

ANNUAL
REPORT
1991-92



POWER GRID CORPORATION
OF INDIA LIMITED



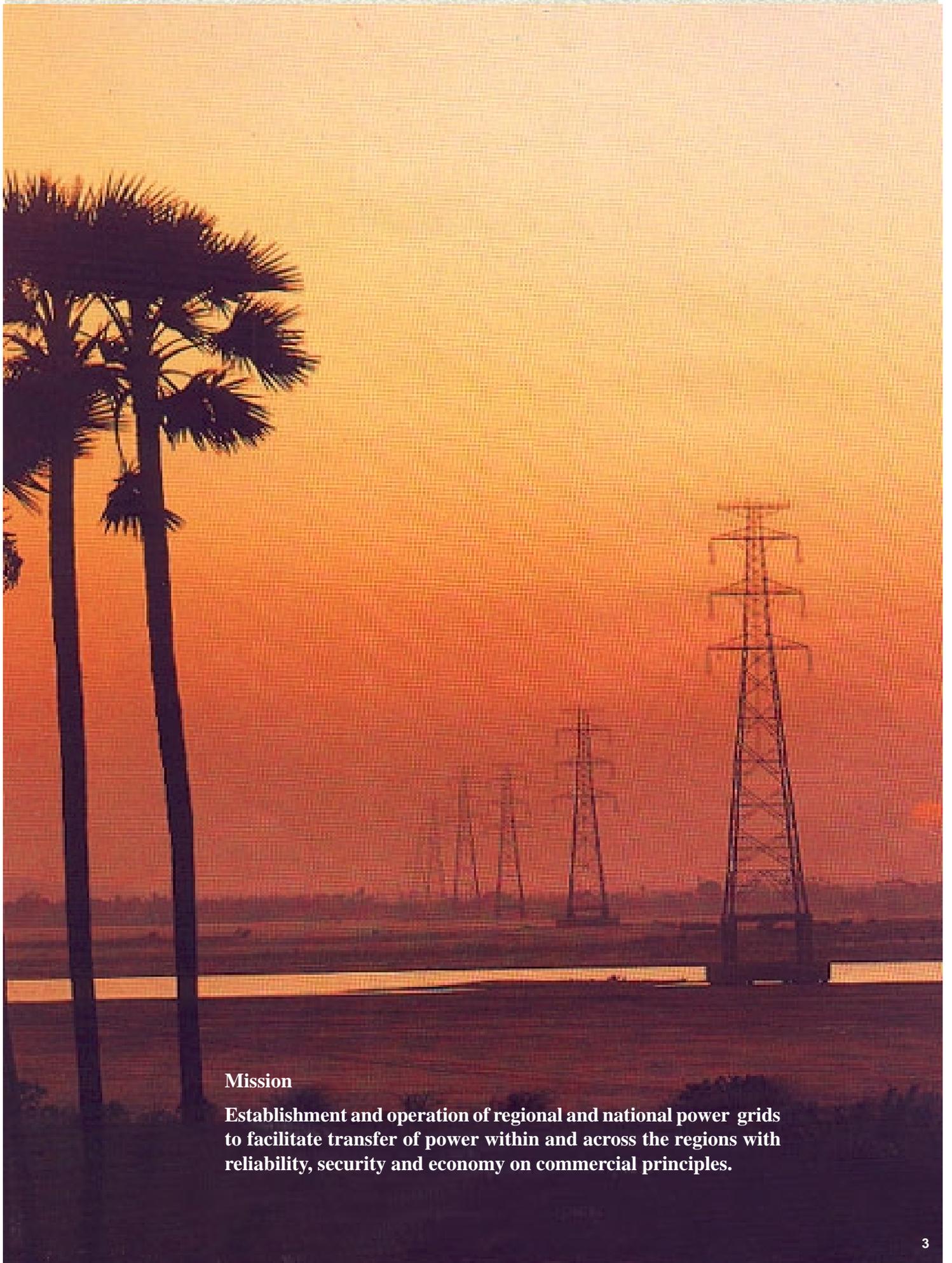
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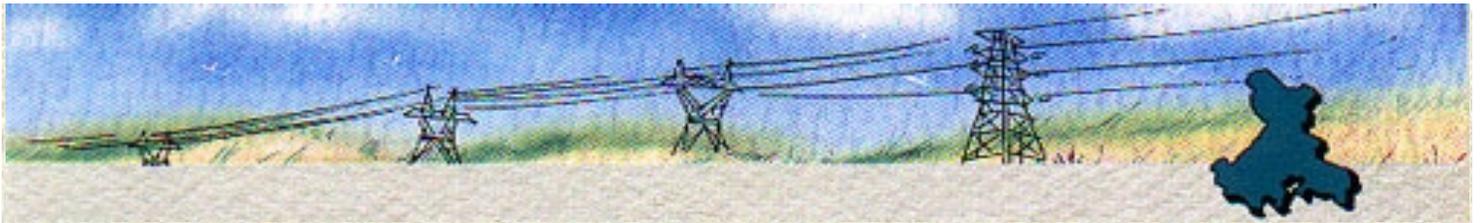


POWER GRID CORPORATION OF INDIA LIMITED



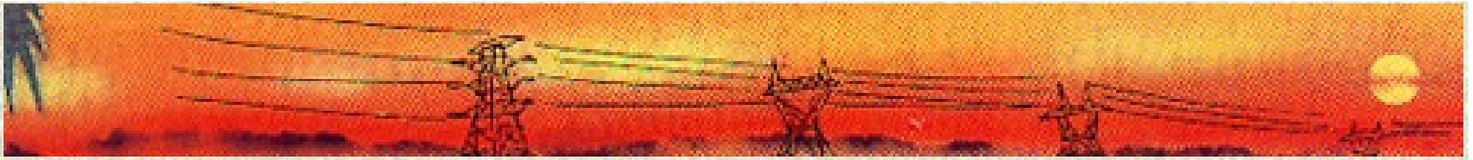
Mission

Establishment and operation of regional and national power grids to facilitate transfer of power within and across the regions with reliability, security and economy on commercial principles.

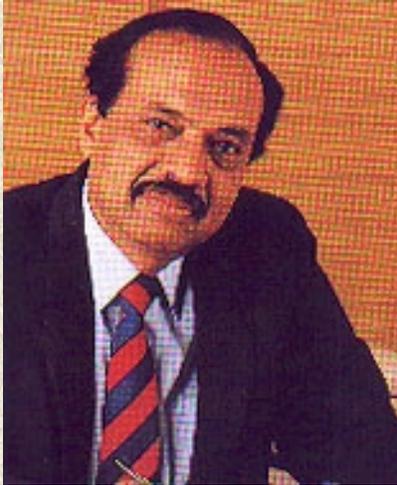


Highlights

Sl.No.	Description	Commissioned on
1.	400 K V Bhopal First Bay at Itarsi S/S	30.8.91
2.	Farakka - Biharshariff 400 K V D/C Line	7.9.91
3.	Biharshariff 400 K V/S/S	7.9.91
4.	ICT-III at Mandola S/S	31.10.91
5.	63 M V A R Bus Reactor at Gooty S/S	1.11.91
6.	400 K V Bhopal 2nd Bay at Itarsi SYS	25.11.91
7.	50 M V A R Bus Reactor at Nagarjunasagar	5.12.91
8.	63 M V A R Bus Reactor at Bangalore	13.12.91
9.	Ramagundam - Khammam 400 K V S/C Line	27.12.91
10.	Agra-Ballabharh 400 K V S/C Line	6.1.92
11.	Khammam-Vijaywada 400 KV S/C	20.3.92
12.	63 MVAR Bus Reactor at Vijaywada S/S	27.3.92
13.	Tanakpur-Bareilly 220 KV D/C	27.3.92
14.	50 MVAR Capacity Bus reactor at Mandola Substation.	24.4.92
15.	Farakka-Durgapur 400 KV Line	11.4.92
16.	Dedicated Speech Line (DOT) between Biharshariff Substation and IOCC, Patna	1.5.92
17.	Static VAR Compensator-I at Kanpur	13.10.92
18.	Static VAR Compensator II at Kanpur	13.10.92
19.	Dadri-Panipat-Malerkotla Line	1.7.92
20.	315 MVA Transformer at Malerkotla Substation	1.7.92
21.	Farakka - Durgapur (II) S/C	9.7.92
22.	315 MVA Transformer at Biharshariff	14.7.92
23.	240 MVA Transformer at Moga	30.7.92
24.	ICT-IV Mandola	20.8.92
25.	Kakrapar-Vav 220 KV	31.8.92
26.	Kakrapar-Bharuch 220 KV	1.9.92
27.	Durgapur (Extn.)	28.10.92



BOARD OF DIRECTORS



Shri R. K. Narayan
Chairman & Managing Director

Sh. Y.P. Gambhir
(Till 2.12.91)

Sh. P. S. Bami
(Till. 30.4.92)

Company Secretary
Shri P. D. Tuteja

Statutory Auditors

Prem Gupta & Company, Chartered Accountant

Principal Bankers

Canara Bank, State Bank of Hyderabad,
Oriental Bank of Commerce, Indian Bank,
State Bank of India, Central Bank of India,
Punjab National Bank, Indian Overseas Bank,
Union Bank of India

Registered Office

10th Floor, Hemkunt Chambers,
89 Nehru Place, New Delhi - 110 019

(This report was adopted at the Third Annual General Meeting of the Company held on 30th September 1992)



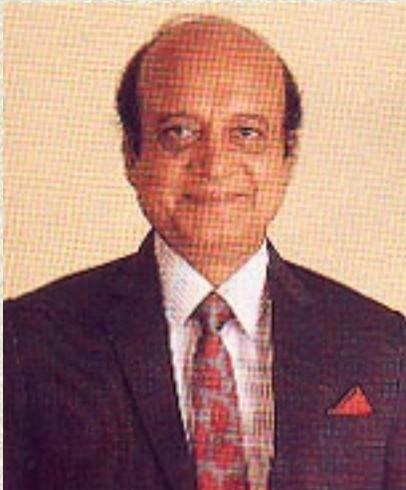
Shri S. C. Parakh
Director (Project)
(from 15.12.91)



Shri T. V. Subramanian
Director (Finance)



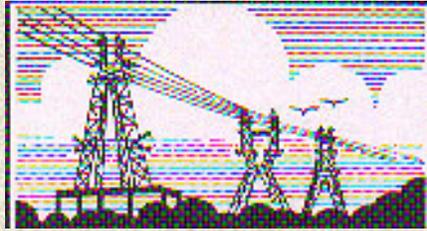
Shri T. Sethumadhavan



Shri H. C. Mital
(from 3.12.91)



Shri A. H. Jung



**CHAIRMAN'S STATEMENT FOR
3RD AGM ON 30.9.1992**

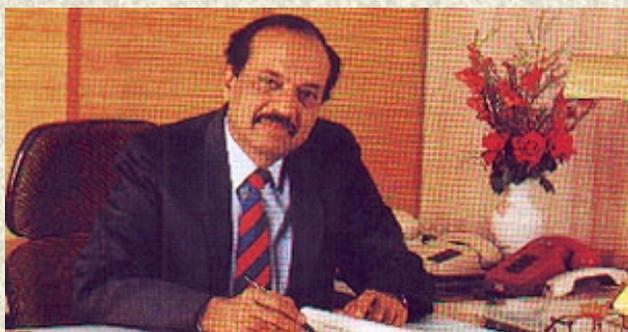


Friends,

I take pleasure in welcoming you to the 3rd Annual General Meeting of NPTC. Your Company is now in the third year of a long term process designed to accomplish its vision of formation of National Power Grid through uncompromising excellence and is moving well on the continuous journey to make this vision a reality.

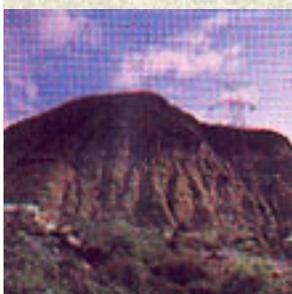


POWER GRID CORPORATION OF INDIA LIMITED



Performance during the year under review

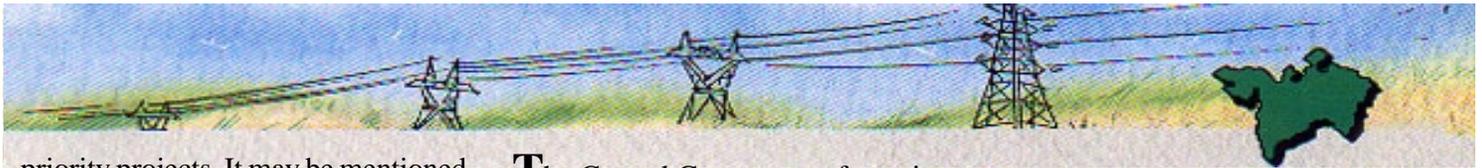
As you are aware, your company has successfully taken over the management of transmission system of the central power generating agencies namely NTPC, NHPC, NEEPCO and NPC. Steps are being taken up for taking over the transmission works of Neyveli Lignite Corporation (NLC) and Tehri Hydro Development Corporation (THDC). Presently, your company is operating 19,979 Circuit Kms of transmission lines consisting of 14,324 Circuit Kms 400 KV, 4,834 Circuit Kms of 220 KV, 812 Circuit Kms of 132 KV AC Transmission Lines and 35 Nos. of substations with a total transformation capacity of 8,875 MVA. The availability factor of the transmission lines since they were taken over have been maintained at a consistently very high level of 98.4%. The construction performance of the new transmission lines have been exceedingly well. Till date, we have commissioned 1,275 Circuit Kms of transmission lines, since our taking over of the transmission works from NTPC in August, 1991 and NHPC & NEEPCO in November, 1991 and have also surpassed the MOU targets fixed for these organisations for the year 1991-92. We have also been able to successfully commission ICTs and Bus Reactors at various Substations.



The de-jure transfer of ownership of transmission assets from the Central Generating Organisations, however, could not progress satisfactorily primarily because of delay in disposition of the writ petition filed in Delhi High Court and the other high courts in India by NTPC Executives Association and Staff Association against the decision of transfer of NTPC employees to NPTC. This petition was dismissed in Delhi High Court in May, 1992 in favour of NPTC. In order to expedite the already delayed de-jure transfer of assets, it has been decided to effect transfer by operation of law. All the necessary steps to that effect have been taken and the transfer of ownership to NTPC is expected to be achieved shortly.

Absence of any assets owned by the Corporation has greatly affected the financial performance of the Corporation. However, the Corporation was able to raise Rs. 200 crores bonds during the year under review. The Corporation has incurred marginal loss of Rs. 1.82 Crores, as the revenue receipts from the transferor organization towards operation & maintenance charges were inadequate to cover the actual expenses which were incurred by NPTC based on the accepted norms.

Response from the international financial institutions like World Bank, Asian Development Bank, OECF Japan etc. to mobilise resources was quite encouraging. In fact the World Bank based on their appraisal of NPTC have fully supported the creation of this young organization and has also in principle agreed to provide loan assistance amounting to US \$ 300 million to fund some of its



priority projects. It may be mentioned that financial assistance has already been made available by OECF Japan to fund our transmission systems associated with Gandhar Gas Project as also the Kathalguri Gas Project. Positive response have already been received from Asian Development Bank, who have agreed to provide grant of US \$ 600,000 for detailed tariff and regulatory studies apart from indicating its interest for funding some important projects including Load Despatch & Communication facilities in the North Eastern Region.

The Central Government from time to time has initiated structural changes in the management and operation of Power Sector. These changes include creation of various agencies for development of multipurpose projects like the Damodar Valley Corporation, Bhakra Beas Management Board etc., establishment of Rural Electrification Corporation, a financial institution dedicated to the development of rural electrification in India, creation of Regional Electricity Boards, formation of central power generating



These accomplishments only indicate that NPTC during its brief tenure has firmly established itself and is fully poised to meet the challenges entrusted to it.

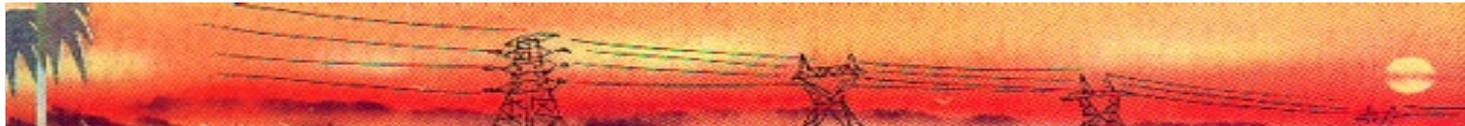
The present power scenario

The present power scenario is marked by energy shortages, poor financial performance of most of the electric utilities, unremunerative electricity tariffs particularly for the agricultural sector, poor utilization of power generating resources, severe resource constraints for future expansions, highly fluctuating voltage and frequency conditions leading to frequent grid failures. Overall, the quality and reliability of power supply to the ultimate consumer is very poor.

companies such as NTPC, NHPC, and NPC, and establishment of Power Finance Corporation, a financial institution to supplement the financial resources of various power utilities. Keeping in view the importance of power in the developmental process of the economy and the urgent need to bridge the gap between power demand and supply, the Government of India has now also invited private participation in power generation.

As you are aware, the formation of NPTC is the latest in the series of structural reforms initiated by the Central Government to maximize benefits from the electricity sector. The formation of NPTC provides distinct advantages for the further development of the power sector as it will be the single agency





responsible for establishment and operation of regional and national power grids to facilitate transfer of power within and across the regions with reliability, security and economy, based on sound commercial principles.

Future Directions

Keeping its mission in view, NPTC has started functioning in a systematic manner to achieve excellence in its organizational functioning. In the first phase transmission assets of various Central/Centre-State joint venture organizations are being taken over by NPTC for its integrated operation and wheeling of power from participating power stations to the beneficiary States. In the second phase, NPTC proposes to operate the Regional Load Despatch Centres and related operational functions for regional and inter-state integrated grid operation. In the third phase, NPTC proposes to create power pools so as to ensure utilization of surplus power in the deficit regions.

In order to facilitate formation of a National Power Grid, NPTC proposes to establish inter-regional links to connect the various regions in asynchronous mode keeping in view the large frequency and voltage fluctuations experienced in various regional grids. This inter-linking of

various regions will lead to considerable economies in power generation as also the increased power availability. The findings of the study by the World Bank on “Long Term Issues in Indian Power Sector” indicates that inter-linking of regional grids could reduce the unserved energy of demand by 50% and accrue benefits of Rs. 1100 crores per year. Studies conducted by CEA also reveal that inter-regional links will save about 10,000 MW power generation capacities by the end of the 10th Plan.

Expansion programme envisaged in future in our country, demands basic infrastructure facilities like Load Despatch & Communication facilities for data acquisition, real time monitoring and control of the grid system. To a certain level, such facilities exist today in Western and Eastern Regions only. The other regions in the country do not have any such facilities for Load Despatch and Communication. Considering its importance for the smooth operation of Regional and National Power Grids, NPTC is envisaging to undertake the implementation of Unified Load Despatch and Communication facilities in all the Regions in the Country.

In order to have effective improvement in the voltage levels for transmission of energy, the





installation of Static VAR Compensators (SVC) and Reactors at strategic locations are being taken up by NPTC to bring about improvement in the quality of supply as well as reducing system losses.

The installation of the Time of Day Meters (TOD) is one of the most important steps envisaged by NPTC towards effective tariff management. The installation of TOD meters will facilitate recording the power flow through the system at different points of time. This information will be extremely useful to help rationalize the tariff structure which in turn will ensure economic operation of the available generating capacities and also improve the grid discipline. NPTC has already taken necessary steps in this regard for the procurement/development of vendors for the same.

Abundance of rationalized tariff structure has severely hampered the power transfer both inter-region as well as intra-region. It is one of the major impediments towards growth of India Power Sector. NPTC from the beginning has laid emphasis on rationalization of the tariff structure. Towards this, NPTC has strongly advocated the three tier tariff structure and NPTC's views have already been discussed with government agencies and State Electricity Boards. The

response received so far from these agencies have been quite encouraging. NPTC expects to rationalize this structure which will greatly facilitate the economic operation of the available generating capacities and also ensure better grid management. Government's efforts to establish tariff commission is also expected to tackle the problems.

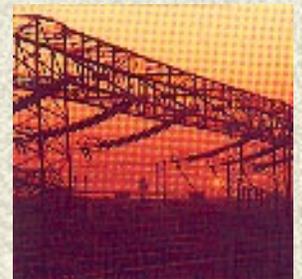
Upgradation of existing technology and adoption of new technology in the area of EHV transmission and grid operation will remain the thrust area for NPTC.

Consultancy

In view of the in-house availability of expertise, NPTC has established its Consultancy Wing to provide Consultancy services in the transmission and distribution area. NPTC has already been enlisted as consultant with all the major financial institutions and submitted offers to prospective clients within India and overseas.

Organisation and Development

As you are aware NPTC has inherited the transmission assets and the associated manpower from various organisations each having its own organizational culture as well as construction, operation &





maintenance practices. Thus one of the challenges NPTC faces today is to transform its manpower into a well-knit and cohesive workforce. Number of in-house and outside workshops, seminars etc. has been organized to evolve organizational strategies most suitable to implement its future programmes in an effective manner.

Proper institutional development has been taken up as one of the priority areas and consultancy study with the help of international consultants is also being taken up to decide the most suitable organizational structure. NPTC is having three tier organizational structure starting from Group Head Quarters at various locations responsible for all the activities relating to construction, operation & maintenance of transmission lines and substations. Their activities are proposed to be supervised by the Divisional Headquarters located at strategic locations in the regions. These Divisional Headquarters report to the Regional Headquarters.



NPTC's 8th Plan

NPTC has submitted to the Govt. its 8th Plan programme for establishment of the new projects as well as completion of on going projects. This proposal was discussed with all the Government agencies and based on these deliberations, NPTC submitted its revised minimum need based programme for the 8th Plan amounting to Rs. 7924 Crores. This proposal was also discussed with the Dy. Chairman Planning Commission wherein inadequacies in the proposed Plan allocation as proposed by the Govt. were highlighted and Planning

Commission agreed to enhance the allocation for NPTC by about Rs. 3000 crores during their midterm review.

Change of name for NPTC

Keeping the Organizational Mission in view, it has been proposed to change the name of the Corporation from National Power Transmission Corporation to Power Grid Corporation of India Limited. Notification on the same will be issued after due approval from the Registrar of Companies.

Conclusion

With the formation of NPTC, Indian Power Sector can look forward to efficient and economic grid operation and improvement in quality and reliability of power.

I am confident that we will be able to correct the existing imbalances between growth of generating capacities and related development of transmission system.

In the end I would like to emphasize for a service oriented organization like ours, only dedicated and all out efforts from all of us can fulfil the mission of Establishment and Operation of Regional and National Power Grids to facilitate transfer of power within and across the region with reliability, security and economy on sound commercial principles.

(R. K. Narayan)

**Chairman & Managing Director
New Delhi
30th September, 1992**



DIRECTOR'S REPORT

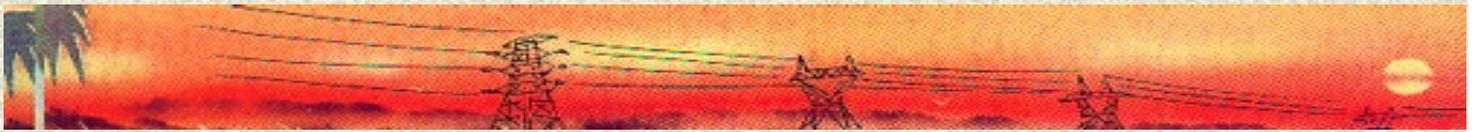


To the Members,

I have much pleasure in presenting to you on behalf of the Board of Directors, the Third Annual Report on the operations of National Power Transmission Corporation Ltd., together with the Audited Statements of Accounts for the year 1991-92.



POWER GRID CORPORATION OF INDIA LIMITED



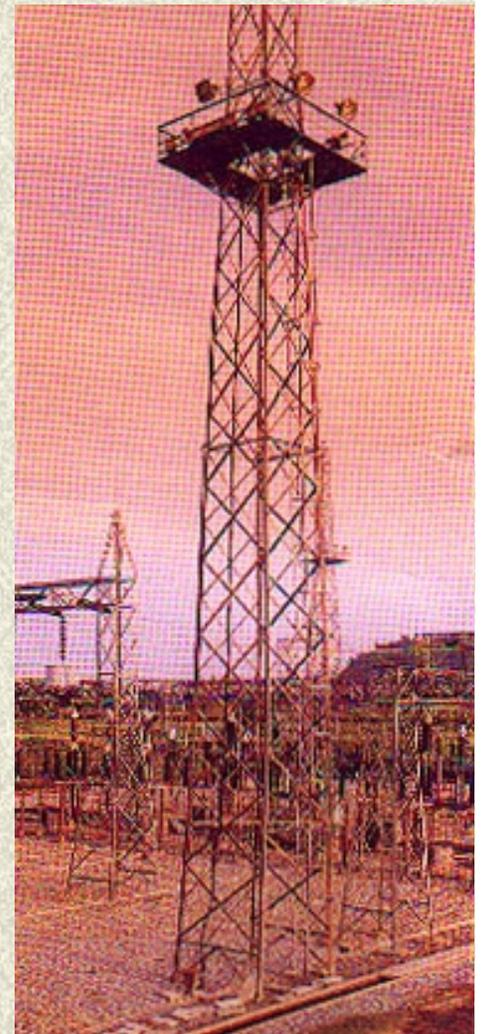
NPTC : An Amalgamating Force

NPTC after its initial transfer stage today stands as an amalgamating force ready to take a giant leap as a partner in the development of the Power Sector and the Nation. With the pooling and merging of expertise in the area of bulk power transmission from different organizations and induction of new talents, NPTC has emerged as a single entity working towards the ultimate goal of formation and establishment of an efficient “National Power Grid”.

Transfer of Transmission Related Assets

In accordance with the Government decision of transferring the transmission systems from various Central/Centre-State joint venture organizations, and in pursuance to the Government of India Orders Nos. 1/12/91-NPTC (Vol. II) dated 12/7/91, No. 1/13/91-NPTC dated 1/11/91 and No. 1/11/91-NPTC dated 1/11/91, the transmission line business of NTPC, NEEPCO and NHPC respectively, was taken over by NPTC, on management basis, with effect from 16th August, 1991, 14th November, 1991 and 19th November, 1991 respectively, along with associated manpower, pending completion of the necessary legal formalities for the eventual de-jure transfer. The transmission system of Nuclear Power Corporation (NPC) was taken by NPTC w.e.f. 28/8/91. Construction activities for the single transmission project under NPC, i.e. Kakrapar Transmission System, presently being carried out by Gujarat Electricity Board on deposit work basis, is now being owned and looked after by NPTC. In case of Nathpa Jhakri

Power Corporation (NJPC), no separate agreement is required as their transmission work was being carried out by NHPC. For Tehri Hydroelectric Development Corporation (THDC), a Centre-State joint venture with UP Government, transfer of the associated transmission system to NPTC is expected soon as the consent of the Uttar Pradesh Government has been received. The transmission line assets of Damodar Valley Corporation (DVC) and Bhakra Beas Management Board (BBMB) are to be transferred after obtaining the concurrence of the concerned State Governments, which is in the process of being obtained. NPTC is now operating and



maintaining various existing transmission lines and sub-stations of NTPC, NEEPCO, NHPC & NPC as per the grid requirements.

Settlement of the Court Cases

As you are aware, NTPC Staff Unions/Associations had filed writ petitions in the various High Courts, against the order of transfer. On the petition filed by NPTC along with Government of India and others, the Supreme Court transferred all the petitions to the Delhi High Court. I am happy to inform you, that based on the detailed deliberations, the Delhi High Court has dismissed these writ petitions, in favour of NPTC.

Financial Performance

The Govt. orders for transfer of transmission line works of NTPC, NHPC and NEEPCO envisage that ownership of the transmission system will be transferred to NPTC after completion of the requisite formalities by 30th September 1991, 31st December and 31st December, 1991 respectively. However, due to delay in completion of the formalities, ownership continues to be with NTPC, NHPC and NEEPCO who were doing the billing and collection upto 31st March, 1992. As a result, NPTC had to defray the expenses out of the Operation and Maintenance fee included as a component in the transmission line tariff which is generally based on 1% of the capital cost. As a result, NPTC had incurred a loss of Rs. 1.82 Crores as the Operation & Maintenance Fee from NTPC is not adequate to cover the actual expenses. It is now expected that ownership will be transferred from 1st April, 1992 and audited

accounts as on 31st March, 1992 will be the base for determining the consideration payable to NTPC, NHPC and NEEPCO.

Budget

For the year 1991-92, NPTC has a sanctioned budget of Rs. 6 Crores which was later on enhanced by Government of India by Rs. 50 Crores. This budget was fully utilised for the year 1991-92. For 1992-93, the budget for NPTC is of the order of Rs. 574.11 Crores, including IDA budget of Rs. 120 Crores shown in the name of NTPC and NHPC for funding transmission line works under the management of NPTC. The current budget is to be funded as under :

	(Rs. Crores)
1. Internal Resources	81.00
2. Bonds	250.00
3. External Commercial Borrowings	100.00
4. Govt. budgetary support against IDA, OECF funding	120.00
5. Govt. budgetary support (including NEC budget of Rs. 13.11 Crores)	<u>23.11</u>
Total	<u>574.11</u>

The current year budget is expected to be utilised by us fully.

Operational Performance

With the take over of the transmission lines and associated substations from NTPC, NHPC, NEEPCO and NPC, the total length of transmission lines under operation with NPTC as on 31.3.92 was 18,169 ckt. kms. consisting of 13,733 ckt. kms. of 400 KV, 3,696 ckt. kms. of 220 KV, 700 ckt. kms. of 132 KV





A/C transmission lines and 34 Nos. of sub-stations with a total transformation capacity of 8,245 MVA.

The operational performance of the transmission system being managed by NPTC has been impressive in all the regions. The overall average availability of lines during the last year, for the period under operation with NPTC was 98.98%, 98.06%, 96.52%, 98.92% and 99.46% in the Northern, Eastern, North-Eastern, Southern and Western Regions respectively.

Construction Performance

On the construction front, your company was able to perform exceedingly well. During the year, NPTC has commissioned back charged Ramagundam-Khammam, Khammam-Vijayawada, Vijaywada-Gajuwaka, Agra-Ballabgarh, Chamera-Moga and Farakka-Biharshariff (D/C) 440 KV lines and Tanakpur-Bareilly I (D/C) 220 KV line. The total length of the transmission lines commissioned during the year was 2,105 ckt. kms. consisting of 1,893 ckt. kms. of 400 KV lines and 212 ckt. kms. of 220 KV lines.

We have also been able to successfully commission ICTs and Bus Reactors of various capacities at Mandola, Gooty, Vijayawada, Nagarjunsagar, Itarasi and Bangalore Substations.

MOU Performance

As NPTC took over the transmission works of the other organizations during the middle of the year, it has

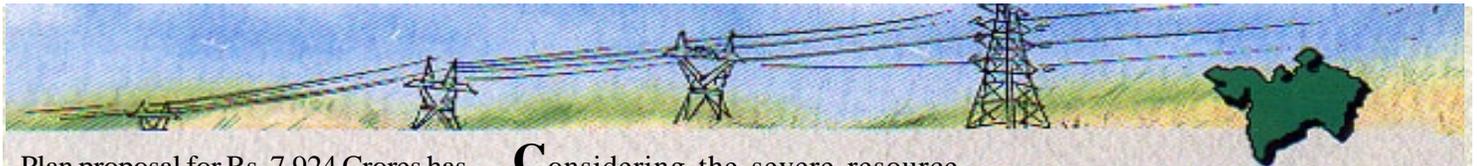
not been possible to enter into a separate Memorandum of Understanding (MOU) with the Government on behalf of NPTC, during 1991-92. However, NPTC has requested Government of India to consider it as an Organization which will sign the MOU with the Government of India in future. Towards this end, a draft MOU, for the year 1992-93, has been prepared and sent to the Government for its consideration. This MOU has been discussed at the various levels in the government including the Committee of Adhoc Task Force under the Department of Public Enterprises. Based on the discussions at the various Government levels, the MOU has been finalised and the final draft submitted to the Ministry of Power for approval.

As far as NPTC performance vis-a-vis the targets set in the MOUs of the other organizations for the transmission lines is concerned, NPTC though inherited a very diverse culture of Project and Contract Management coupled with severe resource constraints, have been able to surpass the MOU targets. As against a stringing target of 1,358 ckt. kms., we have been able to achieve 1,534 ckt. kms.

8th Plan Programme

For the 8th Five Year Plan (1992-97) NPTC had submitted total fund requirement of Rs. 17,212 Crores. However, based on detailed discussions in Department of Power, Central Electricity Authority and Planning Commission, and also keeping in view the severe resource crunch, a minimum need based 8th





Plan proposal for Rs. 7,924 Crores has been submitted. It is expected that a total allocation of about Rs. 7,592 Crores is likely to be made available to NPTC for the 8th Plan.

International Fund Mobilisation

During the year, your company was appraised by the various International Financial Institutions for consideration of transfer of various loans from Organization like NTPC, NHPC and NEEPCO to NPTC for the existing and on-going transmission projects. I am pleased to inform you

Considering the severe resource constraints in the country and also keeping in view the ambitious expansion programme for establishment of new transmission lines, NPTC has concentrated its efforts in mobilizing international assistance from all the reputed International Financing Institutions like the World Bank, OECF of Japan, ADB etc.

A loan agreement of Japanese Yen 3.878 billion was signed in January, 1992, for the transmission system Project associated with Gandhar

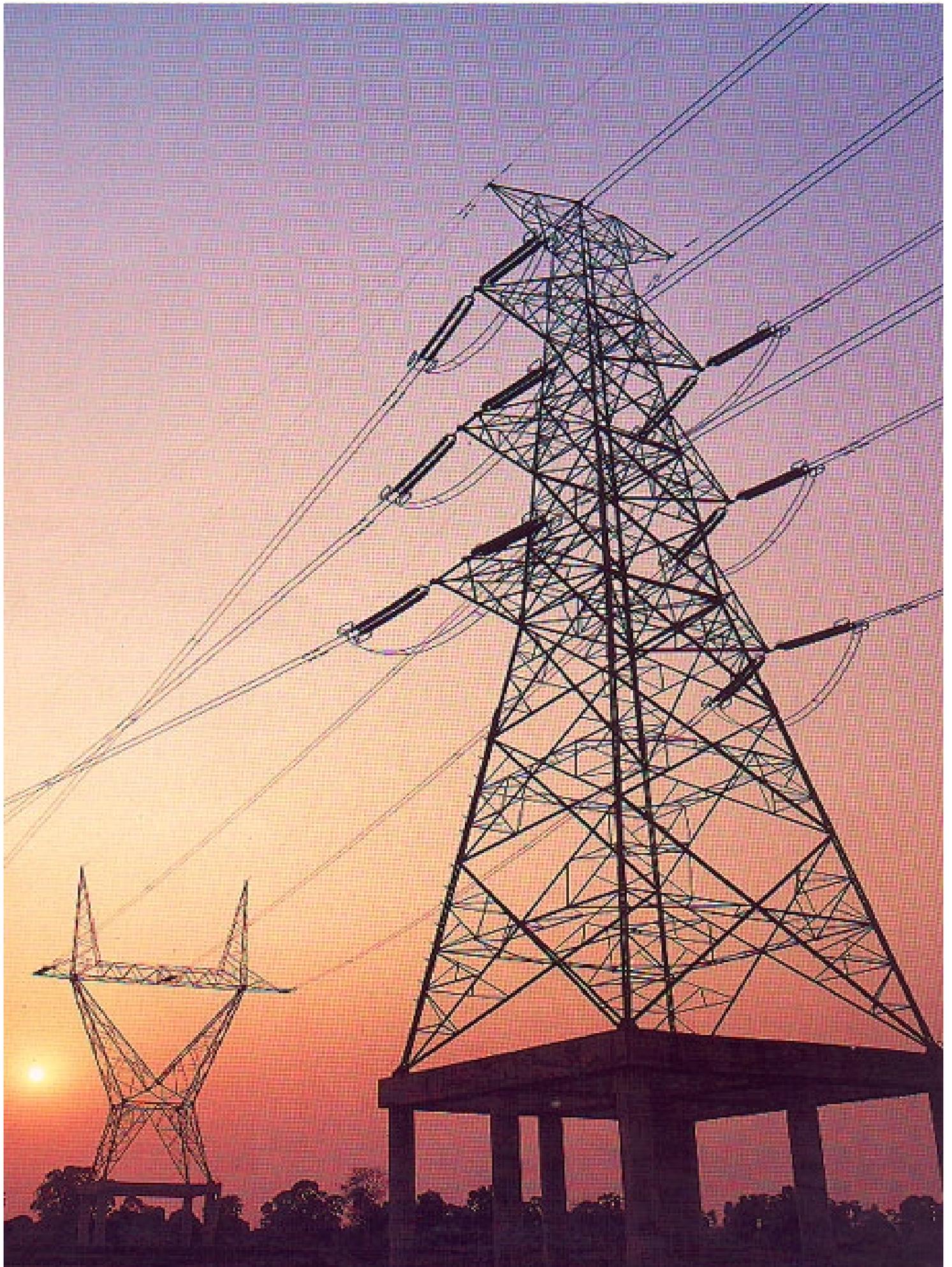


that all the International Financial Institutions like World Bank, OECF of Japan, IBJ of Japan, ADB etc. have found this new company to be financially viable, and have accordingly granted “in principle” approval for transfer of transmission system related loans from NTPC, NHPC and NEEPCO to NPTC pending finalisation of detailed modalities for modifications of loan agreements. In fact, the World Bank has made transfer of transmission assets to NPTC as a pre-condition for all future loans to the Power Sector in India. This is primarily because the World Bank is keen to ensure speedy implementation of this reorganization of the Indian Power Sector, for its overall future growth and efficient operations.

Combined Cycle Gas Based Power Project. This is the first tranche of loan for this project and more loans will be forthcoming for this project in the subsequent years as per the OECF method of project financing. The total OECF financeable portion of this project amounts to Japanese Yen 15.597 billion.

NPTC has also successfully initiated with ADB to provide possible financial assistance, as grant, to the tune of US \$ 6,00,000 for a detailed tariff study for NPTC. NPTC has also successfully initiated dialogue with ADB for possible financial assistance for implementation of some important transmission projects in the North-Eastern Region in Southern Assam, Mizoram, Arunachal Pradesh







and Tripura, as well as, establishment of North-Eastern Region Load Despatch & Communication Facilities. Based on detailed discussions and consultations, the World Bank has indicated its willingness to provide assistance to the extent of US \$ 300 million for a package of projects which includes financing of additional transmission system associated with Vindhyachal STPP Stage-I, Chandrapur HVDC back-to-back Project between Southern and Western Regions, and Southern Region Load Despatch and Communication project, to name only its important components.

Inter-Regional Links

We have achieved a milestone when the Southern and Western Regions were synchronized for the first time through 400 KV AC Ramagundam Chandrapur Double Circuit Transmission Line. This line is expected to significantly improve the power supply position in the southern and Western Region, as it will be possible to utilize night surplus power in the Western Region for the benefit of the Southern Region, thereby relieving pressure on Hydro-based generation in the Southern Region, which can be more fruitfully utilized to meet the peak load requirements.

Progress for obtaining investment approval for the other inter regional links is also satisfactory. HVDC back-to-back project at Chandrapur is in the final stages of approval, having been cleared by PIB, is now awaiting cabinet approval. HVDC back-to-back project at Mau between Eastern & Northern Region has been techno-economically cleared by CEA and is expected to be put up to PIB shortly.

The Inter-regional HVDC link between Eastern & Southern Region between Jeypore & Gajuwaka has already been techno-economically cleared by CEA, and is expected to be considered by PIB shortly.

Unified Load Despatch And Communications

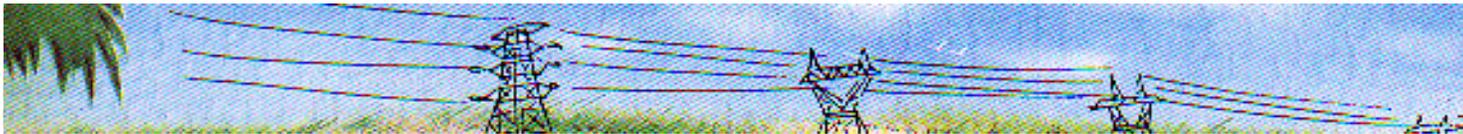
The Unified Load Despatch and Communication facilities are essential pre-requisite for efficient and coordinated operation of Regional, as well as, National Power Grids. In order to prepare a detailed action plan for the establishment of Regional & National Load Despatch and Communication facilities, a detailed study is being initiated with the assistance of the World Bank and ADB. The load Despatch Center in the Northern Region is already covered under partial financing of the World Bank under the Northern Region Transmission system (NRTS) Project, while the Southern Region load despatch and communication facilities is proposed to be funded under the proposed US \$ 300 million loan of the World Bank. For the North-Eastern Region, assistance is being sought from ADB.

The draft MOU for sharing of the cost for this Unified Load Despatch & Communication facilities is under preparation for circulation to the constituent beneficiary states of the Northern Southern & North-Eastern Region.

Consultancy

We have been able to gain significant ground in the potential





area of Consultancy. We are providing consultancy in different areas to Delhi Electric Supply Undertaking (DESU), Power Development Department of the Government of Jammu and Kashmir, Brahmaputra Board and Orissa State Electricity Board. We have also been entrusted by the Department of Power, Royal Government of Bhutan the work for Operation and Maintenance of 132 KV Salakati-Geylegphag line and 132 KV bays at Salakati and Geylegphag, and for studying and recommending modifications in their transmission & distribution system. We are discussing with the Electricity Department of Pondicherry for undertaking turnkey construction of transmission lines and substations for them.



NPTC has also initiated steps to register itself as Consultant with the various International Financing Agencies such as World Bank, ADB, African Development Bank etc.



A visit was also made to Middle East to discuss with Senior Officials the possible areas of cooperation for development of transmission system in their countries. Director (Projects) as a part of Government of India's mission also visited Australia for exploring possibilities to undertake consultancy works. We have also submitted our bids for consultancy to the Jordan Electricity Authority, Nepal Electricity Authority, Ministry of Electricity, Qatar and TNB Malaysia.

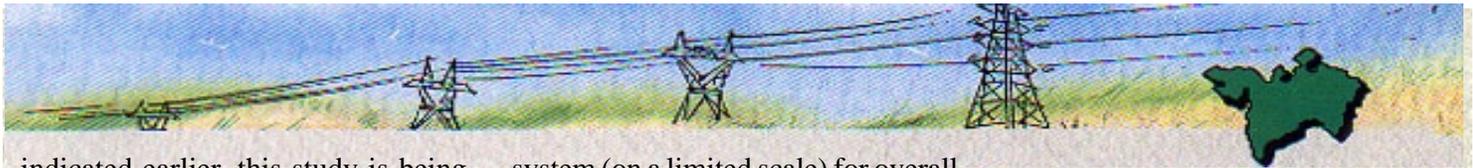
Tariff Structure

As a first step, we have initiated the process of signing of the MOUs regarding transmission charges with the various beneficiary states in the

different regions based on the existing principle of transmission tariff prevalent with other organizations like NTPC, NHPC etc. This is primarily to facilitate immediate billing activities being started once the transfer of transmission assets takes place from the various other organizations. Draft MOUs have already been sent to the various beneficiary states in all the regions. MOU with Madhya Pradesh SEB has already been signed and discussions with others are in progress. In the North-Eastern Region, subsequent to the signing of MOU for transfer of transmission assets from NEEPCO to NPTC w.e.f. 1/4/92, NPTC has already started billing the various constituent states in the North Eastern Region for the NPTC transmission services used by them. NPTC has also signed an agreement with Royal Government of Bhutan for purchase of power from Chukha.

Existing inter-utility tariff structure prevailing in the power sector is one of the primary impediments towards economic operation and healthy development of the power system in India. NPTC has, during the last year, carried forward its suggestions for a more rational and frequency based tariff structure which, if implemented, will bring desired discipline in the grid operations and also facilitate optimum utilisation of vital inter-regional AC and HVDC links, as well as merit order operation of country-wide generation resources.

Parallely, NPTC has initiated steps to carry out a detailed tariff study in order to evolve a system of bulk power and transmission tariff that is conducive for maximization of benefits from the power sector. As



indicated earlier, this study is being funded by an ADB grant.

New Projects

Sustained biased investment in Power Generation and neglect of Transmission system in our country has led to sub-optimal and uneconomic utilization of the power system. NPTC as a single transmission organization has the responsibility for realizing the vast potential our power system offers through economic exchange of power supply.

NPTC plans to take up various projects in the future to achieve these goals. Some of these projects include the Augmentation of Central Transmission System, Augmentation of Transmission System in Assam, Mizoram and Tripura, Transmission Systems of Vindhyachal-II, Rihand-II Faridabad, Yamunagar, North Karanpura, Vindhyachal Additional Transmission System, strengthening of the Northern Region Transmission System, etc.

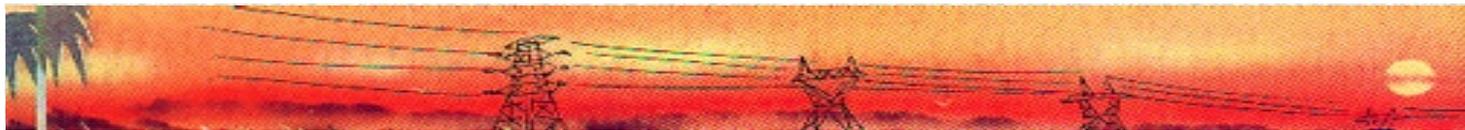
NPTC also plans to take up projects in the area of system improvement, and improvements in the distribution

system (on a limited scale) for overall benefit of the SEBs in particular and the country as a whole. Some of these will include Time of the Day (TOD) metering and Instrumentation. SVC, Additional Transformers and Reactors. Capacitor Installation, Survey and Investigation, Infrastructure Development and Training for Hotline and Bare Hand Maintenance.

Towards this end, NPTC has submitted detailed project proposals to the Government for investment approval which are in the various stages of discussions/approval. The major constraints faced in obtaining the investment approval (s) for these projects include constraints in fund availability, forest clearance and concurrence of the states to utilize and share the cost of these projects, during the operation phase.

As already indicated earlier, to ease the fund availability position, various steps have been initiated to raise additional funds from various sources, including enhanced funds from the International Financial Institutions, through supply linked credits and by raising money from the Indian money market.





In order to overcome the problem of forest clearance, NPTC has submitted a novel idea to the Government for the creation of a “Forest Bank”. Through this new process, we plan to carry out afforestation in advance by creation of a Forest Bank, and as and when a project is taken up for implementation, an area equivalent to the amount of forest likely to be used by the project will be debited to that project account, to nullify the impact of forest degradation due to that project.

Gandhar Gas Based Power Project (Capital cost-Rs. 203.81 Crores).

During the year NPTC also submitted three fresh project proposals namely i) Transmission system associated with Rana Pratap Atomic Power Project (RAPP-B), ii) Northern Eastern HVDC back-to-back link at Mau (2x250 MW), and iii) Contingency Schemes for transmission system associated with Dulhasti Hydro Electric Project. The



A detailed project justification and rigorous follow up with the State Electricity Boards is being carried out to obtain their concurrence for utilization and sharing of the cost of the various projects, before they are taken up for implementation.

last two schemes, namely Dulhasti HEP transmission system and Northern-Eastern HVDC back-to-back link at Mau are also been techno-economically cleared by the CEA. During the year, Transmission System Project associated with the Tehri Hydro Electric Complex has also been recommended for investment approval by the Public Investment Board.

Feasibility Report Submission and Investment Approval

In spite of NPTC being a new organization, it has made considerable progress in preparing/processing Feasibility Report for the new transmission projects. During the year, NPTC obtained investment approval for two transmission system projects namely, i) Transmission system associated with Koel Karo Hydro-electric Project (Capital Cost Rs. 45.99 Crores), and ii) Transmission System associated with

Studies For Institutional Development and Organizational Excellence

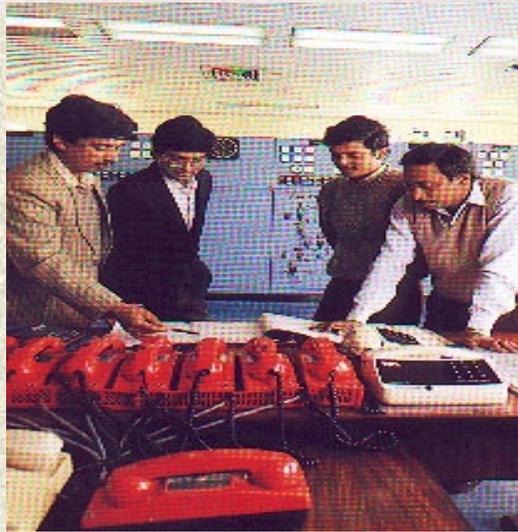
In order to streamline the functioning of the organization, a detailed study of the organizational restructuring was taken up during the year. Based on detailed discussions at various levels, a detailed proposal for reorganization of regional, as well as,



the Corporate set up has been finalised, which is under implementation. As per this proposal, the Northern region has been divided into two regions in order to facilitate its better functioning. This was primarily because the Northern region is a very large region spread over a very vast area requiring two regional control set ups for its effective functioning and control. As per this proposal NPTC will have a four tier organizational structure consisting of Corporate Centre at the top, followed by Regional Headquarters, Divisional Headquarters and Group Headquarters. The details of this revised organizational structure is indicated in Annexure.

NPTC is planning to carry out detailed studies for Institutional Development and Organizational Excellence. These studies are expected to be financed by the World Bank and Asian Development Bank. These studies will give comprehensive feedback on the operations of our organization and recommend areas of possible improvements to achieve our goals and objectives. These studies will cover very important and relevant topics/areas like “Institutional Development and Planning”, “Transmission Planning”, “Bulk Power, Transmission Tariff and Transmission Regulation” and “System Control and Load Despatch”.

Statutory auditors have pointed out that the internal audit system needs further strengthening and streamlining. Steps have already been initiated to create additional posts for Internal Audit to cope with the volume of work.



Human Resource Management

The total manpower strength of the Corporation is about 5100 personnel which includes personnel transferred from other organizations like NTPC, NHPC, NEEPCO as also some direct recruits. The total number of personnel transferred from NHPC is 1,810 (35.5%), from NEEPCO 867 personnel (17%) and the remaining from NTPC and direct recruits. Workmen category constituted about 61% (3,124 Nos.), Supervisory Category 14.5% (742 Nos.) and remaining 24% is Executives.

We have initiated steps to recruit persons in selected areas to meet the organizational requirements. Primarily, NPTC will be recruiting from the open market highly skilled personnel, as well as some supporting staff, required for the management of the future projects.

During the last one year, NPTC has managed to import considerable importance to the Human Resource Management which is in line with our philosophy that the human resources is the most important resource of the Corporation. While a detailed action





plan for the development of in-house training facilities is in progress, we are already sponsoring candidates for training programmes being organized by various other organizations.

To facilitate Organizational integration a top management workshop on “Organizational Integration for Excellence” was organized during December, 1991, under the guidance of an eminent management consultant, We have also signed a MOU with CPRI, Bangalore to provide impetus to the Research and Development activities of the organisation.

as functional Director w.e.f. 15.12.1991 and was designed as Director (Projects). Shri H.C. Mital upon his joining as Member (PS), CEA was appointed as Part-time Director of NPTC w.e.f. 3.12.1991.

Acknowledgements

The Board wishes to place on record its sincere appreciation of the invaluable assistance rendered by the Government of India, particularly the Ministry of Power, Ministry of Finance, Planning Commission, Ministry of Project Implementation, Department of Public Enterprises,



Board of Directors

Since the Second Annual General Meeting of NPTC Shri Y.P. Gambhir and Shri P.S. Bami who were part time Directors of NPTC w.e.f. 11.7.1991 and 9.11.1989 respectively retired from the Directorship of NPTC w.e.f. 2.12.1991 and 30.4.1992 respectively. Board placed on record deep appreciation for the valuable advice and guidance given by them at all times and their active contribution in the making of the Corporation. Shri S.C. Parakh joined

Regional / State Electricity Boards, Central Electricity Authority and Central Generating Organizations.

The achievements of the Corporation are a result of combined, continuous, dedicated efforts and contributions put in by all the employees of the corporation. The Directors take this opportunity to acknowledge this contribution.

(R. K. Narayan)
Chairman & Managing Director
New Delhi
30 September 1992.





POWERGRID

Transmission Network

POWERGRID Transmission System in India
(Existing/Under Construction)



Existing		U/C		Existing		U/C	
800 KV S/C		800 KV S/C		220 KV D/C		220 KV D/C	
400 KV S/C		400 KV S/C		132 KV S/C		132 KV S/C	
400 KV D/C		400 KV D/C		132 KV D/C		132 KV D/C	
220 KV S/C		220 KV S/C					
Thermal Power Station		Hydro Electric Power Station		HVDC Back to Back		HVDC Bipole	

POWERGRID Transmission System in India (Proposed)

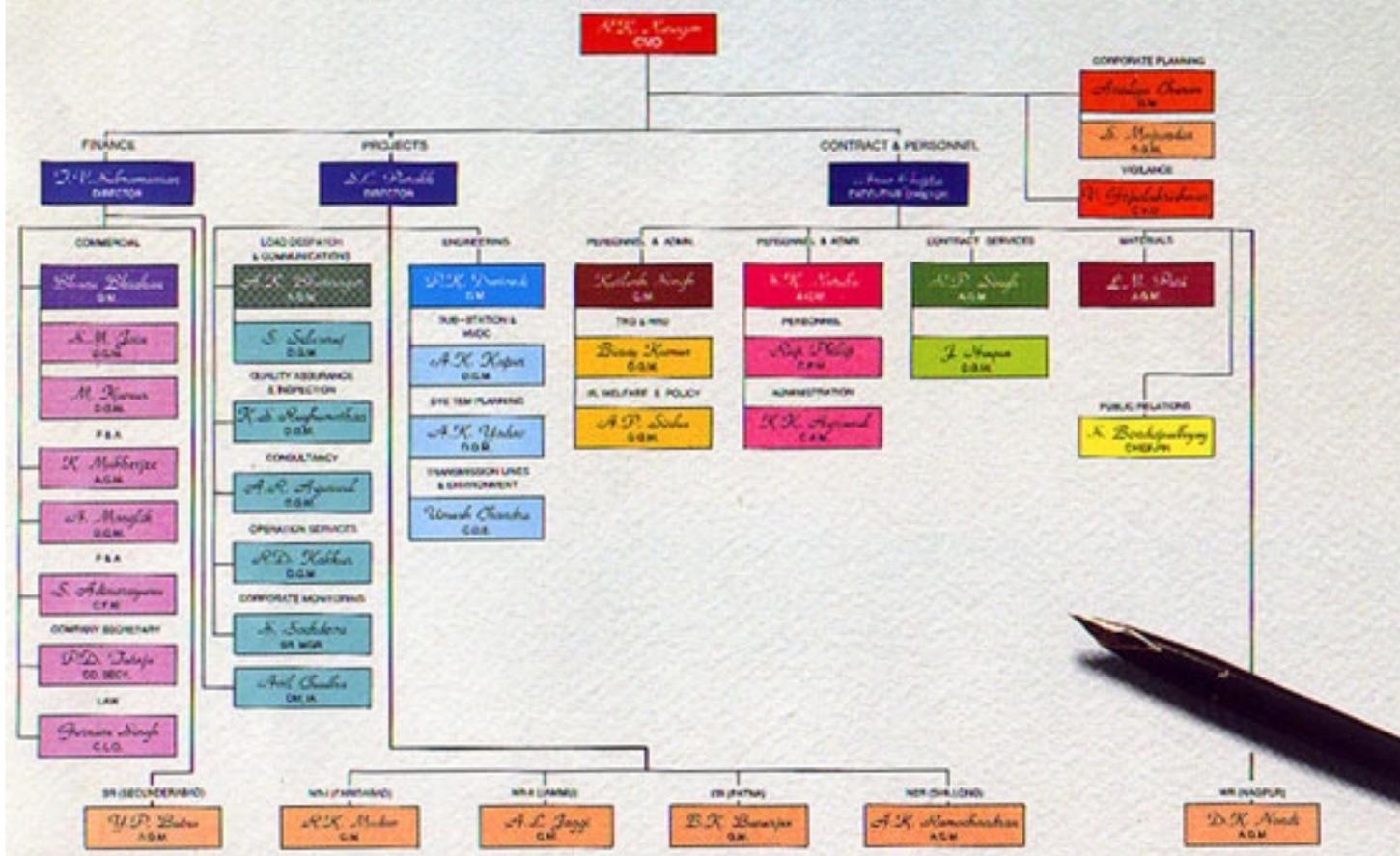


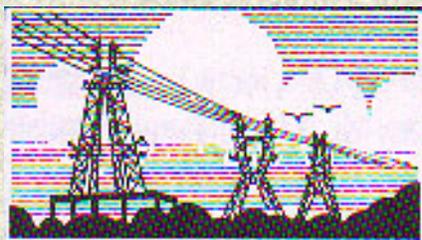
800 KV S/C
 400 KV S/C
 400 KV D/C
 Nuclear Power Plant

220 KV S/C
 220 KV D/C
 132 KV S/C

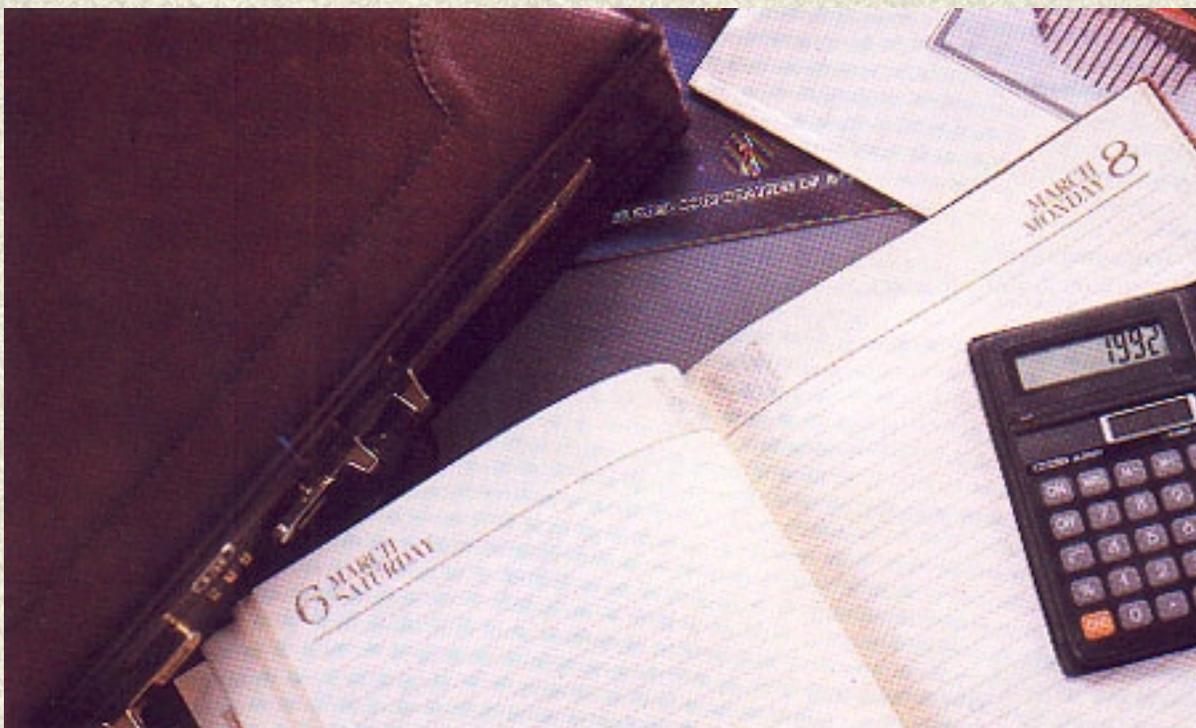
132 KV D/C
 HVDC Back to Back
 HVDC Bipole

POWER GRID ORGANISATION STRUCTURE





ANNUAL ACCOUNTS



POWER GRID CORPORATION OF INDIA LIMITED



BALANCE SHEET

As at 31st March 1992

(Rs. in Thousands)

	Schedule No.	As at 31st March, 1992	As at 31st March 1991
SOURCES OF FUNDS			
Shareholders' Funds			
Capital	1	61,10,00	5,10,00
Loan Funds			
Unsecured Loans	2	237,71,48	
Total		298,81,48	5,10,00
APPLICATION OF FUNDS			
Fixed Capital Expenditure			
Fixed Assets			
Gross Block		5,56,68	23,62
Less : Depreciation to date		3,35	96
Net Block		5,53,33	22,66
Capital Work-in-Progress	4	63,99,51	34,02
Construction stores and advances	5	10,03,67	
		79,56,51	56,68
Current Assets, Loans and Advances			
Inventories		75,55	
Cash and bank balances		73,36,15	3,98,99
Other current assets		2,07,98	1,50
Loans and Advances		179,44,79	22,80
		255,64,47	4,23,29
Less : Current Liabilities and Provisions			
Liabilities		55,62,58	10,11
Provision		32,96	
		55,95,54	10,11
Net current assets		199,68,93	4,13,18
Miscellaneous expenditure			
(to the extent not written off or adjusted)	8	17,73,83	40,14
Profit & Loss Account		1,82,21	
		19,56,04	
Total		298,81,48	5,10,00
Contingent liabilities			
Notes on accounts	14	NIL	NIL

Schedules 1 to 14 and Accounting Policies from integral part of Accounts

(P.D. TUTEJA)
Secretary

(T.V. SUBRAMANIAN)
Director (Finance)

(R.K. NARAYAN)
Chairman & Managing Director

As per our report of even date
For PREM GUPTA & CO.
Chartered Accountants

(P. B. GUPTA)
Partner

Place : New Delhi

Dated : 22nd September, 1992



PROFIT & LOSS ACCOUNT

For the year ended 31st March 1992

(Rs. in Thousands)

	Schedule No.		For the year ended 31st March, 1992	For the year ended 31st March 1991
INCOME				
Consultancy Project Management and Supervision Fees			21,34,19	
Other Income	9		33,48	
			21,67,67	
EXPENDITURE				
Transmission and Administration Expenses	10	26,39,23		31,04
Depreciation		2,39		96
Prior Period adjustment (Net)	13	1,15		-2
		26,42,77		31,98
Less : Incidental expenditure during construction transferred to Capital Work-in-progress	12A		3,11,05	31,98
			23,31,72	
Loss (before interest & finance charges)			1,64,05	
Interest and finance charges	11		1,76,82	
Less : Interest & finance charges transferred to capital Work-in-progress	12B		1,58,66	
			18,16	
Loss for the year			1,82,21	
Balance of loss carried over to Balance Sheet			1,82,21	---

(P.D. TUTEJA)
Secretary

(T.V. SUBRAMANIAN)
Director (Finance)

(R.K. NARAYAN)
Chairman & Managing Director

As per our report of even date
For PREM GUPTA & CO.
Chartered Accountants

(P. B. GUPTA)
Partner

Place : New Delhi
Dated : 22nd September, 1992

POWER GRID CORPORATION OF INDIA LIMITED



CAPITAL SCHEDULE-1

(Rs. in Thousands)

	As at 31st March, 1992	as at 31st March, 1991
AUTHORISED		
5,00,00,000 (Previous year 5,00,00,000) equity shares of Rs. 1000/- each.	5000,00,00	5000,00,00
ISSUED SUBSCRIBED AND PAID-UP		
5,11,000 (Previous year 16,000) equity shares of Rs. 1000/- each fully paid up	51,10,00	1,60,00
Share capital deposit	10,00,00	3,50,00
	<u>61,10,00</u>	<u>5,10,00</u>

LOAN FUNDS SCHEDULE-I1

(Rs. in Thousands)

	As at 31st March, 1992	As at 31st March, 1991
UNSECURED LOANS		
16.75%/17% Taxable 7 Years Redeemable non-Convertible Bonds of Rs. 1000/- each redeemable at par (earliest Date of redemption is 10th/13th March 1999*	100,00,00	
9% Tax Free 10 years Redeemable Non- convertible Bonds of Rs. 1000/- each redeemable at par (earliest Date of redemption is 10th March 2002)*	<u>100,00,00</u>	
	200,00,00	
Unsecured Loans from others	<u>37,71,48</u>	
	<u>237,71,48</u>	
	<u>237,71,48</u>	

*To be secured by creating charge on NTPC Transmission Lines Assets in terms of clause No. 3.11 (c) of Management Agreement Dated 13.08.1991 between NTPC and NPTC.

FIXED ASSETS-TRANSMISSION LINES SCHEDULE-3A

(Rs. in Thousands)

	Gross Block			Depreciation Upto 31.3.92	Net Block	
	As at 01.04.91	Additions	Sales/Adj.		As at 31.03.92	As at 31.3.92
LAND (Including Development)						
Freehold		30,67		30,67		30,67
Roads, bridges, culverts & helipads		89		89		89
BUILDING						
Main Plant		3,78		3,78		3,78
Others		5,83		5,83		5,83
Temporary erection		4,35		4,35		4,35
Water Supply, drainage & sewerage		1,66		1,66		1,66
Plant & Machinery		1,22,69		1,22,69		1,22,69
Construction and Workshop equipment		91,02		91,02		91,02
Vehicles		2		2		2
Furniture, Fixtures and Other equipment		35,95		35,95		35,95
EDP & WP Machines		27		27		27
TOTAL (A)		<u>2,97,13</u>		<u>2,97,13</u>		<u>2,97,13</u>



FIXED ASSETS-OFFICE COMPLEX
SCHEDULE-3B

(Rs. in Thousands)

	Gross Block			Depreciation Upto 31.3.92	Net Block	
	As at 01.04.91	Additions	Sales/Adj.		As at 31.03.92	As at 31.3.92
Temporary erection		77		77	77	
Vehicles	4,88	2,44		7,32	99	4,52
Furniture, Fixture & Other equipment	15,05	1,26,11		1,41,16	1,43	1,39,73
EDP & WP Machines	3,69	19,71		23,40	93	22,47
TOTAL (B)	23,62	1,49,03		1,72,65	3,35	1,69,30

FIXED ASSETS-TOWNSHIP ASSETS
SCHEDULE-3C

(Rs. in Thousands)

	Gross Block			Depreciation Upto 31.3.92	Net Block	
	As at 01.04.91	Additions	Sales/Adj.		As at 31.03.92	As at 31.3.92
Roads, bridges culverts & helipads		10,32		10,32		10,32
BUILDINGS						
Others		51,52		51,52		51,52
Temporary erection		6,34		6,34		6,34
Water supply, drainage & sewerage		1,27		1,27		1,27
Electrical Installation		5,73		5,73		5,73
Furniture, fixtures & Other equipment		11,72		11,72		11,72
TOTAL (C)		86,90		86,90		86,90

FIXED ASSETS (SUMMARY)
SCHEDULE-3

(Rs. in Thousands)

	Gross Block			Depreciation Upto 31.3.92	Net Block	
	As at 01.04.91	Additions	Sales/Adj.		As at 31.03.92	As at 31.3.92
LAND (Including Development)						
Freehold		30,67		30,67		30,67
Roads, bridges, culverts & helipads		11,21		11,21		11,21
BUILDING						
Main Plant		3,78		3,78		3,78
Others		57,35		57,35		57,35
Temporary erection		11,46		11,46		11,46
Water Supply, Drainage & sewerage		2,93		2,93		2,93
Plant & Machinery		1,22,69		1,22,69		1,22,69
Construction and Workshop equipment		91,02		91,02		91,02
Electrical Installation		5,73		5,73		5,73
Vehicles	4,88	2,46		7,34	99	4,52
Furniture, Fixture and other equipment	15,05	1,73,78		1,88,83	1,43	1,87,40
EDP & WP Machines	3,69	19,98		23,67	93	22,74
GRAND TOTAL	23,62	5,33,06		5,56,68	3,35	5,53,33
Previous year	4,64	18,98		23,62	96	22,66



CAPITAL WORK IN PROGRESS-TRANSMISSION PROJECTS

SCHEDULE-4A

(Rs. in Thousands)

	Balance As at 1st April, 1991	Addition	Adjustments	Capitalised During the period	Balance As at 31st March, 1992
Development of Land		12,46			12,46
Roads, bridges & culverts		9,76		89	8,87
Building (others)		75,51		9,61	65,90
Temporary erection		6,57		4,20	2,37
Water supply, drainage and sewerage		1,77		1,50	27
PLANT & MACHINERY (including associated civil works)		9,44,14			9,44,14
On own account & On supply-cum- erection contract		53,00,50		1,20,88	51,79,62
Survey, Investigation, Consultancy & Supervision Charges		6,53			6,53
Total (A)		63,57,24		1,37,08	62,20,16

CAPITAL WORK IN PROGRESS-OFFICE COMPLEX

SCHEDULE-4B

	Balance As at 1st April, 1991	Additions	Adjustments	Capitalised During the period	Balance As at 31st March, 1992
Temporary erection		17,07			17,07
Total (B)		17,07			17,07

CAPITAL WORK IN PROGRESS-TOWNSHIP ASSETS

SCHEDULE-4C

	Balance As at 1st April, 1991	Additions	Adjustments	Capitalised During the period	Balance As at 31st March, 1992
Roads, bridges, culverts & helipads		13,96		10,32	3,64
Buildings (others)		1,47,24		51,51	95,73
Temporary erection		6,34		6,34	
Water supply, drainage and sewerage		9,09		1,10	7,99
Electrical installations		14,84		5,73	9,11
Total (C)		1,91,47		75,00	1,16,47

CAPITAL WORK IN PROGRESS-INCIDENTAL EXPENDITURE DURING CONSTRUCTION

SCHEDULE-4D

	Balance As at 1st April, 1991	Additions	Adjustments	Capitalised During the period	Balance As at 31st March, 1992
Incidental Expenditure During Construction	34,02	4,63,65			4,97,67
Less : Allocated to Capital Work in Progress		4,51,86			4,51,86
Total (D)	34,02	11,79			45,81
GRAND TOTAL (A+B+C+D)	34,02	65,77,57		2,12,08	63,99,51
Previous year	4,54	29,48			34,02



CONSTRUCTION STORES & ADVANCES
SCHEDULE-5

(Rs. in Thousands)

		As at 31st March, 1992	As at 31st March, 1991
Construction Stores (at cost)	16		
Steel	19,86		
Cement	<u>5,39,38</u>	5,59,40	
Others			
Advance for Capital Expenditure			
Secured	9,27		
Unsecured, considered good against Bank guarantees	35,26		
Others (i.e. Unsecured without B.G.)	<u>3,99,74</u>	<u>4,44,27</u>	
		<u>10,03,67</u>	
Construction Stores Include Materials in transit, under inspection and with contractors		4,86,47	

CURRENT ASSETS, LOANS AND ADVANCES
SCHEDULE-6

(Rs. in Thousands)

		As at 31st March, 1992	As at 31st March, 1991
Inventories (At cost as certified by Management)			
Loose tools	9,63		
Consumable stores	61		
Components, Spares and other spare parts :	<u>65,31</u>	75,55	
Cash & Bank Balances			
Cash, drafts, stamps and imprest	4,89		15
Remittance in transit	26,50		
Short Term Deposits with			
Indian Banks	73,97,73		1,50,00
Balance with scheduled banks on current accounts	<u>1,85,38</u>		2,48,84
		76,14,50	3,98,99
Less : Funds, held on customers' A/c.		<u>2,78,35</u>	
		73,36,15	3,98,99
Other Current Assets			
Interest accrued	20791		1,50
Others	<u>7</u>	2,07,98	1,50



**CURRENT ASSETS, LOANS AND ADVANCES
SCHEDULE-6 (Contd.)**

(Rs. in Thousands)

		As at 31st March, 1992	As at 31st March, 1991
Loans and Advances			
Loans			
Employees		2,84,60	1,09
Advances			
Advances Recoverable in Cash or in kind or for value to be received from			
Contractors & Suppliers, including material issued on loan	29,16		
Employees	74,79		23
Claims recoverable	4		
Others	27,80,79		20,22
Deposits with customs, port trust and other authorities	5,45,41		1,26
Other deposits			
(a) Can Bank Financial Services Ltd.	110,80,80		
(b) Andhra Bank Financial Services Ltd.	21,50,00		
(c) Public deposit A/c. with Government of India	10,00,00		
	<u>142,30,00</u>	<u>176,60,19</u>	<u>21,71</u>
		<u>179,44,79</u>	<u>22,80</u>
		<u>255,64,47</u>	<u>4,23,29</u>
Inventories include stores in transit		47	
Particulars of Loans and Advances			
Secured		1,55,76	1,09
Unsecured considered good		177,89,03	21,71
Considered doubtful and provided for :		<u>179,44,79</u>	<u>22,80</u>
	Maximum Amount 1991-92	Maximum Amount 1990-91	
Due from Directors & Officers of the company			
Directors	58		54
Officers	5,94	1,20	1,20



CURRENT LIABILITIES AND PROVISIONS
SCHEDULE-7

(Rs. in Thousands)

		As at 31st March, 1992	As at 31st March, 1991
Current Liabilities			
Sundry Creditors			
For Capital expenditure	4,61,11		88
Other goods and services	2,94,37		
Book overdraft (Banks)	19,49,53		
	<u>27,05,01</u>		88
Deposits, retention money from contractors and others	2,09,11		15
Less : Investments held as security	3,50		
	<u>2,05,61</u>		15
		23,46,15	9,08
Other Liabilities			
Interest accrued but not due on loans			
Other Loans	2,06,67		
Interest accrued but not due on bonds	99,14		
	<u>3,05,81</u>		
		55,62,58	10,11
		32,96	
Provision for gratuity		<u>55,95,54</u>	<u>10,11</u>

MISCELLANEOUS EXPENDITURE (To the extent not written off or adjusted)
SCHEDULE-8

(Rs. in Thousands)

	Balance As at 1st April, 1991	Additions	Deductions	Balance As at 31st March, 1992
Bond Issue Expenses		17,45,00	11,31	17,33,69
Preliminary Expenses	40,14			40,14
TOTAL	<u>40,14</u>	<u>17,45,00</u>	<u>11,31</u>	<u>17,73,83</u>

OTHER INCOME
SCHEDULE-9

(Rs. in Thousand)

		For the year ended 31st March, 1992	For the year ended 31st March, 1991
Interest from			
Indian Banks	2,59		2,45
Others	34,63	37,22	1
		<u>2,32</u>	2,46
Miscellaneous income		39,54	4
			2,50
Less : Income transferred to incidental expenditure during construction-Sch. 12C		<u>6,06</u>	<u>2,50</u>
		<u>33,48</u>	



TRANSMISSION, ADMINISTRATION & OTHER EXPENSES
SCHEDULE-10

(Rs. in Thousands)

		For the year ended 31st March, 1992	For the year ended 31st March, 1991
Employee Cost			
Employees' remuneration and benefits			
Salaries, wages, allowances & benefits		11,42,34	7.93
Contribution to provident and other funds		1,19,35	63
Welfare expenses		1,46,72	38
		<u>14,08,41</u>	8,94
Transmission Expenses			
Repairs & Maintenance			
Buildings	28,57		56
Plant & Machinery			
Sub Station	38,02		
Transmission lines	89,29		
Construction equipment	9		
Others	45,11		3
		2,01,08	59
Power charges		1,72,72	8
Stores consumed		1	
Water charges		2,16	3
		<u>3,75,97</u>	70
Administration Expenses			
Training & Recruitment expenses	8,17		4.45
Less : Fee for training and application	58		3
		7,59	4.42
Professional charges & consultancy		26,16	1.13
Communication expenses		83,56	2.29
Travelling expenses (excluding foreign travel)	2,31,84		94
Foreign travel only	12,36		
		2,44,20	94
Tender expenses	19,36		
Less : Sale of tenders	1,61		
		17,75	
Payment to statutory auditors			
Fee (subject to approval of company law board)	90		3
In other capacity (certification of prospects etc.)	31		
Expenses	1,08		
		2,29	3
Advertisement and publicity		19,88	35
Printing and stationery		46,41	1,31
EDP hire and other charges		10,66	22
Entertainment expenses		2,31	10
Brokerage & Commission		30	



TRANSMISSION, ADMINISTRATION & OTHER EXPENSES
SCHEDULE-10 (Contd.)

(Rs. in Thousands)

		For the year ended 31st March, 1992	For the year ended 31st March, 1991
Rent		93,60	6,63
Construction stores written off		20	
Temporary works charged off		4,39	
Security expenses		43,82	
Books & Periodicals		7,33	
Transport vehicle running expenses		26,52	
Horticulture expenses		3,19	
Expenses on hiring of vehicles		68,21	
Furnishing Expenses		6,73	
Subscription to trade & other associations		6,34	
Hire charges of office equipment		1,85	
Miscellaneous expenses (excluding Directors' fee)		17,40	3,93
Insurance		1,04,90	2
Rates and taxes		1,87	3
Expenses for Guest House	7,55		
Less : Income from Guest House	16		
		<u>7,39</u>	
		8,54,85	21,40
		<u>26,39,23</u>	<u>31,04</u>
Stores consumption included in repair and maintenance		18,24	

FINANCE AND OTHER CHARGES
SCHEDULE-11

(Rs. in Thousands)

		For the year ended 31st March, 1992	For the year ended 31st March, 1991
Interest on			
Loans from Banks - Indian		3,26	
Redeemable bonds I Issue	1,53,24		
Less : Interest earnings on bonds	<u>1,35,02</u>		
		18,22	
		11,31	
Bond Issue expenses		<u>1,41,91</u>	
Others		1,74,70	
		2,12	
Other finance charges		<u>1,76,82</u>	



**INCIDENTAL EXPENDITURE DURING CONSTRUCTION
SCHEDULE-12**

(Rs. in Thousands)

		For the year ended 31st March, 1992	For the year ended 31st March, 1991
A. Expenses			
Employees' Remuneration and Benefits			
Salaries, wages, allowances and benefits		1,24,62	7,93
Contribution to provident and other funds		13,98	63
Welfare expenses		17,57	38
		<u>1,56,17</u>	8,94
Repairs & Maintenance			
Buildings	2,16		56
Construction equipment	8		
Others	5,22		3
		<u>7,46</u>	59
Power		11,87	8
Water charges		32	3
		<u>19,65</u>	70
Administration Expenses			
Professional charges & consultancy fee		3,87	1,13
Communication expenses		17,02	2,29
Travelling expenses		38,17	94
Tender expenses	7,11		
Less : Income from sale of tenders	<u>38</u>		
		6,73	
Payment to Auditors		33	3
Advertisement and Publicity		2,79	35
Printing and Stationery		8,54	1,31
EDP hire and other charges		1,66	22
Entertainment expenses		36	10
Brokerage and commission		7	
Rent		15,23	6,63
Construction Stores written off		15	
Temporary works written off		2,58	
Security expenses		8,02	
Books & Periodicals		1,08	
Transport vehicle running expenses		3,78	
Horticulture expenses		61	
Expenses on hiring of vehicles		13,35	
Furnishing Expenses		92	
Subscription to trade & other association		91	
Hire charges of office equipment		25	
Miscellaneous expenses		3,66	8,35
Insurance		2,84	2
Rates and taxes		54	3
Depreciation		35	96
Guest House Expenses	1,28		
Less : Income from guest house	<u>3</u>		
		<u>1,25</u>	
		1,35,06	22,36
Prior Period adjustment (net)		<u>17</u>	<u>-2</u>
TOTAL (A)		<u>3,11,05</u>	<u>31,98</u>



INCIDENTAL EXPENDITURE DURING CONSTRUCTION
SCHEDULE-12 (Contd.)

(Rs. in Thousands)

		For the year ended 31st March, 1992	For the year ended 31st March, 1991
B. Interest and Finance Charges	18,22		
Interest on Bonds	1,39,76		
Others	68		
Other Finance charges		1,58,66	
TOTAL (B)		<u>1,58,66</u>	<u> </u>
C. Less Other Income			
Interest from	7		2,45
Indian banks	5,45		1
Others	54		4
Miscellaneous Income		6,06	2,50
TOTAL (C)		<u>6,06</u>	<u>2,50</u>
GRAND TOTAL (A + B - C)		4,63,65	29,48

PRIOR PERIOD ADJUSTMENT (NET)
SCHEDULE-13

(Rs. in Thousands)

		For the year ended 31st March, 1992	For the year ended 31st March, 1991
Income			
Excess provision written back			2
Expenditure			
Salary, wages, allowances & benefits	98		
Others	17		
		1,15	
Prior period expenditure/income (Net)		<u>1,15</u>	<u>-2</u>



NOTES ON ACCOUNTS :
SCHEDULE-14

1. Balances shown under Advances, Creditors are subject to confirmation. In the opinion of the Management, the value on realisation of current assets, loans and advances in the ordinary course of business will not be less than the value at which these are stated in the Balance Sheet.
2. Management of Operation & Maintenance and Construction of Transmission Lines and Sub-stations of NTPC, NHPC and NEEPCO was taken over on 16.08.91, 19.11.91 and 14.11.91 respectively. The ownership of Transmission Line works of Nuclear Power Corporation was taken over on 28.08.91.
3. The values of Fixed Assets and Capital Work-in-Progress for Transmission system include the share of NPTC in Transmission work jointly owned with NTPC.
4. During the year Company has provided depreciation in the Books of Accounts as per Electricity (Supply) Act Rs. 2,39,010/- (Previous Year Rs. 96,399/-) and the depreciation in terms of Section 205 (2) (b) of the Companies Act 1956 works out to Rs. 25,05,810/- (Previous Year Rs. 65,318/-). The cumulative effect of the same up to 31st March 1992 is Rs. 22,48,030 (up to previous year (-) Rs. 18,770/-).
5. (a) Breakup of expenditure on employees in receipt of remuneration in aggregate at the rate of not less than Rs. 1,44,000/- per year if employed for full year or not less than Rs. 12,000/- p.m., if employed for the part of the year :-

(Rs. in Thousands)

	Current year		Previous year	
	Employed throughout the year	Employed for part of the year	Employed throughout the year	Employed for part of the year
No. of employees (Nos.)	4	8	Nil	1
Salaries & Allowances	431	497	Nil	55
Contribution to PF & Other Funds	41	43	Nil	5
Other Benefits	159	149	Nil	19

- (b) Employees remuneration and benefits include the following for the Directors including Chairman and Managing Director.

(Rs. in Thousands)

	Current Year	Previous Year
Salaries & Allowances	272	103
Contribution to PF and other Funds	27	10
Other Benefits	65	23

- (c) The remuneration of employees and Directors mentioned in clauses (a) and (b) above are exclusive of contribution under Group Insurance and Gratuity Scheme, the amount of which is not ascertainable separately. In addition to the above remuneration the whole time Directors have been allowed the use of staff car including for private journeys on payment of Rs. 400/- per month, as may be applicable in accordance with the provisions of the Ministry of Finance (BPE) Circular No. 2(18)pc/64, dated 20.11.1964 as amended from time to time.
5. Estimated amount of contracts remaining to be executed on Capital account and not provided is Rs. 67,04,06,765/- (Previous year Rs. 21,73,087/-)

POWER GRID CORPORATION OF INDIA LIMITED



	Current Year	Previous Year
	Rs.	Rs.
6. a) Expenditure in Foreign Currency		Nil
Other than Professional Consultancy Fees and interest	7,02,559	
b) Value of Components, Stores and spare parts consumed		
Indigenous	19,41,544	Nil
c) Earning in Foreign Exchange		
Others	7,456	Nil
7. Gratuity liability has been provided on estimated basis from the date of the Absorption of employees from their Parent Organisations and Gratuity for past period and recoveries therefor from Parent Organisations could not be provided for want of information.		
8. Advances include Rs. 96.16 lakhs (previous year Rs. Nil) being billed by NTPC on account of O&M charges recoverable for Anta and Auraiya Transmission Lines which is disputed by State Electricity Boards and Rs. 312.95 lakhs (previous year Rs. Nil) for O&M charges being billed by NPTC for other lines.		
9. No provision has been made for income tax for the financial year 1991-92 as the Corporation does not have taxable income.		
10. For Biharshariff Sub-station (of Farakka TE, freehold land is allotted int he name of NTPC Ltd. However, NPTC made payment of Rs. 30.67 lakhs during the year 1991-92 in view of joint ownership.		
11. Previous year's figure have been regrouped/rearranged wherever necessary.		

(P. D. TUTEJA)
Secretary

(T.V. SUBRAMANIAN)
Director (Finance)

(R.K. NARAYAN)
Chairman & Managing Director

As per our report of even date
For PREM GUPTA & Co.
Chartered Accountants

(P. B. GUPTA)
Partner

Place : New Delhi
Date : 22nd September 1992



ACCOUNTING POLICIES :

1.0 Fixed Assets :

- 1.1 In the case of commissioned assets, where final settlement of bills with contractor is yet to be effected, capitalisation is made on provisional basis subject to necessary adjustment in the year of final settlement.
- 1.2 Items of scientific appliances included under different heads of assets, plant and machinery and loose tools costing either Rs. 5000/- or less or with written down value of Rs. 5000/- or less as at the beginning of the year are charged off to revenue.

2.0 Capital Work-in-Progress :

- 2.1 In respect of supply-cum-erection contracts, the value of supplies received at site is taken as Capital Work-in-Progress.
- 2.2 Incidental expenditure during construction (net) including corporate office expenses (allocated to the projects pro-rata to the annual capital expenditure) for the year is apportioned to capital work-in-progress on the basis of accretions thereto.
- 2.3 Capital expenditure not represented by assets is allocated to other capital assets, which are directly benefited from such expenditure. Where such identification is not possible, the expenditure is accounted for under incidental expenditure during construction in the year in which the work is completed.
- 2.4 Deposit work/cost plus contracts are accounted for on the basis of statement of account received from the contractors.
- 2.5 Claims for price variation in case of contracts are accounted for on acceptance.
- 2.6 Valuation of inventories is effected on monthly weighted average method based on actual costs.

3.0 Profit and Loss Account

- 3.1 Depreciation on fixed assets is being provided from the year following that in which the assets become available for use at the rates determined taking into account the prescribed period as per the electricity (Supply) Act 1948. In respect of assets, where prescribed period has not been laid down under the aforesaid Act, depreciation has been provided on straight line method at the rates corresponding to the rates laid down under the Income Tax Act.
- 3.2 Expenses on training and recruitment are charged to revenue in the year of incurrence.
- 3.3 Expenses for the year common to operation and construction activities are allocated to Profit & Loss Account and incidental expenditure during construction in proportion of transmission charges to annual capital outlay in the case of Corporate Office and transmission charges to accretions to Capital Work-in-Progress in the case of projects. In respect of assets commissioned, the interest on loans for capital works, chargeable to profit and loss account is ascertained on the basis of approved debt equity ratio for the project irrespective of actual avilment of the loan and equity which is reallocated in the year of conversion of debt./equity to conform to the approved norms for the said project.
- 3.4 Pre-paid expenses and prior-period expenses and income of items of Rs. 5000/- and below are charged to natural heads of accounts.
- 3.5 Interest recoverable on advances to suppliers/NTPC as well as warranty claims/liquidated damages are accounted for on receipt/acceptance.
- 3.6 Value of scrap other than steel-scrap adjusted in the accounts as and when sold.
- 3.7 Income from Consultancy service is being accounted for on the basis of actual progress/technical assessment of work executed.
- 3.8 Bond issue expenses are being written off over maturity period of bonds.



Auditors' Report

The Members of the
National Power Transmission Corporation Ltd.
New Delhi

We have audited the attached Balance Sheet of National Power Transmission Corporation Limited as at 31st March, 1992 and also the Profit and Loss Account of the Company for the year ended on that dated annexed thereto. As the Company is governed by the Electricity (Supply) Act, 1948, the provisions of the said Act read with rules made there under have prevailed wherever they have been inconsistent with provisions of the Companies Act, 1956. We report that :

1. As required by the Manufacturing and other Companies (Auditor's Report) Order, 1988 issued by the Company Law Board in terms of Section 227 (4A) of the Companies Act, 1956, we enclose in the Annexure a statement on the matters specified in paragraphs 4 and 5 of the said order.
2. Further to our comments in the Annexure referred to in Paragraph 1 above :-
 - a) We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit;
 - b) In our opinion, proper books of account as required by law have been kept by the Company, so far as appears from our examination of the books;
 - c) The Balance Sheet and Profit and Loss Account dealt with by the report are in agreement with the books of account.

In our opinion and to the best of our information and according to the explanations given to us, the said accounts read with notes given in Schedule 14 give the information required by the Companies Act., 1956 in the manner so required as applicable to Electricity Generating Companies and give a true and fair view :-

- (i) In the case of the Balance Sheet, of the state of affairs of the Company as at 31st March, 1992; and
- (ii) In the case of the Profit and Loss Account, of the loss for the year ended on that date.

For PREM GUPTA & CO.
Chartered Accountants

(P. B. Gupta)
Partner

Place : New Delhi
Date : 22nd September, 1992



ANNEXURE TO THE AUDITOR'S REPORT

1. The Company has generally maintained proper records showing full particulars, including quantitative details, and situation/location, so far as practicable of its fixed assets. The fixed assets of the Company have been physically verified by the Management during the year and no material discrepancies between the books records and physical inventory have been noted.
2. None of the fixed assets have been revalued during the year.
3. As explained to us, the stocks of finished goods, stores and spare parts have been physically verified during the year by the management. In our opinion the frequency of verification was reasonable.
4. According to the information and explanations given to us, in our opinion, the procedures of physical verification of stocks followed by management are reasonable and adequate in relation to the size of the company and the nature of its business.
5. The discrepancies noted on verification between the physical stores and book records were not material, having regard to the size of the operations of the company.
6. In our opinion and on the basis of our examinations of the stock records, the valuation of stocks is fair and proper in accordance with the normally accepted accounting principles. There were no stocks in the preceding year.
7. The company has not taken any loan from the companies, firms or the other parties listed in register maintained under section 301 of the companies Act, 1956. There are no companies under the same management as defined under sub-section (1B) of Section 370 of the Companies Act, 1956.
8. The company has not granted any loan, secured or unsecured to companies, firms or other parties listed in the register maintained under section 301 of the Companies Act, 1956. There are no Companies under the same management as defined under sub-section (1B) of section 370 of the Companies Act, 1956.
9. The loans and advances in the nature of loans have been given to the employees who are generally repaying the principal amount as stipulated. The payment of interest has also generally been as stipulated.
10. In our opinion and according to the information and explanations given to us, having regard to the explanations that some of the items purchased are of a special nature, for which suitable alternative sources do not exist for obtaining comparable quotations, there are adequate internal control procedures commensurate with the size of the company and the nature of its business with regard to purchases of stores, components, plant and machinery, equipment and other assets and for the sale of goods.
11. According to the information and explanations given to us, there are no transactions of purchase and sale of goods and materials made in pursuance of contracts or arrangements entered in the register maintained under section 301 of the Companies Act, 1956, aggregating during the year to Rs. 50000/- or more in respect of each party except in case of services rendered by the company. We have been informed that no similar services were rendered to other parties and hence the prices at which services have been rendered are not comparable. On the basis of information and explanations provided, the same appears to be reasonable.
12. As explained to us, no unserviceable or damaged stores are determined by the Management.
13. The company has not accepted any deposit from the Public Under Section 58A of the Companies Act, 1956 and rules made thereunder.

POWER GRID CORPORATION OF INDIA LIMITED



14. The company does not have any by-product. In our opinion, reasonable records have been maintained by the company for the sale and disposal of scrap.
15. In our opinion, the Company has an adequate Internal Audit System commensurate with the size and nature of its business. However, we observe that the internal audit system offers further scope for improvement with the growth of the business.
16. The central Govt. has not prescribed maintenance of cost records under section 209(I)(d) of the Companies Act., 1956 in respect of the Company.
17. The Company is regular in depositing Provident Fund dues with the appropriate authority. As per information made available to us, E.S.I. Act is not applicable to the company.
18. According to the information and explanations given to us, there were no undisputed amounts payable in respect of income tax, wealth tax, sales tax, customs duty and excise duty which have remained outstanding, as at 31st March, 1992, for a period of more than six months from the date they became payable.
19. According to the information and explanations given to us and the records of the Company examined by us, no personal expenses have been charged to revenue account, other than those payable under contractual obligations or in accordance with generally accepted business practice.
20. The provisions of the Sick Industrial Companies (special provisions) Act, 1985 are not applicable to the Company.
21. In connection with the Company's business of providing services, we report that, no job work has been executed by the corporations during the year under audit.

for PREM GUPTA & CO.
Chartered Accountants

(P. B. GUPTA)
Partner

Place : New Delhi
Date : 22nd September, 1992



COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 619(4) OF THE COMPANIES ACT, 1956 ON THE ACCOUNTS OF THE NATIONAL POWER TRANSMISSION CORPORATION LIMITED FOR THE YEAR ENDED 31ST MARCH, 1992.

I have to state that Comptroller and Auditor General of India has no comments upon or supplement to the Auditor's report under Section 619(4) of the Companies Act, 1956 on the Accounts of National Power Transmission Corporation Ltd., New Delhi for the year ended 31st March, 1992.

(KANWAL NATH)
Principal Director of Commercial
Auditor & Ex-Officio Member,
Audit Board-III, New Delhi

Place : New Delhi
Date : 29th September, 1992



ANNEXURE TO DIRECTOR'S REPORT

PARTICULARS OF EMPLOYEES PURSUANT TO SECTION 217 (2A) OF THE COMPANIES ACT, 1956

S.No.	Name	Designation and nature	Remuneration (Rs)	Qualifications	Experience (Years)	Date of commencement of employment	Age (Years)	Last employment held
1.	2.	3.	4.	5.	6.	7.	8.	
Employed for the full of the year								
1.	Sh. T.V. Subramanian	Director (F)	1,67,524	B.A. (H) FICWA AMIIA (USA)	32	28.09.90	55	NTPC LTD.
2.	Sh. R.P. Singh	A.G.M.	1,51,537	B.Sc. (E) (Mech.) M.Sc. (E) (Mech)	22	21.01.91	44	- do -
3.	Sh. S.K. Narula	A.G.M.	1,52,597	Dip in (I&S) BA, PGD in LABOUR LAW	28	19.02.91	48	- do -
4.	Sh. Amulya Charan	G.M.	1,58,938	B.E. (Mech.) PGD in Buss. Admn.	18	14.03.91	44	- do -
Employed for the part of the year								
1.	Sh. A.L. Jaggi	G.M.	55,568	B.E. (Elec.)	30	19.11.91	53	NHPC LTD.
2.	Sh. S.S. Rao	D.G.M.	1,00,559	B.E. (Mech) PGD BM	22	16.08.91	45	NTPC LTD.
3.	Sh. S.C. Parakh	Director (P)	65,472	B.Sc. (E) (M)	32	15.11.91	54	- do -
4.	Sh. S.M. Jain	D.G.M.	70,900	B.Sc. (E) (E)	28	16.08.91	51	- do -
5.	Sh. Batra Yash Paul	A.G.M.	1,05,771	B.Sc. (E) (Civil) M.I.E.	32	16.08.91	56	- do -
6.	Sh. Selva Raj	Sr. Mgr. (O&M)	92,555	B.E. (Hon) (Elec.) PGD P.M. ICWAI (INTER)	20	16.08.91	43	- do -
7.	Sh. Kumar V.	A.G.M.	1,37,526	B.Tech (Hons.) M.Tech (Str)	30	16.08.91	53	- do -
8.	Sh. Banerjee M.K.	G.M.	61,379	B.Sc. B.E. (Civil)	32	16.08.91	56	- do -

Notes : Remuneration include Salary, Allowances, Payment for Subsidised leased accommodation, reimbursement of medical expenses to employees and employer's contribution to provident fund and other funds. The whole time directors have been allowed the use of staff car including for private journey in payment of Rs. 400/- p.m. as may be applicable in accordance with the provisions of the BPE Circular No. 2 (18)/PC/64 dated 20.11.64 as amended from time to time.



REVENUE EXPENDITURE ON SOCIAL OVERHEADS FOR THE YEAR ENDED 31.03.92
SCHEDULE-15

(Rs. in Thousands)

Sl. No.	Particular	Land Scaping & waste land devpt.	Township	Educanl. & School facilities	Medical facilities	Subsidised transport	Social & cultural activities	Subsidised canteen	Total
1.	Payment to employees			86	3996	338	872	279	5571
2.	Material consumed		46						46
3.	Welfare expenses	439		20	1374	574	1471	453	4331
4.	Others including Repairs & maintenance		1892						1892
5.	Sub total (1+2+3+4)	439	1938	106	5370	912	2343	732	11840
6.	Less Recoveries		74						74
7.	Net Expenditure (5 - 6)	439	1864	106	5370	912	2343	732	11766



Objectives

The Corporation has set the following objectives in line with its mission :

- Efficient Operation and Maintenance of Transmission Systems.
- Strengthen Regional Power Grids and establishing Inter-regional links leading to formation of National Power Grid.
- Establish/augment Regional Load Despatch Centres and Communication facilities
- Introduce Rational Tariff Structure for exchange of power
- Bring about Economies of Scale in all facets of Power Systems
- To achieve constructive cooperation and build professional relations with stakeholders, peers and other related organisations.