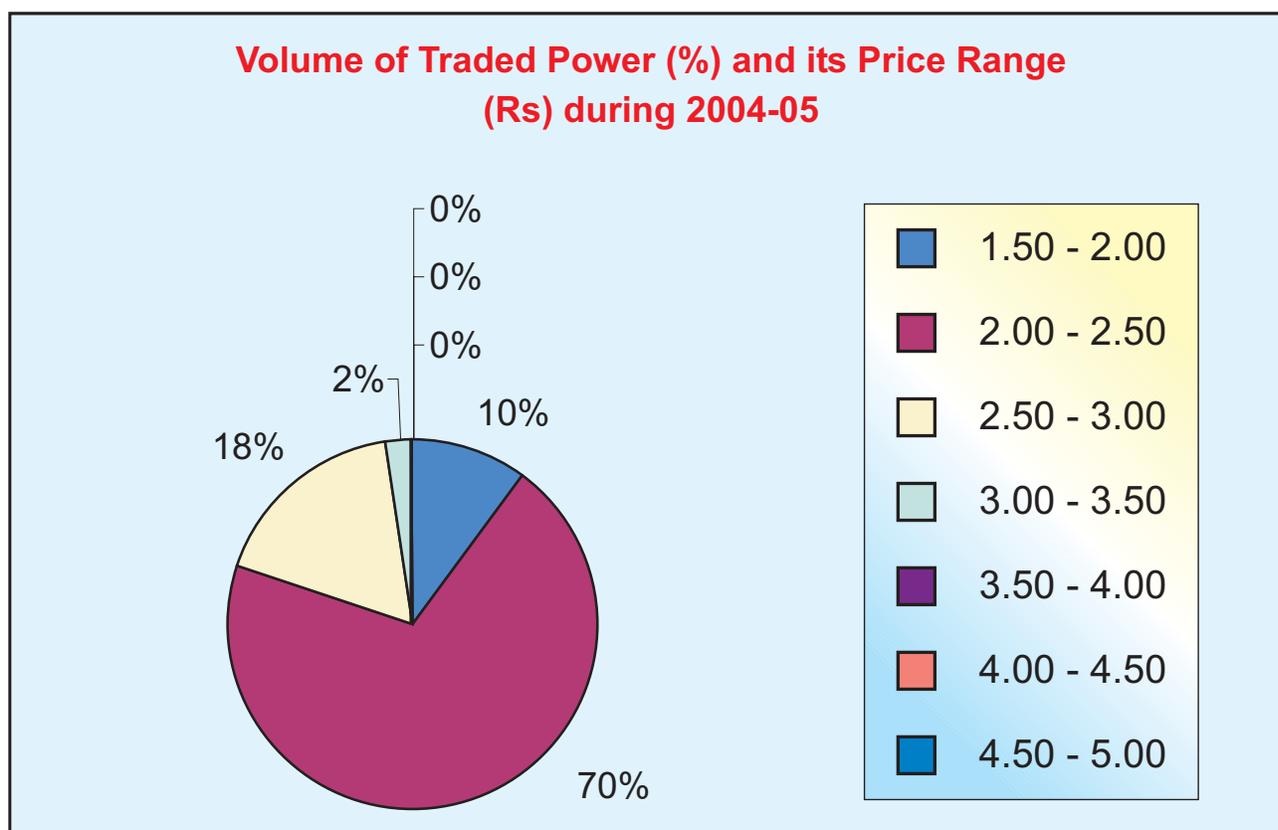


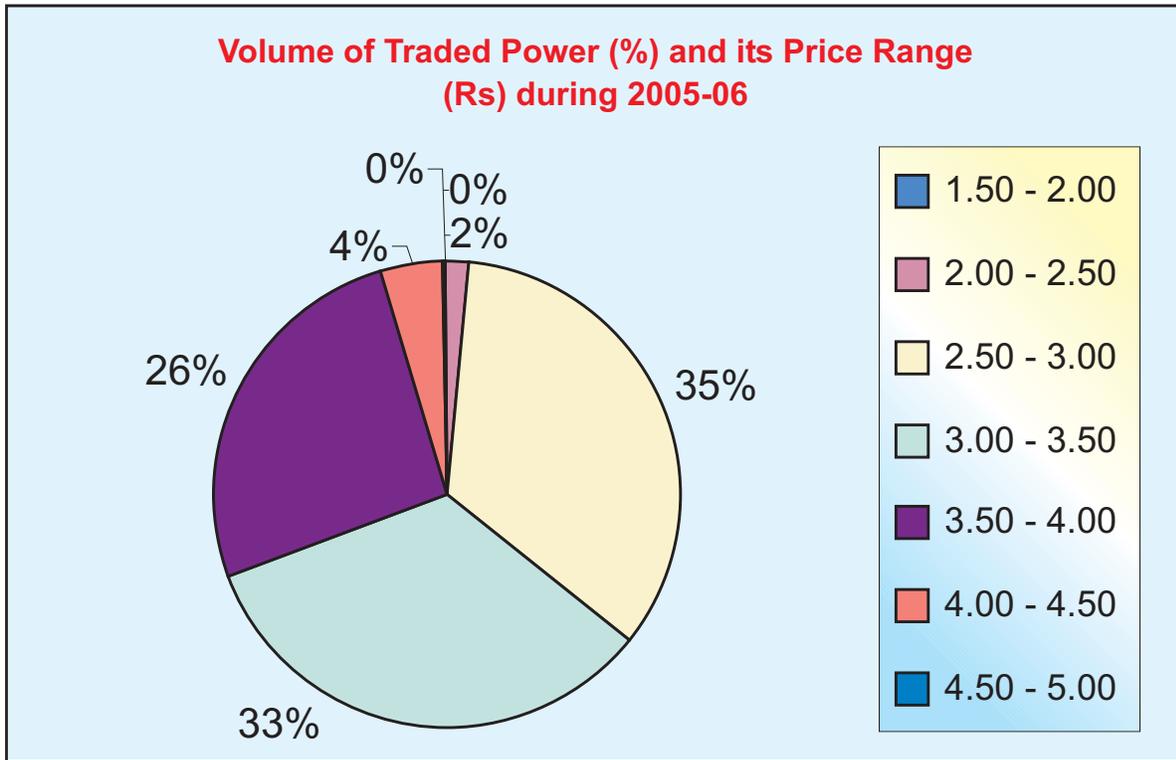
Trading licensees rely on various State Electricity Boards and generating companies including captive power plants for purchase of electricity. Main sources of purchase are WBSEB, GRIDCO, APPCC/APTRANSCO and JTPCL, which constitute 51.29% of the total electricity traded. After purchasing from these and other sources, the trading licensees have sold about 50% of the total volume to MSEB, MPSEB and PSEB during 2005-06.

The sale price has increased during 2005-06 as compared to the year 2004-05. At price range of Rs. 2.00 – 2.50, 70% of the volume was traded during 2004-05 whereas at the same price range only 1.68% of the volume has been traded during 2005-06. About 60% of the volume has been traded at the price

range of Rs.3.00 – 4.00 during the year 2005-06. Maximum sale price was Rs.3.30 during 2004-05 whereas it was Rs.4.75 during 2005-06. The following charts depict the volume of traded power (in percentage) and its price range during 2004-05 and 2005-06 :

Substantial increase in the prices of traded power indicates shortages that are prevailing and that the demand is less elastic to prices. Pertinently, the electricity generation during 2005-06 has increased over that during 2004-05. However, the increase in demand has surpassed the increase in electricity generation/supply, leading to continued shortages – both in terms of peak and energy shortages. This gives market signal for capacity addition in generation.





7.2 Trading Margin

The trading margin charged by the licensees has been varying for various transactions undertaken during 2005-06. Using the quarterly information submitted by the licensees, the range of trading margin has been computed for the entire volume traded by the licensees, which is as given below:

Trading Margin (Paise/kwh)	% of the Volume Traded during 2004-05	% of the Volume Traded during 2005-06
≤ 5	89.05	39.38
6-10	5.14	47.68
≥ 11	5.81	12.94

The above table shows that the trading margin charged by the licensees increased during 2005-06 when compared with the previous year. The weighted average trading margin was also computed based on weighted average purchase and sale price which was about 6 paise/kwh in 2004-05 went up to about 9 paise/kwh during 2005-06.

After examining the trends in trading margin, the Commission has issued CERC (Fixation of Trading Margin) Regulations dated 23.01.2006, published in the Official Gazette dated 27.01.2006, fixing the trading margin of 4 paise/kwh.

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OTHER ACTIVITIES DURING THE YEAR

1. Interaction with Hon'ble Minister of Power :

An interaction of Chairpersons and Members of all Electricity Regulatory Commissions with the Hon'ble Minister of Power was held on 20th – 21st April 2006 at New Delhi.

The Central Commission coordinated this meeting in which the Regulators shared their

experiences on the functioning of the Regulatory Commissions. The Hon'ble Minister of Power was apprised of the various significant steps taken, orders/regulations issued by the Regulatory Commissions towards implementation of the provisions of the Electricity Act, 2003. The Regulators also shared the problems being faced by them in discharging their functions as an independent institution. In the two-day





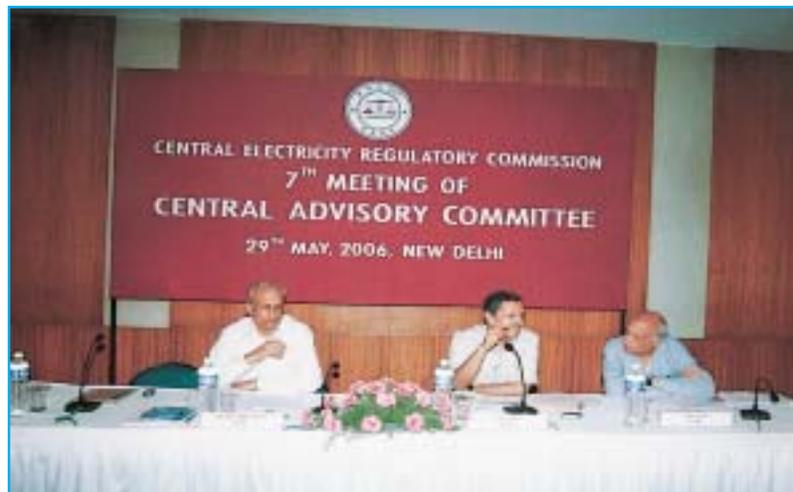
Interaction of Chairpersons and Members of ERCs with the Hon'ble Minister of Power

long meeting the issues arising out of the Tariff Policy, harnessing of surplus captive generation, rising cost of traded power, and consumer advocacy mechanism were discussed.

2. Central Advisory Committee (CAC) :

The Electricity Act, 2003 (under Section 80) provides for constitution of Central Advisory Committee (CAC). The Commission in line with the requirement under the Act has constituted the Central Advisory Committee by representation from commerce, industry, transport, agriculture, labour, consumers, non-governmental organisations

and academic & research bodies in the electricity sector to solicit advice on policy formulation, quality, continuity and extent of service provided by licensees, compliance by the licensee with the license conditions and requirements of the license, protection of consumer interest and energy supply and overall standards of performance by utilities.





The CAC so constituted supersedes the Committee constituted under the Electricity Regulatory Commissions Act, 1998. The composition of the Central Advisory Committee was as follows:

1. Shri V. Subramanian, Secretary, Ministry of Non-Conventional Energy Sources, New Delhi
2. Shri Ramesh Chandra, Member (Electrical), Railway Board, New Delhi
3. Shri G.S. Rajamani, Ex Member, CERC, F-2 Harmony Apartments, 56, 4th Main Road, Raja Annamalaipuram, Chennai
4. Shri Sanjay Mitra, Joint Secretary, Prime Minister's Office, New Delhi
5. Shri S.K. Garg, Chairman & Managing Director, National Hydro Power Corporation Ltd., Faridabad
6. Shri C.P. Jain, Chairman & Managing Director, National Thermal Power Corporation Ltd., New Delhi
7. Shri R.P. Singh, Chairman & Managing Director, Power Grid Corporation of India Ltd., New Delhi
8. Ms. Rachael Chatterjee, Chairman & Managing Director, Andhra Pradesh Transmission Corporation Limited, Hyderabad
9. Shri Malay Kumar De, Chairman, West Bengal State Electricity Board, Kolkatta
10. Shri S.C. Das, Chairman, Assam State Electricity Board, Guwahati
11. Shri J.P. Chalasani, Director, Reliance Energy Ltd., New Delhi
12. Shri A.J. Engineer, Director, Tata Power Company Ltd., Mumbai
13. Shri V. Raghuraman, Senior Advisor (Energy), Confederation of Indian Industry, Gurgaon
14. Dr. Amit Mitra, Secretary General, Federation of Indian Chambers of Commerce and Industry, New Delhi
15. Shri Sanjay Bhatia, Managing Director, Maharashtra State Electricity Distribution Co. Ltd., Mumbai
16. Shri S.C. Mahapatra, Chairman & Managing Director, GRIDCO Ltd., Bhubaneswar
17. Shri Ashok K. Khurana, Chairman, Uttar Pradesh Power Corporation Ltd., Lucknow
18. Dr. B.S. Mann, President, Bhartiya Kisan Union, Punjab
19. Shri R. Chidambaram, Chairman, All India Power Engineers Federation, Chennai
20. Shri Pradeep S. Mehta, Secretary General, Consumer Unity & Trust Society, Jaipur, Rajasthan
21. Shri Girish Sant, Prayas, Pune



22. Shri R. Ravimohan, Managing Director, Credit Rating Information Service of India Ltd., Mumbai
23. Shri V.S. Shetty, Chairman & Managing Director, Industrial Development Bank of India, Mumbai
24. Shri K. Ramanathan, Distinguished Fellow, The Energy and Resources Institute, New Delhi
25. Dr. Suman Kumar Bery, Director General, National Council for Applied Economic Research, New Delhi
26. Shri T.L. Sankar, Advisor, Administrative Staff College of India, Hyderabad
27. Dr. Badal Mukherji, 38/5 Probyn Road, Delhi University, Delhi-9
28. Shri Deepak Parekh, Chairman, Housing Development Finance Corporation, Mumbai

The 7th meeting of the Central Advisory Committee (CAC) was held on 29th May, 2006 at India Habitat Centre (IHC), New Delhi to discuss the important orders/regulations, issued by the CERC in discharge of its functions, issues relating to trading and development of market in electricity, measures to strengthen the consumer's advocacy in the electricity sector, grid discipline, advance against depreciation,



7th CAC Meeting Held on 29th May, 2006



norms for grid interactive renewable power. In particular, the following issues were discussed :

- **Cost of traded power** - It was felt by the Members that regulatory intervention was a must during market development stage. The 4 paise trading margin fixed by CERC was welcomed by some Members. It was also suggested that CERC should intervene to bring about discipline in trading and for that purpose, the booking of transmission corridor should be linked to the price of power implying thereby that the cheaper power should get precedence over costlier power in terms of booking of the transmission corridor.
- **Consumer advocacy** - It was suggested that stress should be laid on capacity building of consumer groups. It was also suggested that each Tariff Order of the SERC should contain 2 – 3 pages of executive summary which could be easily understood by the common man.
- **Grid Discipline** – The need for ensuring greater discipline in operation of the grid was reiterated.
- **Norms for Grid Interactive Renewable Power** – It was felt that the word ‘renewable’ should be defined and hydro generation should be included as renewable. It was opined that competitive bidding should be introduced for renewables at the earliest. It was argued that the practice

of linking tariff of renewables with that of thermal generation was problematic because of rising gas prices.

MOUs/Bilateral Agreements with Foreign Governments/International Organisations :

3. Interaction with US Regulators

The CERC and FERC alongwith State level Energy Regulatory Authority have agreed to participate as partners in the India Energy Partnership Program (IEPP). The USEA has entered into a co-operative Agreement with the U.S. Agency for International Development (USAID) Office of Energy, Environment and Technology, whereby USEA has agreed to organise and implement an India Energy Partnership Program (IEPP). The IEPP recognises the mutual interest between CERC and Regulatory Authorities in USA in exchange of information and experience. The IEPP is designed for mutual transfer of experiences and information back and forth between CERC and the Regulatory Authorities of USA in an effective and efficient manner and to foster long-term sustainable relationships between the partners. It may involve all aspects of regulatory operations and administration such as management, restructuring, finance and accounting, independent power marketing, customer service, bulk power transactions, telecommunications, strategic planning and other necessary areas of expertise.

Two delegations from CERC – one led by Chairperson, CERC and the other led by Chief (Finance) visited USA as part of the



exchange programme. The delegation led by Chief (Finance) visited FERC, Washington and Philadelphia Public Utility Commission (PaPUC), Philadelphia during August 14 – 20, 2005. The delegation led by Chairperson, CERC visited FERC, USA during November 15 – 21, 2005. During the visit, the officers interacted with the officials of FERC and PaPUC and discussed issues relating to open access laws and non-discrimination in transmission, transmission pricing, development of market, operation of power exchange, and consumer choice.

4. Interaction with Chinese Regulators

A delegation led by Chairperson, CERC visited China during August 24 – 28, 2005 for

bilateral negotiations with State Electricity Regulatory Commission, People's Republic of China.

Interaction between the CERC delegation and Chinese delegation relate to an understanding that there was considerable scope for collaboration between the two countries, especially, between regulatory institutions. The SERC, China evinced considerable interest in the Electricity Act, 2003 as also the important regulations issued by CERC to promote investment and competition and to lay down transparent and impartial procedures. Similarly, the Chinese regulator's Orders regarding efficiency linked ROE, rationalization of tariff structure, market



Chairperson, CERC being briefed by Mr. Xu Hang, Director, East China Electricity Regulatory Bureau, on his arrival at Shanghai.



Chairperson, CERC and his delegation visiting the Load Despatch Centre of North China Grid Company at Beijing.

development, grid management etc. were of considerable interest to the Indian regulatory mechanism.

5. Interaction with APX and Nord Pool

5.1 A delegation comprising Shri A.K. Sachan, Secretary, CERC and Shri Ravinder, Chief (Engg.), CERC and Shri Alok Kumar, Director (R&R), MoP visited Amsterdam Power Exchange (APX) at Amsterdam on 17th October, 2005 followed by visit to Nordic Power Exchange, Oslo, Norway on 18th and 19th October, 2005 for detailed discussions with Nord Pool Consulting, Norwegian Transmission System Operator and Regulator.

5.2 The objective of visit was to gather first hand experience of the working of power exchanges in Europe with a view to develop a power exchange in India. Another purpose was to gather information about the role of Transmission System Operator vis-à-vis market operator and transmission pricing scheme for market participants.

6. CERC's Role in shaping Forum of Regulators (FOR)

Forum of Regulators (FOR) has been constituted by Central Government in terms of the provisions of the Electricity Act, 2003. The Forum consists of Chairperson of Central Electricity Regulatory Commission (CERC) and Chairpersons of State Electricity



Regulatory Commissions (SERCs). The Chairperson of CERC is the Chairperson of the Forum. CERC has played a pivotal role in building consensus amongst the electricity regulators in the country, on several issues of critical importance facing the power sector. During the year 2005-06, two meetings were held at New Delhi.

The Agenda for the first meeting which was held on 28th April, 2005, was as under :-

- Discussions on the functions of the Forum as defined in the Notification constituting Forum of Regulators.
- Discussions on the follow-up action on the part of the Central Commission and State Commissions, arising out of the National Electricity Policy issued by the Government of India.
- Measures for regulating traded power.

- Distribution open access and methodology for computation of surcharge.

- Discussion on Time of Day (TOD) tariff.

The main Agenda for the second meeting which was held on 03rd November, 2005, was as under :-

- Measures to harness existing capacities of captive plants into the grid.
- Introduction of Open Access to facilitate speedy development of market and competition.

7. Chairperson, CERC elected as Chairman, South Asia Forum for Infrastructure Regulation (SAFIR)

SAFIR is a network of infrastructure regulators of the region (comprising Bangladesh, Bhutan, Nepal, Sri Lanka, India and Pakistan), connected international



Chairperson, CERC, and Chairman, South Asia Forum for Infrastructure Regulation (SAFIR) attending one of the events of SAFIR at Lahore, Pakistan



institutions and individuals that are active in the field. The sectors covered by SAFIR include Electricity, Telecom, Water, Oil, Gas, Transport, etc. Its objectives are to stimulate research, provide a databank regarding regulatory reform, initiate beneficial exchange of knowledge and expertise, and set the trend for rapid implementation of global best practices. The activities of the SAFIR are guided by a Steering Committee comprising independent Regulators of the region. Currently, SAFIR includes several members from Nepal, India, Pakistan and Sri Lanka.

Chairperson, CERC was elected as Chairman, SAFIR for the period 17.06.2005 to 16.06.2006. During this period, he made painstaking efforts to carry forward the ideals

and goals of SAFIR. SAFIR successfully organized the Seventh Core Course at Agra, which registered one of the highest participations in recent years. Two Steering Committee Meetings were held, one each in India and Pakistan, and many important decisions taken. With the assistance of Lahore University of Management Sciences (LUMS), Pakistan and National Electric Power Regulatory Authority (NEPRA), Pakistan, the one-off event at Lahore on Competition and Consumer Interest was a great success. During this period, eleven new members were admitted to SAFIR. Nepal and Bhutan have become Members for the first time.

8. Notifications Issued during the Year 2005 - 06:

Sl. No.	Notification No. & Date	Subject
01.	120 dated 25.08.2005	CERC (Terms and Conditions of Tariff) (First Amendment) Regulations, 2005
02.	135 dated 22.09.2005	Various Rates (discount rate, escalation rate, inflation rate) notified under the Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees
03.	144 dated 19.10.2005	Billing charges on provisional basis up to 31.03.2006
04.	149 dated 18.11.2005	CERC (Indoor/Outdoor Medical Facilities) Regulations, 2005
05.	13 dated 27.01.2006	CERC (Fixation of Trading Margin) Regulations, 2006
06.	31 dated 08.03.2006	Establishment of Central Advisory Committee of CERC
07.	38 dated 17.03.2006	Indian Electricity Grid Code

9. Seminar/Conferences/Training/Exchange Programs

The details of Seminar / Conferences / Training / Plant visits / Exchange Programs

attended by the Chairman, Members, Secretary and Staff of the Commission are provided in **Annexure IV and Annexure V.**





OUTCOME OF THE REGULATORY PROCESS IN TERMS OF BENEFITS TO CONSUMERS AND DEVELOPMENT OF THE POWER SECTOR

(A) Benefits to Consumers

Reduction in bulk electricity tariff of central generating stations under the new Terms & Conditions for the period 2004-09 on account of the following:

(i) Reduction in Return on Equity (ROE)

Reduction in ROE from 16% to 14% for the tariff period 2004-09 directly reduces the cost of bulk power.

(ii) Adoption of Debt Equity Ratio of 70:30 for the New Investment

The capital investment of the existing projects of the central generating companies were being serviced on debt equity ratio of 50:50. The new Terms & Conditions provide that for new investment on or after 1.4.2004 shall be serviced in the ratio of 70:30 and in case the equity deployed is less than 30% then actual equity is to be considered for the purpose of tariff. Since the equity fetches a higher return than the loan, the reduction in the equity components will reduce the cost of production of the central generating stations.

(iii) Rationalisation of Depreciation

Central Commission has rationalised recovery of depreciation in tariff by linking it to useful life of the assets in its tariff notification for 2001-04 and 2004-09. The accelerated rate of depreciation of 7.5% allowed to thermal generating station has been dispensed with. This was with a view to reduce front loading of tariff and reduce price of electricity to the SEBs/ DISCOMs.

(iv) Higher Benchmarks of Performance

The norms of stations heat rate, secondary fuel oil consumption and auxiliary energy consumption for coal/lignite/gas based station have been revised with a view to achieving economy and improving efficiency of performance. The revision in these operational norms is as follows:



Gross Station Heat Rate

Technology	For period 2001-04	For period 2004-09
Coal based TPS 500 MW sets	2500 Kcal/KWh	2450 Kcal/KWH
TPS-II based stations	2956 Kcal/KWh	2850 Kcal/KWh
Combined cycle stations	2000 Kcal/KWh and separate norms for small gas turbines less than 50 MW	1850/1950 Kcal/KWh depending upon class of the gas turbine.
Secondary Fuel Oil Consumption		
Coal/Lignite based stations	3.5 ml/KWh	2.0 ml/KWh for coal and 3.0 ml/KWh for lignite based stations.
Auxiliary Energy Consumption		
Coal	As per GOI notification dt.30.3.1992.	Reduced by 0.5% point for coal based stations.

The relaxed operation norms for existing stations of NTPC namely Kahalgaon STPS and gas based station namely Kawas, Gandhar, Dadri, Anta and Auriya have also been reduced and are as follows:

Name of Generating Station	For the period 2001-04	For the period 2004-09
Kahalgaon STPS	2550	2500
Kawas GPS	2125	2075
Gandhar GPS	2100	2000
Anta GPS	2125	2075
Auraiya GPS	2125	2100
Dadri GPS	2125	2075

The variable charges are reduced corresponding to the revision in operating norms. In case of existing stations of NTPC, the net reduction in the variable charges for the NTPC stations based on prices of coal, gas and secondary fuel oil as in March 2004 was of the order of Rs.372.00 crore out of this Rs.233 crore was on account of reduction in specific fuel oil consumption norms alone. However, upward revision in fuel price has offset the

reduction achieved through tightening of operating norms.

(v) Norms for loss of coal in transit

In the tariff regulations for the period 2004-09, the following normative transit and handling losses as percentage of the quantity of coal dispatched by the coal supply company during the month have been specified:



Pit head generating : 0.3% stations

Non-Pit head generating : 0.8% stations

The above norms would have significant impact in curbing loss/pilferage of coal in transit.

(vi) Norms for O&M expenses

In the tariff regulations for the period 2004-09, the Commission has adopted normative approach towards O&M expenses to be allowed for thermal generating stations. This will encourage the generating companies to economize their O&M expenses and keep the cost of generation under control. The O&M norms for coal based stations are as follows:

Coal based stations

(Rs. in lakh/MW)

Year	200/210/250 MW sets	500 MW and above sets
2004-05	10.40	9.36
2005-06	10.82	9.73
2006-07	11.25	10.12
2007-08	11.70	10.52
2008-09	12.17	10.95

Similar norms have been set for lignite fired thermal stations as well as gas turbines / combined cycle generating stations.

(vii) Target Availability

Norm of target availability for

thermal generating station was adopted as 80% and for lignite based stations TPS-II the norm was 72% for the period 2001-04. The target availability norm for thermal generating station has been retained as 80% for the period 2004-09. The norm for lignite based stations has been raised to 75%. In case of hydro stations, capacity index norms for the run of the river type hydro stations have been raised to 90% from 85%. The raising of availability norms has positive impact on reliability of power supply.

(B) Impact of CERC Norms on NTPC Coal-Based Stations

- ROE – Reduction of Rs.253 crore per year
 - ▶ Result of ROE reduction from 16% to 14%
- Energy Charges – Reduction of Rs.333 crore per year
 - ▶ As a result of higher efficiency, lower specific fuel oil consumption and lower Aux. Consumption
 - ▶ Computed at March, 2006 coal and fuel oil prices
- Increase in Energy Charges due to increase in coal and fuel oil price between March, 2004 and March, 2006 – Rs.1616 crore

As can be noticed, all efficiency gains in power plant operation have been neutralized due to non-transparent pricing of fuel.



(C) Performance of various Central Generating Companies

Various trends indicating the performance of the utilities regulated by CERC are at following Annexures:

- Cost of Generation (Tariff) of Generating Stations of NTPC for 2004-05 & 2005-06 can be seen in **Annexure-VI**.
- Annual Fixed Charges of Hydro Stations of NHPC, NEEPCO and SJVNL for 2004-09 can be seen in **Annexure-VII**.
- Transmission tariff for 2004-09 in respect of some typical transmission schemes can be seen in **Annexure-VIII**.

(D) Development of Sector

1. The following changes in the new terms & conditions of tariff for 2004-05 are providing an investor friendly environment conducive to power development through light handed regulation incorporating system of in built rewards for efficiency of operation.

- (i) Rationalisation of Advance Against Depreciation (AAD)

There was provision of Advance Against Depreciation to facilitate repayment of loan in terms & conditions of tariff for the period 2001-04. The new Terms & Conditions of tariff for the period 2004-09 provide for advance against depreciation linked to loan tenure of 10 years instead of 12 years earlier. This will ensure easy repayment option for the generators

and comfort in arranging finance for the new projects.

- (ii) Doing away with concept of actual or lower whichever is lower.

- (a) Normative Interest on Working Capital

The old Terms & Conditions for the period 2001-04 provide for computation of interest on working capital based on norms of fuel stock, fuel consumption etc. and were subject to actual. However, under the new Terms & Conditions for the period 2004-09, any reference to actual have been removed and interest on working capital has to be computed on the normative fuel stock and fuel consumption etc.

This would incentivise generators to optimize their resources and bring in more efficiency in operation so that savings, if any, could be retained by them.

- (b) Normative O&M for Thermal

The O&M cost norms were earlier based on 5 years actual. In the Terms & Conditions of tariff, the O&M cost for thermal have been specified in Rs./MW terms. This enables the generators to know their O&M expenses in advance and incentivise them to optimize their resources. Savings, if any, can be retained by the generators.



(c) Normative Performance Benchmarks

The Terms & Conditions of the tariff for 2001-04 provide for computation of energy charges based on norms but the same were subject to adjustment if the actual were lower than the normative operational parameters of stations heat rate, specific fuel oil consumption and auxiliary energy consumption. There was no incentive for the generators to bring about efficiency in operation or to conserve specific fuel oil.

The above dispensation of actual or norm whichever is lower have now been removed in the new Terms & Conditions of tariff for the period 2004-09. The normative operational parameters now incentivewise generators to operate its plant efficiently and in optimum manner. Savings, if any, can be retained by the generator.

(iii) Methodology for Admitting Additional Capitalisation

Methodology for admitting additional capital expenditure on R&M and life extension of the generating stations specified. The existing coal & gas based stations of NTPC like Singrauli STPS, Ramagundam STPS, Korba STPS, Auraiya GPS etc. are near completion of their rated life and would be requiring extensive

R&M and life extension programme during the tariff period 2004-09.

(iv) All India Norm of O&M for Inter-state Transmission System

The O&M expenses for inter-state transmission system for the period 2001-04 were based on actual or linked to capital cost for new transmission system. The regulation on terms & conditions of tariff for the period provide for a uniform O&M norms based on Rs.per Km line or Rs. per substation to be applied for working out regional O&M charges for the inter-state transmission system.

2. Open Access in Inter-State Transmission.

The Electricity Act, 2003 mandates CERC to provide open access in inter-State Transmission in non-discriminatory manner. After going through due consideration and hearings, the Commission issued its principle regulation on 30th January, 2004 for providing open access in inter-State Transmission. The open access in inter-State Transmission is considered vital for creating, competition in the power supply industry. The open access regulation allows generating companies, distribution companies, electricity traders and captive generators to seek access to inter-State Transmission System across the whole



country for wheeling electricity. The regulation dated 30th January, 2004 have now been amended vide amendments to the Regulation dated 21.02.2005 based on the feed back and difficulties

faced by the parties seeking open access in inter-State Transmission during one year period. All India Open Access transactions during 2005-06 are as follows:

Open Access Transactions – All India, during 2005-06

S. No.	Region	Total no. of transactions	Energy Approved(MU)		
			Intra-Regional	Inter-Regional	Total
1	Northern Region	2263	4274	5852	10126
2	Western Region	1241	381	10180	10561
3	Southern Region	35	646	126	772
4	Eastern Region	109	516	107	623
5	North-Eastern Region	290	174	270	444
	Total	3938	5991	16535	22526





ANNUAL STATEMENT OF ACCOUNTS

- ◆ Consequent to enactment of the Electricity Act, 2003, the Central Electricity Regulatory Commission is being extended budgetary support by the Central Government as Grants-in-aid from the Financial Year 2004-05 onwards. The Central Commission has been operating the Fund with the permission of the Ministry of Power. The grants made by the Central Government, all fee received and all sums received by the Central Commission from such other sources as may be decided by the Central Government are credited in the Fund. The fund is applied for meeting the expenses on salary, allowances and other remuneration of the Chairperson, Members, Officers and other employees of the Central Commission and also the expenses incurred by the Commission in discharge of its function etc.
- ◆ During the Financial Year 2005-06, the budgetary support extended to the Central Commission as grants-in-aid was Rs.5.85 crore against which expenditure incurred was Rs.6.33 crore. The major share of expenditure was on Rate, Rent and Taxes (RRT) followed by salary. The deficit of Rs.48 lakh has been met from the receipt of CERC.

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AGENDA FOR THE YEAR 2006-07

- ◆ Development of market – concept paper.
- ◆ Development of framework for national transmission tariff.
- ◆ Monitoring of Indian Electricity Grid Code (IEGC).
- ◆ Monitoring of implementation of ABT.
- ◆ Finalization and notification of regulations relating to curtailment of power supply due to non-payment of dues.
- ◆ Regulation for Grant of Licence for Inter-State Transmission.
- ◆ Regulation on revenue sharing for use of transmission assets for other business.
- ◆ Disposal of the remaining petitions pertaining to period 2004-09.

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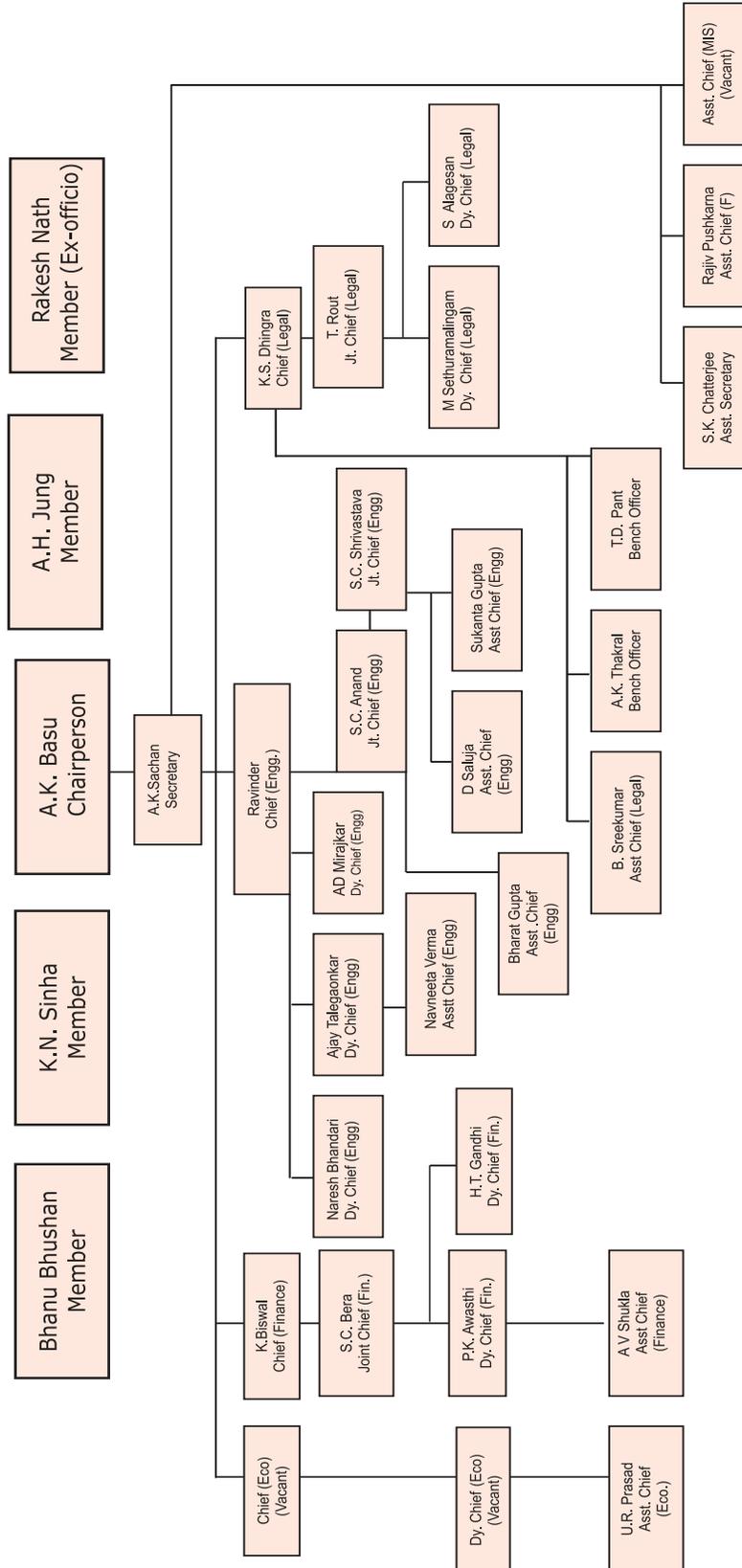
ANNEXURES





Annexure-I

Central Electricity Regulatory Commission Organisation Chart





Annexure-II

E-MAIL ID AND PHONE NUMBERS OF THE CHAIRPERSON, MEMBERS AND STAFF OF THE COMMISSION (As on 31.03.2006)

	Name	Designation	Phone No.	E-mail
	A.K. Basu	Chairperson	24360004	chairman@cercind.org
	K.N. Sinha	Member	24361280	kns60@rediffmail.com
	Bhanu Bhushan	Member	24361259	bhanubhushan@del13.vsnl.net.in
	A.H. Jung	Member	24361235	akbarjung@hotmail.com
	A.K. Sachan	Secretary	24361051	ak_sachan@yahoo.com
	K. Biswal	Chief (Finance)	24364898	k_biswal@hotmail.com
	K.S. Dhingra	Chief (Legal)	24363174	ks_dhingra@hotmail.com
	Ravinder	Chief (Engg.)	24364960	ravinderveeksha@hotmail.com
	S.C. Bera	Joint Chief (Finance)	24363395	subhas.bera@yahoo.com
	S.C. Anand	Joint Chief (Engg.)	24363395	anandsca@hotmail.com
	S.C. Shrivastava	Joint Chief (Engg)	24364895	scschandra@hotmail.com
	Trilochan Rout	Joint Chief (Legal)	24363327	rout_T6@yahoo.com



	P.K. Awasthi	Deputy Chief (Finance)	24364895	awasthi_prabhat@yahoo.com
	H.T. Gandhi	Deputy Chief (Finance)	24364895	h_t_gandhi@yahoo.com
	Naresh Bhandari	Deputy Chief (Engg.)	24364826	nbjalaj@yahoo.com
	Ajay Talegaonkar	Deputy Chief (Engg)	24364826	ajay_tal@hotmail.com
	A.D. Mirajkar	Deputy Chief (Engg.)	24364826	avinashdmirajkar@rediffmail.com
	M. Sethuramalingam	Deputy Chief (Legal)	24364826	msr_sethu@yahoo.com
	S. Alagesan	Deputy Chief (Legal)	24364826	alagesan_js@yahoo.com
	S.K. Chatterjee	Assistant Secretary	24361145	sushanta_chat@yahoo.com
	Rajeev Pushkarna	Assistant Chief (Fin.)	24361145	pushkranaraj@yahoo.co.in
	Devendra Saluja	Assistant Chief (Engg.)	24364960	devendrasaluja@yahoo.co.in
	Smt. Navneeta Verma	Assistant Chief (Engg.)	24364895	verma_neeta@indiatimes.com
	Sukanta Gupta	Assistant Chief (Engg.)	24363338	gupta_sukhanta@yahoo.com
	Bharat Gupta	Assistant Chief (Engg.)	24364895	bharatgupta_cerc@yahoo.com



	A.V. Shukla	Assistant Chief (Fin.)	24361145	avshuklacea@yahoo.com
	B. Sreekumar	Assistant Chief (Legal)	24361145	bskumar102@rediffmail.com
	U.R. Prasad	Assistant Chief (Eco)	24363338	uppaluri123@rediffmail.com
	Sitab Singh	Assistant Chief (Fin.)	24361145	sitab_s_b@yahoo.com
	A.K. Thakral	Bench Officer	24361145	
	T.D. Pant	Bench Officer	24361145	



Annexure - III

(A) STATUS OF PETITIONS FILED BEFORE THE COMMISSION DURING THE YEAR 2005-06

Carried forward from last year (2004-2005)	No. of Petitions received during 2005-2006	Total	Disposed of	Pending as on 31.03.2006
191	150	341	184	157

Details of Petitions disposed of during 2005-2006

Sl. No.	Petition No.	Date of Filing	Filed by	Subject	Date of Disposal
01.	31\2001	28.05.01	NTPC	Tariff for Kawas GPS - 01.04.2001 to 31.03.2004.	07-Apr-05
02.	33\2001	28.05.01	NTPC	Tariff for Gandhar GPS - 01.04.2001 to 31.03.2004.	01-Apr-05
03.	37\2001	01.06.01	NTPC	Tariff for Kahalgaon STPS - 01.04.2001 to 31.03.2004.	04-Aug-05
04.	58\2002	08.03.02	PGCIL	Tariff for LILO of S/C Singrauli-Kanpur line - 1400 KV sub-station at Allahabad and LILO of Singrauli-Kanpur line -II including ICT-I & ICT-II at Allahabad with associated bays in Northern Region for the period from 01.08.2001 to 31.03.2004.	13-Apr-05
05.	82\2002	23.05.02	PGCIL	Tariff for Unified Load Destpach and Communication Scheme in Northern Region.	02-Sep-05
06.	83\2002	22.05.02	PGCIL	Tariff for Unified Load Destpach and Communication Scheme in Southern Region.	13-Sep-05
07.	88\2002	27.06.02	PGCIL	Incentive of transmission system of Western Region for the year 2001-2002.	28-Dec-05
08.	91\2002	31.07.02	NEEPCO	Tariff in respect of sale of power from Doyang HEP upto 31.03.2004.	04-Apr-05
09.	105\2002	21.10.02	NLC	Fixation of tariff for NLC TPS-I expansion.	07-Apr-05



10.	110\2002	19.09.02	PGCIL	Tariff for 315 MVA, 400/200 KV ICT-IV Ballabgarh in Northern Region for the period from 01.07.2001 to 31.03.2004.	13-Apr-05
11.	113\2002	13.11.02	PGCIL	Tariff for 400 KV Jamshedpur-Raourkela S/C transmission system in Eastern Region for the period from 01.01.2003 to 31.03.2004.	04-Apr-05
12.	121\2002	14.11.02	PGCIL	Tariff for 400 KV D\C Raipur-Rourkela line along with Raipur and Rourkela Station under Eastern-Western inter-regional line in Western Region for the period from 01.04.2003 to 31.03.2004.	04-Apr-05
13.	122\2002	30.09.02	PGCIL	Tariff for Talchar-Kollar HVDC line with HVDC Pole I at Talchar and Kolar, Kolar-Madras line. LILO of Cuddapah-Bangalore S/C line, Kolar-Hoody D\C line, 4x167 MVA auto transformer 400 KV Hossur-Salem S/C line and 2x315 auto transformer with associated bays for line and ICT etc under transmission system associated with Talchar-II Project for the period from 01.11.2002 to 31.03.2004.	10-May-05
14.	132\2002	13.12.02	PGCIL	Tariff for Talchar HVDC Terminal Stations at Talchar & Kolar related with Pole-II, 400 KV D/C Kolar-Hossur line alongwith associated bays at Kolar and Hossur, and 400 KV S/C Salem-Udumalpet line alongwith associated bay extension at Salem and Udumalpet etc. under transmission system associated with Talchar-II project for the period from 01.03.2003 to 31.03.2004.	03-Aug-05
15.	138\2002	15.11.02	PGCIL	Tariff for Lilo of 400 KV D/C Bongaigaon-Malda at Siliguri in Eastern Region for the period from 01.08.2003 to 31.03.2004.	13-Jul-05
16.	1\2003	08.01.03	NTPC	Tariff for 1st Unit (500 MW) of Talcher Super Thermal Power Project Stage-II (4x500 MW).	13-Jun-05
17.	8\2003	03.02.03	PGCIL	Transmission Tariff for 400 KV Meerut-Mandola I & II and ICT-II and ICT-III (01.02.2003 to 31.03.2004).	07-Sep-05



18.	11\2003	07.03.03	GRIDCO	Direction to APTRANSCO for payment of arrears/outstanding dues.	25-Jan-06
19.	12\2003	07.03.03	GRIDCO	Direction to APTRANSCO for payment of arrears/outstanding dues.	25-Jan-06
20.	28\2003	04.06.03	PGCIL	Transmission tariff for 400 KV D/C Nathpa Jhakri-Nalagarh line for the period from 01.04.2003 to 31.03.2004.	16-Aug-05
21.	32/2003	30.06.03	NEEPCO	Fixation of Two Part Tariff of Electricity from Agartala Gas Turbine Power Project (84 MW) of NEEPCO for the year 2003-2004.	09-Sep-05
22.	33/2003	30.06.03	NEEPCO	Fixation of Two Part Tariff of Electricity from Assam Gas Based Power Project (29 MW) of NEEPCO for the year 2003-2004.	22-Aug-05
23.	36/2003	10.07.03	NEEPCO	Fixation of two part tariff of electricity from Kopili Hydro Electric Project of NEEPCO for the period from 01.04.2001 to 31.03.2004.	16-Aug-05
24.	37/2003	17.07.03	PGCIL	Approval of incentive based on availability of transmission system of Western Region for the year 2002-2003.	28.Dec-05
25.	41/2003	25.07.03	GRIDCO	Petition Under Section - 79(1)(a) & (f) of the Electricity Act, 2003 - To regulate supply of Power to GRIDCO.	23-Jun-05
26.	57/2003	16.09.03	PGCIL	Transmission Tariff for LILO of 400 KV Chamera-I - Kishenpur transmission line at Chamera-II in Northern Region : 01.04.2001 to 31.03.2004.	23-Nov-05
27.	60/2003	22.09.03	PGCIL	Transmission tariff for LILO of 220 KV S/C Panki-Naubasta in Northern Region for the period from 01.10.2003 to 31.03.2004.	21-Jun-05
28.	70/2003	13.10.03	PGCIL	Transmission Tariff for 315 MVA 440 KV, 3rd ICT at Biharsharif alongwith associated for the period from 01.10.2003 to 31.03.2004.	18-Oct-05
29.	9/2004	27.01.04	TGV	Application for Power Trading Licence	24-May-05
30.	27/2004	05.03.04	NTPC	Disputes in regard to non-payment of amounts due to the petitioner for supply of energy in the Eastern Region for the month of October 1998.	23-Jun-05



31.	30/2004	22.03.04	PGCIL	Tariff for unified load despatch and communication (ULDC) scheme in North Eastern Region.	20-Sep-05
32.	64/2004	30.06.04	NHDC	Provisional approval of generation tariff of Indira Sagar Project for the period from 01.04.2004 to 31.03.2005.	12-May-05
33.	67/2004	16.07.04	PGCIL	Tariff of Hathidah River Crossing sec of 220 KV Biharshariff-Begusarai transmission line in Eastern Region for the period from 01.04.2004 to 31.03.2009.	10-Feb-06
34.	68/2004	16.07.04	PGCIL	Tariff of Kishenpur-Pampore transmission line Kishenpur substation in Northern Region for the period from 01.04.2004 to 31.03.2009.	04-Jan-06
35.	69/2004	16.07.04	PGCIL	Tariff of Korba-Budhipadar transmission system for the period from 01.04.2004 to 31.03.2009.	16-Mar-06
36.	70/2004	21.07.04	PGCIL	Tariff of Jeypore-Gazuwaka transmission line in Southern Region for the period from 01.04.2004 to 31.03.2009.	16-Feb-06
37.	73/2004	22.07.04	PGCIL	Tariff of transmission system associated with Vindhyachal Stage II in Western Region for the period from 01.04.2004 to 31.03.2009.	14-Feb-06
38.	77/2004	27.07.04	PGCIL	Transmission tariff for transmission system associated with RAPP-B Project in Northern Region for the period from 01.04.2004 to 31.03.2009.	13-Jan-06
39.	78/2004	04.08.04	NLC	Review of CERC order dated 29.05.2004 in petition No.90/2003 - Revised UI accounting procedure followed by the SREB Secretariat in respect of NLC II starting from the week from 03.11.2003 to 09.11.2003.	25-May-05
40.	79/2004	04.08.04	NEEPCO	Fixation of tariff in respect of sale of power from Kopili Hydro Electric Project Stage-II for the period from 26.07.2004 to 31.03.2009.	09-Nov-05
41.	82/2004	06.08.04	PGCIL	Tariff for transmission system Unchahar Stage II Power Project in Northern Region for the period from 01.04.2004 to 31.03.2009.	03-Feb-06



42.	84/2004	11.08.04	PGCIL	Approval of Tariff for Kishenpur Moga transmission system in Northern Region for the period from 01.04.2004 to 31.03.2009 and additional capitalization.	24-Feb-06
43.	85/2004	12.08.04	RETL	Application for grant of transmission licence to Reliance Energy Transmission Limited.	29-Jul-05
44.	97/2004	28.09.04	PGCIL	Tariff for transmission system associated with Faridabad Gas Based Combined Cycle Power Project in Northern Region for the period from 01.04.2004 to 31.03.2009.	27-Jan-06
45.	98/2004	28.09.04	PGCIL	Tariff for 220 kV Anta transmission system in Northern Region for the period from 01.04.2004 to 31.03.2009	15-Dec-05
46.	99/2004	28.09.04	PGCIL	Tariff for 400 kV Chamera I-Kishenpur transmission system in Northern Region for the period from 01.04.2004 to 31.03.2009.	06-Sep-05
47.	100/2004	28.09.04	PGCIL	Tariff for transmission system associated with Uri Hydroelectric project in Northern Region for the period from 01.04.2004 to 31.03.2009.	23-Nov-05
48.	101/2004	28.09.04	PGCIL	Tariff for Bairasuil transmission system in Northern Region for the period from 01.04.2004 to 31.03.2009.	27-Feb-06
49.	102/2004	28.09.04	PGCIL	Tariff for Singrauli transmission system in Northern Region for the period from 01.04.2004 to 31.03.2009.	30-Nov-05
50.	103/2004	28.09.04	PGCIL	Tariff for SALAL stage II transmission system in Northern Region for the period from 01.04.2004 to 31.03.2009.	09-Sep-05
51.	104/2004	28.09.04	PGCIL	Tariff for transmission system associated with ICT at Kishenpur in Northern Region for the period from 01.04.2004 to 31.03.2009.	09-Sep-05
52.	105/2004	30.09.04	PGCIL	Tariff for transmission system associated with Auraiys Gas Power Project in Northern Region for the period from 01.04.2004 to 31.03.2009.	12-Dec-05
53.	106/2004	28.09.04	PGCIL	Tariff for Moga-Hissar-Bhiwani transmission system in Northern Region for the period from 01.04.2004 to 31.03.2009.	27-Mar-06



54.	107/2004	30.09.04	PGCIL	Tariff for additional converter transformer (spare) for the Rihand-Dadri HVDC BI-Pole in Northern Region for the period from 01.04.2004 to 31.03.2009.	07-Sep-05
55.	108/2004	28.09.04	PGCIL	Tariff for 220 KV Tanakpur transmission system in Northern Region for the period from 01.04.2004 to 31.03.2009.	07-Sep-05
56.	109/2004	28.09.04	PGCIL	Tariff for Chamera Stage -I Transmission system in Northern Region for the period from 01.04.2004 to 31.03.2009.	02-Feb-06
57.	110/2004	28.09.04	PGCIL	Tariff for SALAL stage-I transmission system in Northern Region for the period from 01.04.2004 to 31.03.2009.	28-Nov-05
58.	111/2004	30.09.04	PGCIL	Tariff for 400 KV Vindhyachal Stage-I transmission system in Western Region for the period from 10.04.2004 to 31.03.2009.	14-Dec.05
59.	112/2004	30.09.04	PGCIL	Tariff of transmission system associated with Gandhar Gas Power Station (Stage-I) in Western Region for the period from 01.04.2004 to 31.03.2009.	14-Feb-06
60.	113/2004	30.09.04	PGCIL	Tariff for 400 KV D/C Singrauli-Vindhyachal transmission line alongwith (2x250MW) HVDC back to back at Vindhyachal in Northern Region and in Western Region for the period from 01.04.2004 to 31.03.2009.	15-Dec-05
61.	114/2004	30.09.04	PGCIL	Tariff for Kawas transmission system in Western Region for the period from 01.04.2004 to 31.03.2009.	26-Oct-05
62.	115/2004	30.09.04	PGCIL	Tariff for Kakrapar transmission system in Western Region for the period from 01.04.2004 to 31.03.2009.	10-Oct-05
63.	117/2004	30.09.04	PGCIL	Tariff for 400 kV Korba transmission system in Western Region for the period from 01.04.2004 to 31.03.2009.	15-Dec-05
64.	118/2004	28.09.04	PGCIL	Tariff of Rangit transmission System in Eastern Region for the period from 01.04.2004 to 31.03.2009	17-Jan-06



65.	119/2004	28.09.04	PGCIL	Tariff for 63 MVAR Line Reactor on 400 kv Kolaghat-Rengali line at Rengali sub-station in Eastern Region for the period from 01.04.2004 to 31.03.2009	02-Sep-05
66.	120/2004	28.09.04	PGCIL	Tariff for 50 MVA Auto Transformer at Malda sub-station in Eastern Region for the period from 01.04.2004 to 31.03.2009	23-Nov.05
67.	121/2004	28.09.04	PGCIL	Tariff for 400 kV Bongaigaon-Malda transmission system in Eastern Region for the period from 01.04.2004 to 31.03.2009	14-Jan-06
68.	122/2004	28.09.04	PGCIL	Tariff for Jeypore-Talcher transmission system in Eastern Region for the period from 01.04.2004 to 31.03.2009	14-Sep-05
69.	123/2004	28.09.04	PGCIL	Tariff for Dehri Karamnasa transmission system in Eastern Region for the period from 01.04.2004 to 31.03.2009.	12-Jan-06
70.	124/2004	30.09.04	PGCIL	Tariff for Chukha transmission system in Eastern Region for the period from 01.04.2004 to 31.03.2009	21-Dec-05
71.	125/2004	28.09.04	PGCIL	Tariff for 400 kV Talcher transmission system in Eastern Region for the period from 01.04.2004 to 31.03.2009	02-Feb-06
72.	126/2004	28.09.04	PGCIL	Tariff for 400 kV transmission system associated with Farakka (I &II) STPS in Eastern Region for the period from 01.04.2004 to 31.03.2009	05-Jan-06
73.	127/2004	28.09.04	PGCIL	Tariff for 400 kV Kahalgaon transmission system in Eastern Region for the period from 01.04.2004 to 31.03.2009.	14-Dec-05
74.	131/2004	28.09.04	PGCIL	Tariff for NLC Stage-II Transmission system Southern Region for the period from 01.04.2004 to 31.03.2009.	07-Nov-05
75.	132/2004	28.09.04	PGCIL	Tariff for Special Energy Meters in Southern Region for the period from 01.04.2004 to 31.03.2009.	31-Oct-05
76.	133/2004	28.09.04	PGCIL	Tariff for 315 MVA ICT -III along with associated bays equipments at Nagarjunasagar sub-station in Southern Region for the period from 01.04.2004 to 31.03.2009.	04-Jan-06



77.	134/2004	28.09.04	PGCIL	Tariff for NLC Stage-I Transmission system Southern Region for the period from 01.04.2004 to 31.03.2009.	03-Nov-05
78.	135/2004	28.09.04	PGCIL	Tariff for 400 kV Central transmission Project-I in Southern Region for the period from 01.04.2004 to 31.03.2009.	14-Dec-05
79.	136/2004	28.09.04	PGCIL	Tariff for 400 kV D/C Kaiga-Sirsi transmission line along with associated bays in Southern Region for the period from 01.04.2004 to 31.03.2009.	27-Jan-06
80.	138/2004	28.09.04	PGCIL	Tariff for 400 kV D/C Ramagundam-Chandrapur transmission system in Southern Region and Western Region for the period from 01.04.2004 to 31.03.2009.	20-Dec.-05
81.	140/2004	18.10.04	PGCIL	Determination of provisional transmission tariff for 220 kv Allahabad-phulpur S/C Transmission Line under system improvement scheme in Uttar Pradesh for the period from 01.06.2004 to 31.03.2009.	30-May-05
82.	141/2004	19.10.04	NTPC	Determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 for Kayamkulam Combined Cycle Power Project (359.58 MW).	04-Apr-05
83.	143/2004	21.10.04	NTPC	Determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 of Feroze Gandhi Unchahar Thermal Power Station Stage-II(420MW).	04-Apr-05
84.	154/2004	27.10.04	NTPC	Determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 for Vindhyachal Super Thermal Power Station Stage-II (1000MW).	04-Apr-05
85.	161/2004	29.10.04	NTPC	Determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 for Faridabad Gas Power Station (431.586 MW).	07-Apr-05
86.	165/2004	01.11.04	NTPC	Determination of impact of additional capital expenditure incurred during 2002-03 (01.03.2003 to 31.03.2003) and 2003-04 for Simhadri Power Station (1000 MW).	04-Apr-05



87.	166/2004	01.11.04	SBL	Grant of licence for inter-state trading in electricity.	21-Jul-05
88.	167/2004	02.11.04	NTPC	Determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 for Dadri Gas Power Station (829.78 MW).	13-Apr-05
89.	169/2004	03.11.04	NTPC	Approval of revised fixed charges due to additional capitalization for the period 2001-02, 2002-03 and 2003-04 in respect of Vindhyachal STPS Stage-I (1260MW).	13-Apr-05
90.	170/2004	11.11.04	NTPC	Approval of revised fixed charges due to additional capitalization for the period from 2001-02, 2002-03 and 2003-04 in respect of Farakka Super Thermal Power Station (1600MW).	17-Jun-05
91.	172/2004	10.11.04	NTPC	Approval of revised fixed charges due to additional capitalization for the period 2001-02, 2002-03 and 2003-04 in respect of Rihand Super Thermal Power Station (1000MW).	18-May-05
92.	173/2004	16.11.04	NTPC	Approval of revised fixed charges due to additional capitalization for the period from 2001-02, 2002-03 and 2003-04 in respect of Ramagundam Super Thermal Power Station (2100 MW) Stage I & II.	03-May-05
93.	174/2004	16.11.04	NTPC	Approval of revised fixed charges due to additional capitalization for the period 2001-02, 2002-03 and 2003-04 in respect of Anta Gas Power Station (419.33 MW).	13-Apr-05
94.	180/2004	29.11.04	NTPC	Approval of revised fixed charges due to additional capitalization for the period 2001-02, 2002-03, 2002—03 and 2003-04 in respect of National Capital Thermal Power Station, Dadri (840MW).	12-May-05
95.	182/2004	24.11.04	PGCIL	Approval of transmission tariff for Hiriyur Sub-station, LILO of Davangere Hoody at Hiriyur and additional bays at Kolar and Hosur under system strengthening Scheme -II in Southern Region for the period upto 31.03.2004.	05-Jul-05
96.	184/2004	07.12.04	SJVNL	Approval of provisional generation tariff of Nathpa Jhakri HEP for the period from 01.04.2004 to 31.03.2009.	17-Jun-05



97.	185/2004	30.11.04	NHPC	Approval of generation tariff of Chemera HE Project stage-II for the period from 02.11.2003 to 31.03.2004.	15-Sep-05
98.	188/2004	10.12.04	PGCIL	Approval of transmission tariff for Khammam-Nagarjunsagar 400 kV S/C line along with extension of Khammam and Nagarjunsagar 400/220 kV S/S under scheme for strengthening of grid system and evacuation of power from Ramagundum Stage III in Southern Region for tariff period 01.03.2004 to 31.03.2004.	18-Aug-05
99.	190/2004	10.12.04	NTPC	Approval of revised fixed charges on account of additional capital expenditure for the period from 01.04.2001 to 31.03.2004 in respect of Singrauli Super Thermal Power Station (2000MW).	07-Jul-05
100.	191/2004	15.12.04	PGCIL	Approval of transmission tariff for Series compensation on Panki-Muradnagar 400 KV S/C line of UPPCL in Northern Region from 01.02.2004 to 31.03.2004.	27-Jul-05
101.	192/2004	15.12.04	PGCIL	Approval of transmission tariff for Agra (Power grid)-Agra (UPPCL) 400KV D/C interconnection in Northern Region for the period from 2001 to 2004.	21-Jul-05
102.	193/2004	15.12.04	PGCIL	Approval of transmission tariff for Strengthening of 220 kV transmission system under system improvement scheme in U.P. in Northern Region for the period from 01.04.2001 to 31.03.2004.	02-Sep-05
103.	195/2004	16.12.04	NTPC	Approval of revised fixed charges on account of additional Capital expenditure for the period 01.04.2001 to 31.03.2004 in respect of Korba STPS (2100MW).	14-Jul-05
104.	4/2005	07.07.05	NTPC	Renovation and Modernisation of Auraiya Gas Power Station (663.36 MW) of the NTPC.	07-Jul-05
105.	5/2005	18.01.05	TSCEL	Seeking relief from excessive rise in per unit charge from the Hydro Electric Project under NEEPCO mainly Ranganadi & Doang in post ABT Period, regulation over transmission constraints/contingency/natural calamities causing adverse effect on drawal/trading of power and Surrendering of share of Doyang HEP, Nagaland.	30-Sep-05



106.	6/2005	20.01.05	PGCIL	Transmission tariff for 230 kV Neyveli-Bahoor transmission line along with associated bay equipment at Neyveli end in Southern Region for the period from 01.04.2004 to 31.03.2009.	16-Jan-06
107.	7/2005	24.01.05	SKPCL	Grant of licence for inter state trading in electricity.	26-May-05
108.	8/2005	27.01.05	NTPC	Approval of revised fixed charges due to additional capital expenditure for the period 14.01.2000 to 31.03.2004 in respect of Tanda Thermal Power Station (440 MW).	24-Oct-05
109.	9/2005	28.01.05	NRLDC	Maintaining grid security by taking appropriate actions in line with section 7.4.5 and 7.4.4 of the Indian Electricity Grid Code (IEGC).	29-Jun-05
110.	11/2005	08.02.05	PGCIL	Determination of provisional transmission tariff for Fixed and Thyristor controlled Series Compensation for 400 kV D/C Raipur-Rorkela Transmission Line at Raipur in Western Region for the period from 01.11.2004 to 31.03.2009.	26-May-05
111.	12/2005	08.02.05	PGCIL	Approval of transmission tariff for LILO of Purnia-Dalkola 132 kV S/C Line and extension at Purnia sub-station in Eastern Region for the period from 01.11.2003 to 31.03.2004.	07-Sep-05
112.	13/2005	11.02.05	NTPC	Approval of tariff of Ramagundam Super Thermal Power Station Stage-III (500MW) for the period from 01.03.2005 to 31.03.2009.	10-May-05
113.	14/2005	11.02.05	MEL	Grant of licence for inter state trading in electricity.	19-Jul-05
114.	15/2005	14.02.05	IAMPL	Grant of licence for inter state trading in electricity.	07-Sep-05
115.	17/2005	16.02.05	NTPC	Approval for borrowing on Floating rate of interest.	28-Jun-05
116.	18/2005	21.02.05	PGCIL	Implementation of 400 kV D/C Bina-Nagda -Dehgam Transmission Lines by Powergrid on the basis of process of approved cost estimate in vogue.	02-Aug-05
117.	19/2005	25.02.05	NTPC	Revision of rate of infirm power supply from Ramagundam Super Thermal Power Station, Stage-III approved vide order dated 31.08.2004 in Petition No. 63/2004.	10-May-05



118.	22/2005	03.03.05	PGCIL	Approval of abnormal Operation and Maintenance expenses on account of additional security for the year 2003-2004 in North-Eastern Region.	26-May-05
119.	23/2005	10.03.05	ERLDC	Non-payment of UI charges by JSEB.	21-Jun-05
120.	24/2005	10.03.05	ERLDC	Non-payment of UI charges by BSEB.	07-Jun-05
121.	26/2005	22.03.05	PGCIL	Restoration of equity depletion occurred as a result of fixation of tariff by Government of India under Section 43A(2) of the Electricity Supply Act, 1948, through various tariff notification for block 1992-1997.	11-May-05
122.	27/2005	29.03.05	PGCIL	Issue of direction regarding refund/ adjustment of development surcharge collected by Power grid during 2003-04 from the state utilities and deployed along with its interest thereon.	07-Apr-05
123.	28/2005	29.03.05	TNEB	Review of Commission's order dated 1.2.2005 in petition No. 194/2004 - fixation of tariff for Neyveli Thermal Power Station-I(600MW) for the period 01.04.2002 to 31.03.2004.	21-Apr-05
124.	29/2005	29.03.05	WRLDC	Non-payment of UI charges by MPSEB.	14-Jun-05
125.	31/2005	06.04.05	WRLDC	Non-payment of UI Charges by CSEB.	11-Jul-05
126.	32/2005	12.04.05	PGCIL	Determination of provisional transmission tariff for 400/220 kV Khandwa S/S and LILO of 400 kV Itarsi-Dhule D/C Transmission Line at Khandwa in Western Region for the period from 01.02.2005 to 31.03.2009.	14-Sep-05
127.	33/2005	21.04.05	DTL	Non-payment of UI Charges by Power Development Department, Jammu & Kashmir and UPPCL under chapter 7.1 (d) of Indian Electricity Grid Code (IEGC)	19-Jul-05
128.	34/2005	20.04.05	NLC	Review of Commission's Order dated 24.2.2005 in petition No. 89/2004-Levy of transmission charges and applying regional transmission losses to NLC Mines.	19-Jul-05
129.	37/2005	25.04.05	NTPC	Review of the Commission's Order dated 28.2.2005 in petition No. 196/2004-revision of O&M expenses for the years 2001-02 to 2003-04.	07-Jun-05



130.	38/2005	25.04.05	PGCIL	Approval of procurement of 2 Nos. converter transformer for Rihand-Dadri HVDC link in Northern Region.	21-Jun-05
131.	41/2005	28.04.05	PGCIL	Determination of provisional transmission tariff for 400 kV Ramagundam-Hyderabad D/C line (under Ramagundam-III associated transmission system) alongwith associated bays and equipment in Southern Region for the period from 01.11.2004 to 31.03.2009.	21-Dec-05
132.	42/2005	06.05.05	NTPC	Direction to Eastern Regional Electricity Board for treatment of drawal by CGSs in Eastern region under complete shutdown conditions in accordance with the guidelines issued by the CEA vide latter dated 07.12.2000.	07-Sep-05
133.	43/2005	05.05.05	MSEB	Seeking direction by CERC to the Madhya Pradesh State Electricity Board to pay the amount due to Maharashtra State Electricity Board.	08-Dec-05
134.	44/2005	09.05.05	PGCIL	Transmission tariff of 2nd 400 kV D/C Kahalgaon-Biharshariff transmission line in Eastern Region for the period from 2004-2009	28-Feb-06
135.	45/2005	11.05.05	Gejendra Haldea	Review of the Commission's Order dated 30.06.2004 in petition No. 20/2004-grant of licence for inter-state trading in electricity to PTC India Limited.	08-Jun-05
136.	46/2005	05.05.05	NTPC	Relaxation of target availability norm of Kawas Gas Power Station (656.20 MW) and Gandhar Gas Power Station (657.39MW) for the period 01.04.2004 to 31.03.2009.	16-Feb-06
137.	47/2005	10.05.05	NHPC	Tariff for Uri HE Project for the period from 01.04.2004 to 31.03.2009.	09-May-05
138.	48/2005	12.05.05	PGCIL	Tariff for 400 kV DC Vijaywada-Nelore line, 400 kV DC Nellore-Sriperumpudur line, New 400 kV switching station at Nellore Extension of Vijayawada and Sriperumpudur with associated bays under system strengthening scheme in SR from 01.04.2004 to 31.03.2009 and for additional capitalization during 2001-2004	14-Jan-06



139.	50/2005	12.05.05	PGCIL	Tariff for 400/220 kV 315 MVA transformer at Jeypore in Eastern Region for the period from 01.04.2004 to 31.03.2009 and for 2001-04 for the additional capitalization during 2001-04.	27-Jan-06
140.	51/2005	13.05.05	PGCIL	Tariff for 400 kv Biharshariff-Sasaram-Sarnath transmission lines along with bays etc. under Eastern-Northern inter-regional HVDC transmission system for the period from 01.04.2004 to 31.03.2009 and for 2001-04 for the additional capitalization during 2001-2004.	25-Jan-06
141.	52/2005	13.05.05	PGCIL	Determination of provisional transmission tariff for 40% fixed series compensation on existing gooty-Neemangala 400 kV s/c line and both circuits of Nagarjunasagar-Cuddapah 400 kV S/C lines under FSC Project in Southern Region for the period from 01.11.2004 to 31.03.2009.	21-Dec.-05
142.	53/2005	17.05.05	PGCIL	Tariff of strengthening of Farakka-Malda transmission link and additional 315 MVA transformer at Malda in Eastern Region for the period from 01.04.2004 to 31.03.2009.	20-Jan-06
143.	55/2005	17.05.05	NHPC	Review of CERC Order dated 28.2.2005 in Petition No.196/2004 (SUO MOTU) - revision of O&M expenses for the years 2001-02 to 2003-04	09-Jun-05
144.	56/2005	18.05.05	NTPC	To claim abnormal O & M Expenses not included in the normalised O & M Expenses for Korba Super Thermal Power Station (2100 MW) for the period 01.04.2001 to 31.03.2004.	11-Aug-05
145.	57/2005	25.05.05	NTPC	To claim abnormal O & M Expenses not included in the normalised O & M Expenses for Ramagundam Super Thermal Power Station Stage I &II (2100 MW) for the period 01.04.2001 to 31.03.2004.	11-Aug-05
146.	58/2005	24.05.05	21st CIPL	Grant of inter state trading licence.	20-Sep-05
147.	62/2005	10.06.05	NEEPCO	Approval of tariff for Doyang Hydro Electric Project of NEEPCO for the period from 01.04.2004 to 31.03.2009	31-Oct-05



148.	69/2005	10.06.05	NTPC	To claim abnormal O&M expenses not included in the normalised O&M expenses for Anta Gas Power Station (419.33 MW) for the period from 01.04.2001 to 31.03.2004	19-Oct-05
149.	71/2005	17.06.05	NTPC	To claim abnormal O&M expenses not included in the normalised O&M expenses for Farakka Super Thermal Power Station (1600 MW) for the period from 01.04.2001 to 31.03.2004	19-Oct-05
150.	74/2005	29.06.05	NTPC	Approval to allocate capital expenditure on assets of Corporate, Regional & other offices to the capital cost of different stations for the purpose of recovery through tariff.	28-Jul-05
151.	75/2005	30.06.05	NHPC	Determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 for Bairasiul HE Project.	03-Feb-06
152.	76/2005	30.06.05	NHPC	Determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 for Tanakpur HE Project.	03-Feb-06
153.	77/2005	01.07.05	NTPC	To claim abnormal O &M expenses not included in the normalised O &M expenses for National Capital Thermal Power Station, Dadri (840 MW) for the period from 01.04.2001 to 31.03.2004.	19-Oct-05
154.	78/2005	07.07.05	NTPC	To claim abnormal O &M expenses not included in the normalised O &M expenses for Auraiya Gas Power Station (663.36 MW) for the period from 01.04.2001 to 31.03.2004.	19-Oct-05
155.	81/2005	08.07.05	TNEB	Fixation of generation tariff in respect of Neyveli Thermal Power Station-I (600MW) for the period 01.04.2001 to 31.03.2004.	04-Aug-05
156.	82/2005	12.07.05	MPSEB	Clarification in the order dated 18.07.2003 in petition No. 49/2002 - approval of transmission tariff for Korba-Budhipadar transmission system in Western Region for the period from 01.04.2001 to 31.03.2004	26-Sep-05
157.	83/2005	12.07.05	NTPC	Approval of provisional tariff of Unit -I (500MW) of Rihand STPS Stage-II for the period from 01.08.2005 to 31.03.2009.	21-Sep-05



158.	85/2005	12.07.05	NHPC	Determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 for Salal HE Project.	01-Feb-06
159.	88/2005	25.07.05	NHPC	Determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 for Uri HE Project Stage-I	03-Feb-06
160.	89/2005	26.07.05	NTPC	To claim abnormal O &M expenses not included in the normalised O &M expenses for Dadri Gas Power Station (829.78 MW) for the period 01.04.2001 to 31.03.2004.	19-Oct-05
161.	91/2005	29.07.05	NTPC	Revision of Norms of Target Availability in respect of Farakka Super Thermal Power Station on account of acute shortage and poor quality of coal during the year 2004-2005	24-Oct-05
162.	92/2005	29.07.05	NTPC	Revision of norms of Target Availability in respect of Farakka Super Thermal Power Station on account of acute shortage and poor quality of coal during the year 2002-03 and 2003-04.	24-Oct-05
163.	93/2005	03.08.05	NHPC	Determination of impact of additional capital expenditure incurred during 2001-02, 2002-03 and 2003-04 for Loktak HE Project.	02-Mar-06
164.	94/2005	17.08.05	ESSAR	Application for the Inter-state Trading licence in electricity.	16-Dec.05
165.	95/2005	23.08.05	GUVNL	Direction to NTPC to tie up and procure adequate quantum of gas at economical rates for Kawas and Gandhar Station and give consent to Gujarat State Petronet Ltd. for laying pipeline in the premises of Kawas and Gandhar Power Station for supply of gas from Gujarat State Petroleum Corporation Ltd.	16-Feb-06
166.	96/2005	19.08.05	PGCIL	Determination of provisional transmission tariff for 40% fixed series compensation on 400 kV Gooty-Neelmangala Circuit-II at Gooty under FSC Project in Southern Region for the period from 01.05.2005 to 31.03.2009.	13-Feb-06
167.	97/2005	23.08.05	NLC	Application for adhering to CERC tariff orders and regulations.	19-Oct-05



168.	98/2005	10.08.05	TNEB	Review of order dated 7.4.2005 in petition No. 105/2002-Approval of tariff in respect of NLC Thermal Power Station-I (Expansion) (Unit I & II) (2X210 MW) for the period from 09.05.2003 to 31.03.2004.	03-Mar-06
169.	100/2005	31.08.05	MPSEB	Review of the order dated 07.04.2005 in Petition No. 31/2001-Approval of Tariff for Kawas Gas Power Station - 01.04.2001 to 31.03.2004.	16-Feb-06
170.	103/2005	01.09.05	UJVNL	Seeking permission for filing the proposed tariff for financial years 2005-06 to 2008-09 of Uttaranchal Jal Vidyut Nigam Limited and for the determination of Hydro Generation tariffs of its inter-state Electricity generation station.	29-Mar-06
171.	106/2005	13.09.05	PGCIL	Determination of provisional transmission tariff for Raipur-Chandrapur (Bhadwra) 400 Kv D/C Transmission line including bay extension at Raipur and Bhadrwati S/S in Western Region for the period from 01.06.2005 to 31.03.2009.	23-Feb-06
172.	107/2005	09.09.05	PGCIL	Determination of provisional transmission tariff for 400 KV S/C Hyderabad-Kurnool-Gooty (DOCO 01.03.2005) and Gooty-Neelmangala (DOCO 01.05.2005) lines along with bay extension and equipment at Hyderabad, Kurnool & Gooty associated with Ramagundum -III Transmission system in Southern Region (DOCO 01.03.2009)	13-Feb-06
173.	108/2005	15.09.05	NTPC	Revision of O & M Expenses in respect of Talcher Thermal Power Station (460 MW) for the period from 01.04.2001 to 31.03.2004.	27-Feb-06
174.	122/2005	13.10.05	NTPC	Revision of O & M Expenses in respect of Feroz Gandhi Unchahar Thermal Power Station Stage-II (420 MW) for the period from 01.04.2001 to 31.03.2004.	19-Jan-06
175.	134/2005	10.11.05	NTPC	Tariff for infirm power supply to the Respondents from unit-II (500MW) of Rihand Super Thermal Power Station, Stage-II prior to its date of commercial operation.	18-Jan-06



176.	136/2005	10.11.05	NTPC	Revision of O & M Expenses in respect of Kawas Gas Power Station (656.20 MW) for the period from 01.04.2001 to 31.03.2004.	25-Jan-06
177.	137/2005	10.11.05	PGCIL	Determination of provisional transmission tariff for 400 Kv D/C Madurai-Thiruvananthapuram transmission system in Southern Region for the period from 01.08.2005 to 31.03.2009.	13-Feb-06
178.	145/2005	18.11.05	NTPC	Revision of O & M Expenses in respect of Kahalgaon Super Thermal Power Station (840 MW) for the period from 01.04.2001 to 31.03.2004.	19-Jan-06
179.	151/2005	09.12.05	NRLDC	Endangering the Northern Region Grid Security by continuous violation of Sections 6.2(1) and 7.4.4 of the Indian Electricity Grid Code (IEGC)	08-Mar-06
180.	153/2005	14.12.05	21st CIPL	Grant of inter state trading licence.	16-Mar-06
181.	155/2005	21.12.05	PGCIL	Miscellaneous application for reimbursement of loss of Return on equity in Ranganadi transmission system due to delay in completion of Rangnadi HE Project.	30-Jan-06
182.	156/2005	21.12.05	PGCIL	Miscellaneous application for revision of sharing methodology for transmission tariff of 50 MV Auto Transformer at Malda sub-station in Eastern Region for the period from 01.10.2001 to 31.03.2004.	09-Mar-06
183.	163/2005	28.12.05	NEEPCO	Review of the order dated 30.09.2005 in petition No. 5/2005- Relief from excessive per unit charge from the Hydro Electric Project under NEEPCO mainly Ranganadi & Doang in post- ABT Period, regulation over transmission constraints/contingency/natural calamities causing adverse effect on drawal/trading of power and surrendering of share of Doang HEP.	09-Mar-06
184.	01/2006	03.01.06	NLC	Payment of SRLDC charges for NLC Mines treated as beneficiary to Thermal Power Station II.	03-Mar-06

(B) INTERLOCUTORY APPLICATION BEFORE CERC

No. of IA carried forward from last year (2004-2005)	No. of IA received during the period 2005-2006	Total	Disposed of	No. of IA pending on 31.03.2006
3	84	87	82	5



Annexure-IV

SEMINARS/ CONFERENCES/ EXCHANGE PROGRAMS ATTENDED BY THE CHAIRPERSON/MEMBERS/SECRETARY/STAFF OF THE COMMISSION OUTSIDE INDIA

S. No.	Name & Designation	Seminar/Conference/Program	Country Visited
01.	Shri Kulamani Biswal, Chief (Finance)	Bilateral exchange visit from 14 th to 20 th August, 2005 on the invitation extended by the USEA on behalf of USAID under the Partnership Programme between CERC, FERC and MDTC.	USA
02.	Shri Naresh Bhandari, Deputy Chief (Engg.)	- DO -	- DO -
03.	Shri S.K. Chatterjee Asst. Secretary	- DO -	- DO -
04.	Shri D.K. Saluja Asst. Chief (Engg.)	- DO -	- DO -
05.	Smt. Navneeta Verma Asst. Chief (Engg.)	- DO -	- DO -
06.	Shri T.D. Pant, Bench Officer	- DO-	- DO -
07.	Shri A.K. Basu, Chairman	24 th to 28 th August, 2005.	China
08.	Shri A.K. Sachan, Secretary	- DO -	- DO -
09.	Shri S.C. Anand, Jt. Chief (Engg.)	- DO -	- DO -
10.	Shri K.N. Sinha, Member	Bilateral exchange visit from 25 th to 31 st August, 2005 on the invitation extended by the USEA on behalf of USAID under the Partnership Programme between CERC, FERC and MDTC.	U.S.A.
11.	Shri A.K. Sachan Secretary	Development of Electricity Market in India – Study Trip to European Markets (APX and Nordpool). Visited Amsterdam and Oslo from 16 th to 21 st October, 2005.	Netherland and Norway
12.	Shri Ravinder Chief (Engg.)	- DO -	- DO -
13.	Shri A.K. Basu, Chairman	Bilateral negotiations with FERC, USA and US State Commissions from 15 th to 20 th November, 2005.	U.S.A.
14.	Shri Ajay Talegaonkar, Dy. Chief (Engg.)	- DO -	- DO -
15.	Shri Ravinder Chief (Engg.)	South Asia Regional Initiative/Energy (SARI/E) Regional Regulation Partnership Executive Meeting from 04 th to 05 th December, 2005 in Dhaka.	Bangladesh.



Annexure – V

PROGRAMS ATTENDED BY STAFF OF THE COMMISSION IN INDIA

S. No.	Name of Hosting Institution	Name of Program & Duration	Designation of Officers deputed
01.	Forum of Indian Regulators (FOIR) in collaboration with Pennsylvania Public Utility Commission, USA	Workshop for Officers of ERCs during 06 th – 07 th June, 2005.	Shri S.C. Srivastava, Jt. Chief (Engg.) Shri U.K. Shukla, Jt. Chief (Fin.) Shri Naresh Bhandari, Dy. Chief (Engg.) Shri Ajay Talegaonkar, Dy. Chief (Engg.) Dr. U.R. Prasad, Asst. Chief (Eco.)
02.	South Asia Forum of Infrastructure Regulation (SAFIR)	7 th SAFIR Core Training Programme on “Infrastructure Regulations and Reforms” from 21 st to 29 th October, 2005 at Agra.	Shri A.D. Mirajkar, Dy. Chief (Engg.) Shri P.K. Awasthi, Dy. Chief (Fin.) Shri Bharat Gupta, Asst. Chief (Engg.), Shri Sukanta Gupta, Asst. Chief (Engg.)
03.	Faculty of Management Studies, University of Delhi	International Conference on “Human Capital Formation in the 21 st Century” at Delhi.	Dr. U.R. Prasad, Asst. Chief (Eco.)
04.	Institute of Cost & Works Accounts of India (ICWAI), New Delhi.	47 th National Convention of ICWAI from 20 th to 22 nd January, 2006 at Bhubaneswar.	Shri K. Biswal, Chief (Fin.)

**Cost of Generation (Tariff) of Generating Stations of NTPC existing as on 1.4.2004 for 2004-05 & 2005-06 in Paise/kWh
Ex-Bus (New Terms & Conditions of Tariff with improved norms) at 80% PLF**

Sl. No.	Name of the Generating Station	Installed Capacity	COD of the Station	Fixed charges	Energy Charges as in March 2005 ²	TOTAL	Weighted Average cost of generation	Annual Fixed Charges	Fixed charges	Energy Charges as in March 2006 ²	TOTAL	Weighted Average Cost of Generation	
Years		2004-05						2005-06					
	Units	MW	paise/kWh	paise/kWh	paise/kWh	paise/kWh	Rs. Lakh	paise/kWh	paise/kWh	paise/kWh	paise/kWh		
Coal Based thermal generating Stations of NTPC													
A. Pit head Generating Stations													
1	Rihand STPS	1000.00	1.1.1991	51	81	132	117	32835.00	51	90	142	123	
2	Singrauli STPS	2000.00	1.5.1988	28	84	112		37090.00	29	83	111		
3	Vindhyachal STPS St-I	1260.00	1.2.1992	39	86	125		28265.00	35	89	125		
4	Korba STPS	2100.00	1.6.1990	32	55	87		42968.00	32	53	84		
5	Ramagundam STPS	2100.00	1.4.1991	33	88	121		45188.00	33	97	130		
6	Talcher STPS St-I	1000.00	1.7.1997	64	48	112		40808.00	63	68	130		
7	Talcher TPS ¹	460.00	1.7.1997	56	68	124		15928.00	56	71	127		
8	Vindhyachal STPS St-II ¹	1000.00	1.10.2000	69	83	152		44731.00	69	86	156		
9	Talcher STPS St-II ⁴	1000.00	1.3.2004 (COD of Unit-2 out of four)	78	50	128		50215.00	78	68	145		
B. Non-Pit head Generating Stations													
1	FGUTPP TPS St-I	420.00	13.2.1992 (Date of Take over)	59	112	171	190	13629.00	51	122	173	194	
2	FGUTPP St-II	420.00	1.1.2001	66	112	178		17720.00	66	121	187		
3	NCTP Dadri	840.00	1.12.1995	59	161	220		31248.00	58	164	222		
4	Farrakka STPS	1600.00	1.7.1996	51	124	175		49886.00	48	121	170		
5	Tanda TPS ¹	440.00	14.1.2000 (Date of Take over)	55	162	217		15200.00	55	185	241		
6	Badarpur TPS ³	705.00	1.4.1982	51	165	216		22091.00	50	192	242		
7	Kahalgaon STPS ¹	840.00	1.8.1996	69	137	206		36837.00	69	135	204		
8	Simhadri ¹	1000.00	1.3.2003	69	90	159		44530.00	69	93	162		
Lignite Based thermal generating Stations of NLC¹													
1	TPS-I	600.00	21.02.1970	49	133	182	171		49	133	182	171	
2	TPS-II Stage-I	630.00	23.04.1988	48	74	122			48	74	122		
3	TPS-II Stage-II	840.00	09.04.1994	75	101	176			75	101	176		
4	TPS-I (Expansion)	420.00	05.09.2003	86	134	221			86	134	221		

Contd....





Sl. No.	Name of the Generating Station	Installed Capacity	COD of the Station	Fixed charges	Energy Charges as in March 2005 ²	TOTAL	Weighted Average cost of generation	Annual Fixed Charges	Fixed charges	Energy Charges as in March 2006 ²	TOTAL	Weighted Average Cost of Generation
Years		2004-05					2005-06					
	Units	MW	paise/kWh	paise/kWh	paise/kWh	paise/kWh	Rs. Lakh	paise/kWh	paise/kWh	paise/kWh	paise/kWh	
Gas /Liquid Fuel Based Stations of NTPC and NEEPCO												
A. Using Natural Gas as Fuel												
1	Dadri CCGT	829.78	01.04.1997	34	93	127	152	19238.00	34	108	142	167
2	Faridabad	431.00	01.01.2001	65	88	152		18760.00	64	100	165	
3	Anta CCGT	419.33	01.03.1990	26	91	117		7506.00	26	104	130	
4	Auraiya GPS	663.36	01.12.1990	31	94	125		11139.00	25	111	136	
5	Gandhar GPS ¹	657.39	01.11.1995	107	99	206		47893.00	107	132	239	
6	Kawas GPS ¹	656.20	01.09.1993	57	96	153		25341.00	57	109	166	
7	Agartala GPS ¹	84.00	01.08.1998	118	84	202			118	84	202	
8	Assam GPS ¹	291.00	01.04.1999	146	51	197			146	51	197	
B. Using Liquid Fuel (Naphtha/HSD) as Fuel												
1	Dadri CCGT	829.78	01.04.1997	34	583	617	536	19238.00	34	671	706	700
2	Faridabad	431.00	01.01.2001	65	467	531		18760.00	64	629	693	
3	Anta CCGT	419.33	01.03.1990	26	460	486		7506.00	26	664	690	
4	Auraiya GPS	663.36	01.12.1990	31	461	492		11139.00	25	631	656	
5	Kayamkulam CCGT	359.58	01.03.2000	85	400	485		20702.00	85	663	748	
6	Kawas GPS ¹	656.20	01.09.1993	57	485	541		25341.00	57	663	720	
Note: ¹ Based on Annual Capacity Charges as per tariff order for the period 2003-04 charged provisionally. ² Energy charges as in March 2005 and March 2006 respectively. ³ Energy Charges in 2004-05 for Badarpur is as on 1.4.2004. ⁴ Based on Provisional Annual Capacity charge.												

Annual Fixed Charges of Hydro Power Stations

Sl. No.	Name of the Generating Station	Installed Capacity	CERC approved Annual Fixed Charges for 2001-04 (Previous Terms & Conditions of Tariff) in paise/kwh corresponding to Annual Design Energy					CERC approved Annual Fixed Charges for 2004-09 (New Terms & Conditions of Tariff with improved norms) in paise/kwh corresponding to Annual Design Energy						
			Pet. No.	Date of Order	2001-02	2002-03	2003-04	Pet.No.	Date of Order	2004-05	2005-06	2006-07	2007-08	2008-09
Units		MW												
HYDRO STATIONS OF NHPC														
1	Chamera stg-I	540.00	60/2001	23.02.05	195.89	153.42	145.26	39/05	09.05.06	135.45	127.76	129.50	131.31	133.20
2	Salal	690.00	64/2001	29.10.04	64.36	64.77	66.39	197/04	09.05.06	69.18	63.53	63.31	64.54	65.82
3	Uri	480.00	61/2001	10.3.05	258.25	239.66	229.39	47/05	09.05.06	198.66	174.84	208.63	137.43	121.87
4	Baira Siul	198.00	65/2001	1.11.02	64.54	66.61	68.81	158/04	09.05.06	80.39	71.37	73.31	75.32	77.41
5	Tanakpur	94.20	62/2001	7.02.05	120.40	113.92	115.09	30/05	09.05.06	119.66	119.85	120.55	115.65	118.28
6	Rangit	60.00	121/2005	29.10.04	308.75	320.88	288.51	175/04	09.05.06	247.89	169.37	178.30	155.32	156.78
7	Loktak	105.00	50/2001	1.11.02	93.13	99.11	102.74			Yet to be approved				
8	Chamera-II \$	300.00	185/2004	15.09.05	-	-	-	185/04	09.05.06	196.93	219.58	255.78	259.54	251.04
HYDRO STATIONS OF NEEPCO														
1	Kopili Stage -I	200.00	36/2003	16.08.05	63.86	64.02	60.69			Petition yet to be filed				
2	Khandong	50.00	36/2003	16.08.05	77.37	78.14	79.25			do				
3	Ranganadi*	305.00	87/2001	11.04.02	-	128.12	128.50			do				
4	Doyang*	75.00	91/2002	6.10.03	210.00	220.50	231.50	62/2005	31.10.05	243.10	255.20			
HYDRO STATIONS OF SJVNL														
1	Nathpa Jhakri*	1500						184/2004	17.6.05	235.00	235.00	235.00		

NOTE : (*) Tariff provisional
 (\$) Commissioned during 2003-04



Comparison of Transmission Tariff for the period 2001-2004 and 2004-2009 awarded by CERC for some Typical Transmission Schemes



Sl. No.	Name of Transmission System	CERC approved Transmission Charges for 2001-04 [Previous Terms & Conditions of Tariff]						CERC approved Transmission Charges for 2004-09 [New Terms & Conditions of Tariff]					
		Pet. No.	Data of order	2001-02	2002-03	2003-04	Pet. No.	Data of order	2004-05	2005-06	2006-07	2007-08	2008-09
				(Rs Lakh)	(Rs Lakh)	(Rs Lakh)			(Rs Lakh)				
1	Kahalgaon Transmission System in ER	25/2002	17.2.2004	2961.75	2952.09	2672.34	127/2004	14.12.2005	2162.97	2190.18	2218.99	2247.72	2279.20
2	Talcher Transmission System in ER	17/2002	6.8.2003	2112.20	1978.27	1889.61	125/2004	2.2.2006	1281.29	1291.89	1303.16	1314.32	1326.66
3	400 kV D/C Ramagundam-Chandrapur transmission system in SR & WR	9/2002	30.6.2003	753.20	760.28	699.59	138/2004	20.12.2005	580.01	588.54	597.63	606.57	616.52
4	RAPP-B Transmission System in NR	50/2002	18.5.2004	2403.39	1416.87	1535.49	77/2004	18.1.2006	1279.82	1254.35	1217.15	1181.84	1055.91
5	Singrauli Transmission System in NR	13/2002	31.7.2003	3492.49	3198.77	3297.70	102/2004	20.11.2005	2571.15	2619.16	2670.59	2720.58	2776.88
6	Vindhyachal Stage-II Transmission System in WR	72/2002	6.8.2003	8679.78	8751.94	10318.81	73/2004	14.2.2006	7089.04	7360.66	8092.60	8819.25	8234.76
7	Anta Transmission System in NR	6/2002	31.7.2003	1164.36	1224.90	1165.91	98/2004	15.12.2005	845.62	859.81	875.20	889.80	906.68
8	Farakka Transmission System in ER	12/2002	4.8.2003	4824.72	4709.04	4786.55	126/2004	5.1.2006	3780.22	3788.23	3798.68	3818.98	3472.96
9	315 MVA ICT-III at Nagarjunsagar S/S in SR	41/2002	25.6.2003	131.44	132.50	133.62	133/2004	4.1.2006	116.40	116.83	117.30	117.82	118.40
10	Vindhyachal Stage-I Transmission System in WR	47/2002	18.7.2003	3274.35	3144.62	2864.92	111/2004	14.12.2005	2629.74	2665.45	2703.81	2741.00	2783.05
11	Baira Siul Transmission System in NR	22/2002	5.8.2003	174.48	182.26	190.50	101/2004	27.2.2006	144.75	148.92	153.38	157.73	162.60
12	Moga-Hissar-Bhiwani Transmission System in NR	44/2002	25.3.2004	2618.87	2449.49	2412.18	106/2004	27.3.2006	2068.17	2066.21	2065.49	2064.93	2072.56
13	Auraiya GPS Transmission System in NR	8/2002	31.7.2003	1613.99	1683.00	1546.08	105/2004	12.12.2005	1252.31	1268.22	1285.32	1301.84	1320.57
14	Kakrapar Transmission System in WR	46/2002	16.7.2003	779.03	674.05	688.55	115/2004	19.10.2005	681.76	693.61	706.23	718.65	732.44
15	Central Transmission Project-I in SR	7/2002	30.6.2003	3657.33	3674.27	3309.15	135/2004	14.12.2005	2857.95	2894.61	2933.5	2972.14	3014.67