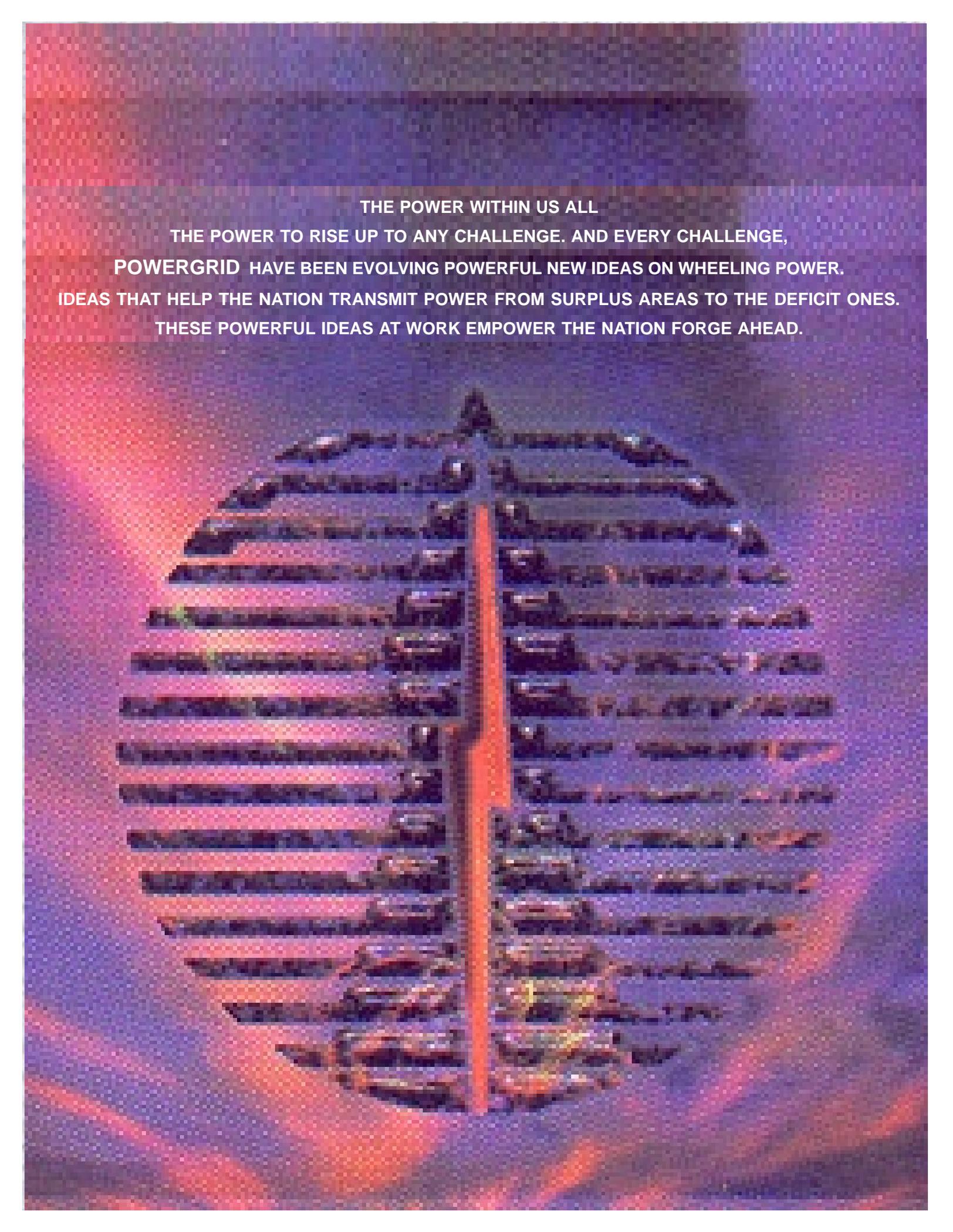


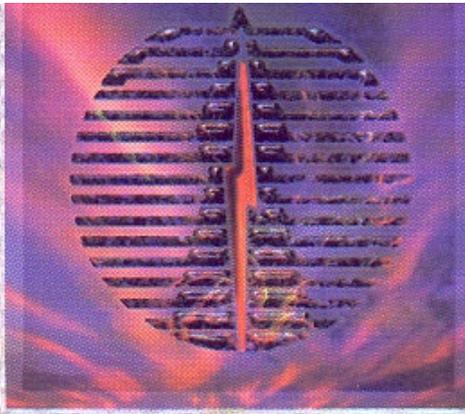
# ANNUAL REPORT 1995-96



POWER GRID CORPORATION OF INDIA LIMITED

A large, illuminated American flag is the central focus of the image. The flag is viewed through a circular opening in a dark, textured structure, possibly a tunnel or a large pipe. The lighting is dramatic, with the red and white stripes of the flag appearing bright against the dark background. The blue field with the stars is also visible, though less brightly lit. The overall mood is patriotic and powerful.

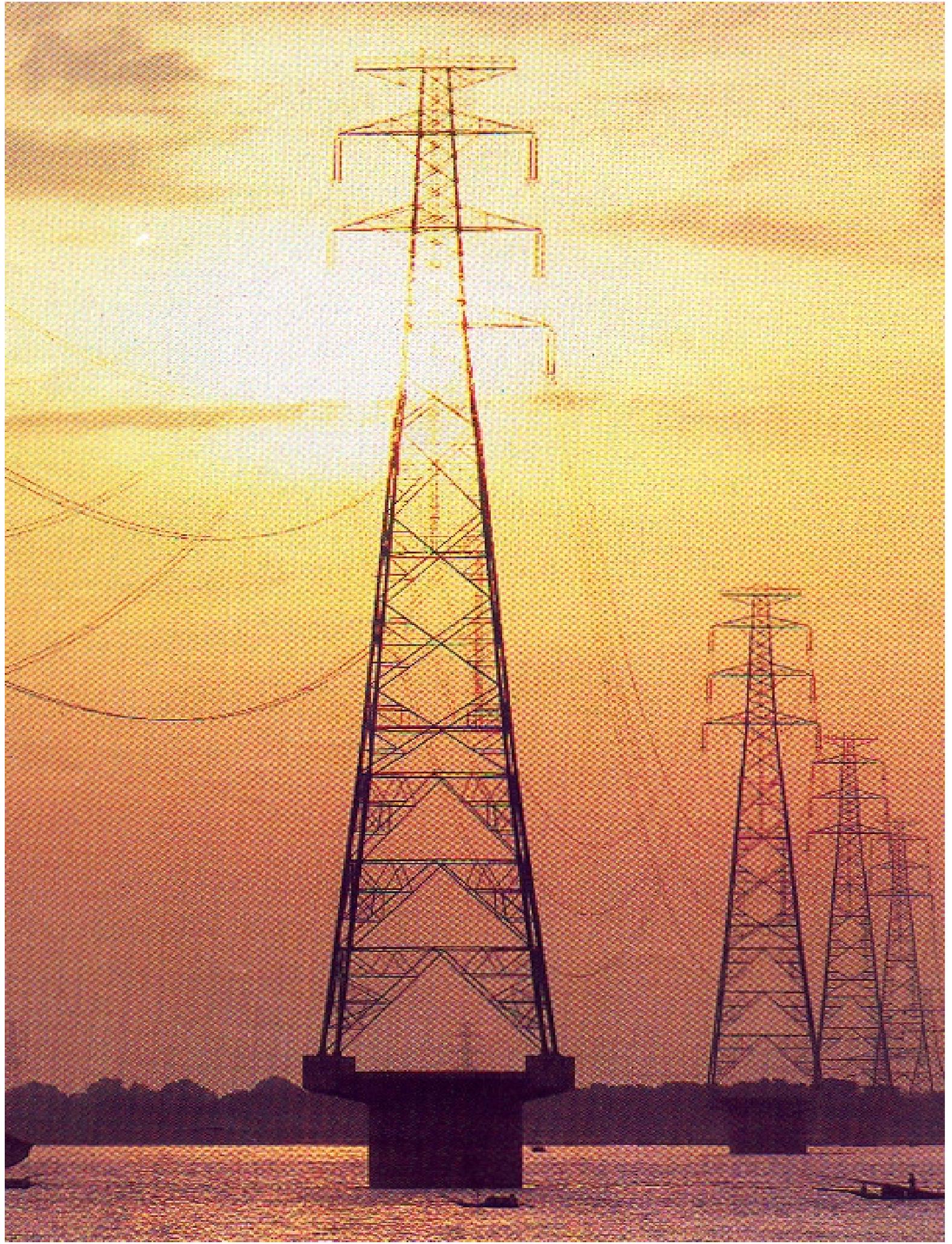
THE POWER WITHIN US ALL  
THE POWER TO RISE UP TO ANY CHALLENGE. AND EVERY CHALLENGE,  
**POWERGRID** HAVE BEEN EVOLVING POWERFUL NEW IDEAS ON WHEELING POWER.  
IDEAS THAT HELP THE NATION TRANSMIT POWER FROM SURPLUS AREAS TO THE DEFICIT ONES.  
THESE POWERFUL IDEAS AT WORK EMPOWER THE NATION FORGE AHEAD.



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# OVERVIEW

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## THE CHANGING FACE OF INDIAN POWER SCENARIO

Power, as the word implies, is a motive force. It is the source and the cause for any movement in general and development in particular. Especially, with regard to the economic development of the country like ours, this powerful economy driving sector comes in the forefront.

With liberalization of the economy and structural changes that are initiated in certain quarters of the economy, the demand for reliable and quality power is ever increasing. And, when the reliable and quality power is in demand, can the quality of power supply management be far behind!

The concept of power and its transmission have recently undergone a sea change. Traditionally perceived as a basic infrastructure for the country's economic development, transportation of power is now being seen in marketing terms.

Power is an instantaneously perishable commodity which makes handling operation more complex, requiring immediate attention in case of any untoward incident. Transportation of power from Generating points to various Load centers on demand plays a very important role in providing a value added service to the beneficiaries. In fact, transmission is an activity which is placed between generators and distributors in the power marketing channel structure.

Today, the Indian power sector is undergoing metamorphosis. The move is towards segregation of transmission from generation and distribution of

power and bringing the transmission under a central nodal agency. The agency thus setup, would ensure optimum efficiency and economy of operation through continuous monitoring, planning and coordinating in a unified manner as facilitator, for exchange of power amongst various generating and distributing agencies. Further, it would help centrally plan the optimal investments required for the development of the power transmission system for the nation as a whole.

The restructuring in the Central Indian Power Sector as envisaged, would induce competition among generators and distributors in their respective markets wherein generating companies will have the options to supply electricity to more than distributing agency. This will ensure efficiency gains and optimal utilization of natural/ depletable energy resources available in the country, which will have a cascading multiplier effect on all facets of the country's economy.

## EQUITABLE POWER DISTRIBUTION : THE NEED OF THE HOUR

Historically, power generation, transmission and distribution were considered as an inseparable business activity, which led to a sub-optimum utilization of scarce natural energy resources.

Rapid strides have been made in the generation capacity additions in the post – independence era (from 1300MW to the present level of more than 81,000 MW). Electricity supply Act, enacted in 1948 with a subsequent amendment in 1975 to cope with the spiraling energy crisis,

helped setting up of several new power stations and strengthening of regional grid system.

However, inspite of such measures, the power sector has been unable to supply quality and reliable power owing to inadequate transmission capacities, inter regional transmission tie lines, metering communication and control facilities resulting in a huge demand – supply gap. And, equitable distribution of power remained a distant dream for quite sometime to come.

Keeping this unsound development in Indian power scenario in view, there has been a growing need felt to restructure the entire Indian power sector. This called for a massive task of establishing grid discipline , enhancing the role of Regional Electricity Boards (REBs), augmenting the regional grid and ultimately integrating it into a national grid system . Rationalising the tariff structure along with installation of state-of-the-art metering, communication & control facilities would pave the way for competition and efficiency in all facets of power sector and help evolve a proper legal and regulatory framework for establishment of loose power pools for ease of exchange of power.

In view of this, it was considered essential to create a facilitator, for the development, establishment and maintenance of all the above, by pooling all the transmission lines and sub-stations, being handled by a number of central organizations, under the umbrella of a single transmission organization. Thus was born the power Grid Corporation of India Limited (POWERGRID) in October 1989.

## POWERGRID: THE CHANGE AGENT

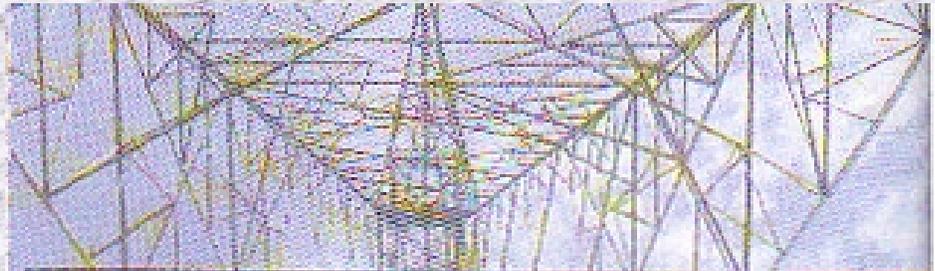
POWERGRID is the change Agent in the evolutionary restructuring movement that is sweeping the Indian power sector an amalgamating force and a partner to the development of Indian power sector.

Today, POWERGRID operates about 27,500 ckt. Kms of transmission lines comprising 400 KV, 220KV, 132 KV AC transmission lines and HVDC transmission system, criss –crossing the entire length and breadth of the country with a total installed transformation capacity of more than 22,700 MVA distributed over 53 sub-stations and maintained at a persistent level of over 98% of line availability, which is comparable with the international standards.

Of the total installed generating capacity about 81,500 MW in India, about 30% is connected to POWERGRID network and about a quarter of the total energy exchanged in India , is handled by POWERGRID. Further, today POWERGRID has about 16% of the total EHV transmission network of the entire country mainly ranging from 132 to 400 KV system.

POWERGRID stands as one among the top six Transmission Utilities in the world whose line availability have always been maintained at above 98%. The net value of assets as on 31<sup>st</sup> March 1996 is more than Rs. 8,700 crores, and it is today one of the largest bulk power transmission organizations in the world. At present, about 12,300 ckt. kms. Of 800, 400, 220, 132 KV & HVDC transmission system along with 25 sub-stations including extension of bay are under construction and a further, 25,000 ckt. kms. Of transmission lines are planned to be executed in the coming plan periods. As per the estimates available, about more than Rs. 12,000 crores of investement is to take place for various projects of POWERGRID during 9th Five Year Plan, which excludes the additional investments of around Rs. 12,000 crores for the

## CAPACITY (Transmission Lines/Sub-Stations)



Sl. No.	Transmission Lines/Sub-station With Ratings	Under Operation (Ckt. Kms.)	Under Construction (Ckt.Kms.)
1.	HVDC	1,630	Two back to back inter Regional Links (Chandrapur & Gazuwaka)
2.	EHVAC		
	(a) 800KV	—	589
	(b) 400 KV	19,902	8,966
	(c) 220 KV	4,946	1,624
	(d) 132 KV	766	1,174
	Total	27,244	12,333
3.	Sub-Station (In Nos)	53	25
4.	Transformation Capacity (MVA)	22,748	

transmission projects associated with the IPP projects.

### NEW ENTRANTS : DOVETAILING THE PRIVATE SECTOR

Keeping in view that private/joint venture generating companies will soon enter the arena, POWERGRID will pave the way for a power evacuation system in an effective and reliable manner. The evacuation system will be dovetailed with the regional power grid not only to ensure proper dispersal of power generated from such stations but also to keep the same within the safe and reliable operational limits of the grid. Further, POWERGRID has also been given mandate to select IPPs through International Competitive Bidding for an already identified site with available necessary clearances from various statutory Agencies.

### INTEGRATED SYSTEM OPERATION

Presently, all the Regional Load Despatch & Communication (RLDCs) facilities are being operated by POWERGRID which are being augmented through implementation of State-of-the-art Unified Load Despatch & Communication Facilities in all the power regions of the country for improved coordination among the regional grids. Once the rationalized commercial principles and procedures are put in place, the platform would be set for commencement of optimal integrated system operation.

Eventually, the Power Pools will be established to facilitate exchange of power between States and Regions which will lead to the formation of NATIONAL POWER GRID.

## **TOWARDS NATIONAL POWER GRID**

In order to establish the National Power Grid, POWERGRID has already chalked out a well laid plain to inter-link the existing regional grids through inter-regional transmission links. As per the independent study conducted by the World Bank, efforts to inter-link the regional grid systems will reduce the unserved demand by 50% and benefits of Rs. 1,100 crores per year will accrue to the organisation which will be approx. 13,000 crores by 1999.

Coupled with the above efforts, POWERGRID will promote creation of regional power pools in all the designate regions on a voluntary cooperation basis to optimise the operation of the total power system. It will provide information on various aspects like price range, generation, maintenance schedules, tie-line flows, deviations, billing and settlement etc.

## **IN-HOUSE EXPERTISE : THE POWER TO PERFORM**

Today POWERGRID has the advanced skills of engineering and power technology with the right management and communication acumen to lead a team of engineers and professionals to greater demanding challenges. More than 6,700 dedicated cohesive minds working towards the goal of providing solutions for various projects and to problems of power supply.

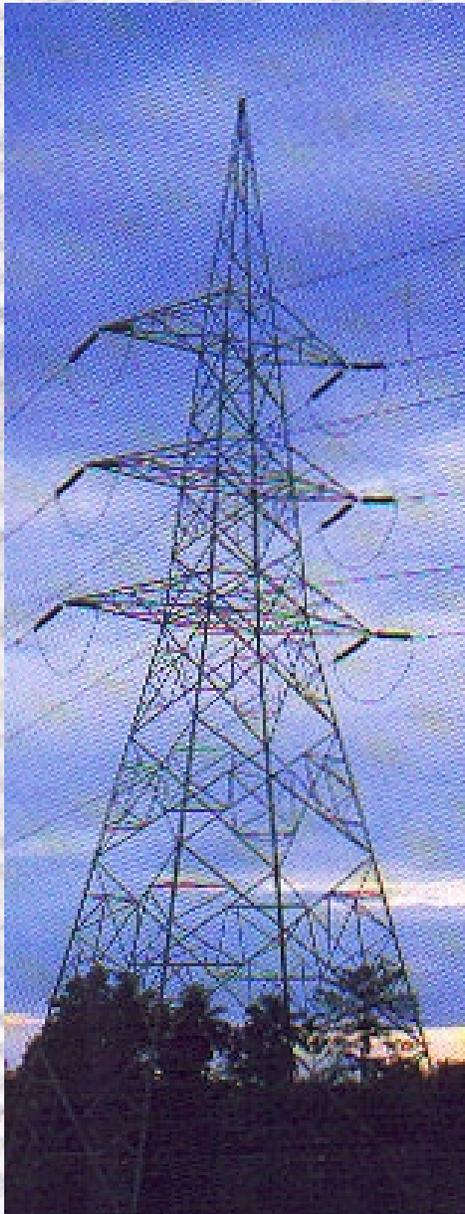
## **ISO-9001 QUALITY SYSTEMS**

POWERGRID has effectively designed, developed and implemented comprehensive policy for Quality Systems in all facets of Project management. Today, it is the only Indian Power Utility bestowed with ISO-9001 Certification for execution of 400 KV turnkey project.

## **TECHNOLOGY**

POWERGRID is committed to adopt state-of-the-art-technologies in power

transmission. In this direction, POWERGRID has undertaken implementation of 800 KV EHV transmission system, which will help in transferring large blocks of power and in conserving right-of-way, upgrading and uprating the existing transmission system to enable transfer of large quantum of power with minimum additional cost of transmission. The other technological areas of crucial importance include the Unified Load Despatch and Communication facilities, HVDC back-to-back-system, large capacity long distance HVDC bipole, series compensation on existing



lines to increase the power transfer capabilities, phase shifting transformers to adjust flow of power in parallel circuits to improve the transient & dynamic performance of the system, flexible A.C. transmission systems, Hotline maintenance, etc. POWERGRID also has plans to diversify in the area of Telecommunication utilising its existing infrastructure, which will help in making available such facilities at low incremental cost.

## **BUSINESS DEVELOPMENT & CONSULTANCY**

Company has made great strides in its field of Consultancy and bagged number of project contracts worth about Rs 25 crores, which include among others the Total turnkey Consultancy Contract of West Bengal Power Development Corporation Ltd. (WBPDCL), Calcutta, for the transmission system of Bakreshwar Thermal Power Project (5x240 MW).

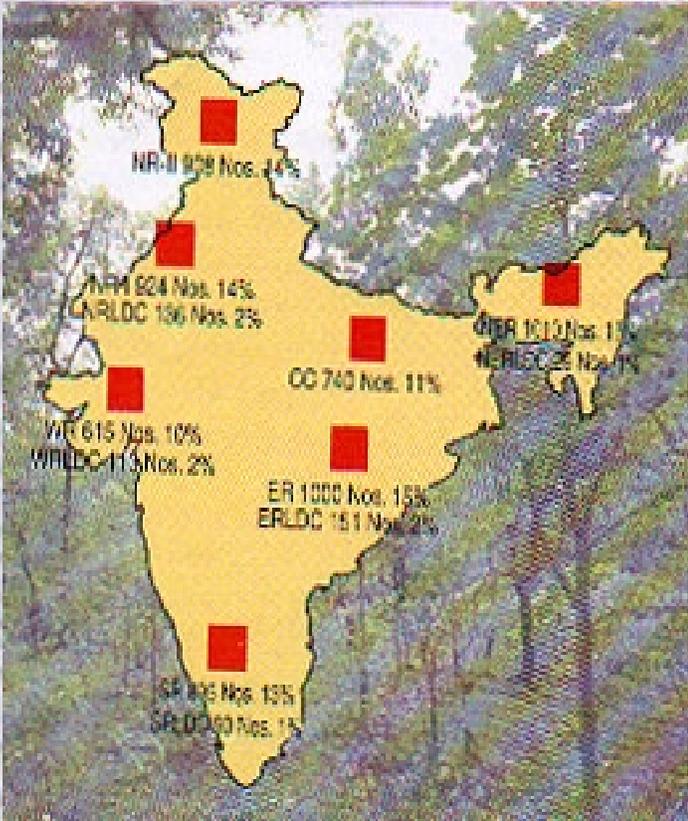
Based on POWERGRID's Core Competency in Procurement & Contracts Management and implementation of the transmission system, the World Bank has recommended POWERGRID, for implementation of the transmission system associated with the Upper Indravati Project of Orissa State Electricity Board (OSED) along with M/s Monenco, USA, Canada, Under the Reform Consultancy Contract.

## **AWARDS & RECOGNITIONS**

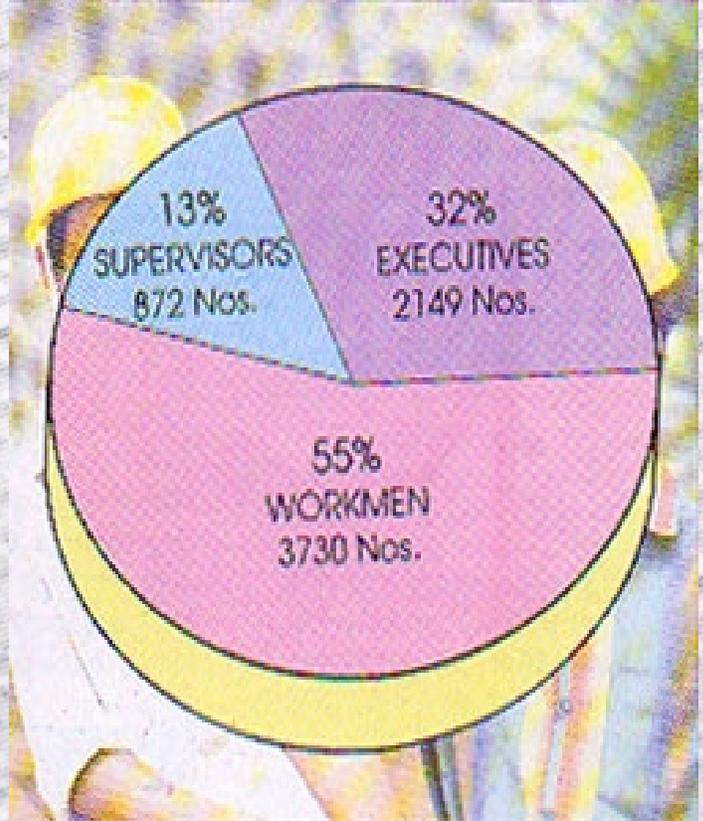
POWERGRID has achieved "Excellent Performance" rating against targets of MOU with Ministry, for the last 3 consecutive years. As a recognition of the outstanding contribution made by POWERGRID in the field of Human Resources Development, the prestigious "ARTDO- Asia Pacific Human Resources Development Award" has been awarded to POWERGRID. The award was open to countries in the Asia-Pacific region as delineated by the Economic and Social Commission for Asia and the Pacific (ESCAP)

## MANPOWER PROFILE

### REGIONWISE



### CATEGORY WISE



Further, it is a matter of great pride for POWERGRID that its seven employees won the prestigious "Prime Minister's Shram Shri Awards consecutively for three years, for their exceptional zeal and enthusiasm towards work.

### SOURCING OF FUNDS

Many international financial institutions like the World Bank, Asian Development Bank (ADB), Overseas Economic Cooperation Fund (OECF), Japan, European Investment Bank (EIB) and others have expressed their full confidence and extended funding to the tune of Rs. 6,000 crores.

They have also indicated Rs. 6,000 crores for funding POWERGRID's ongoing and future projects which

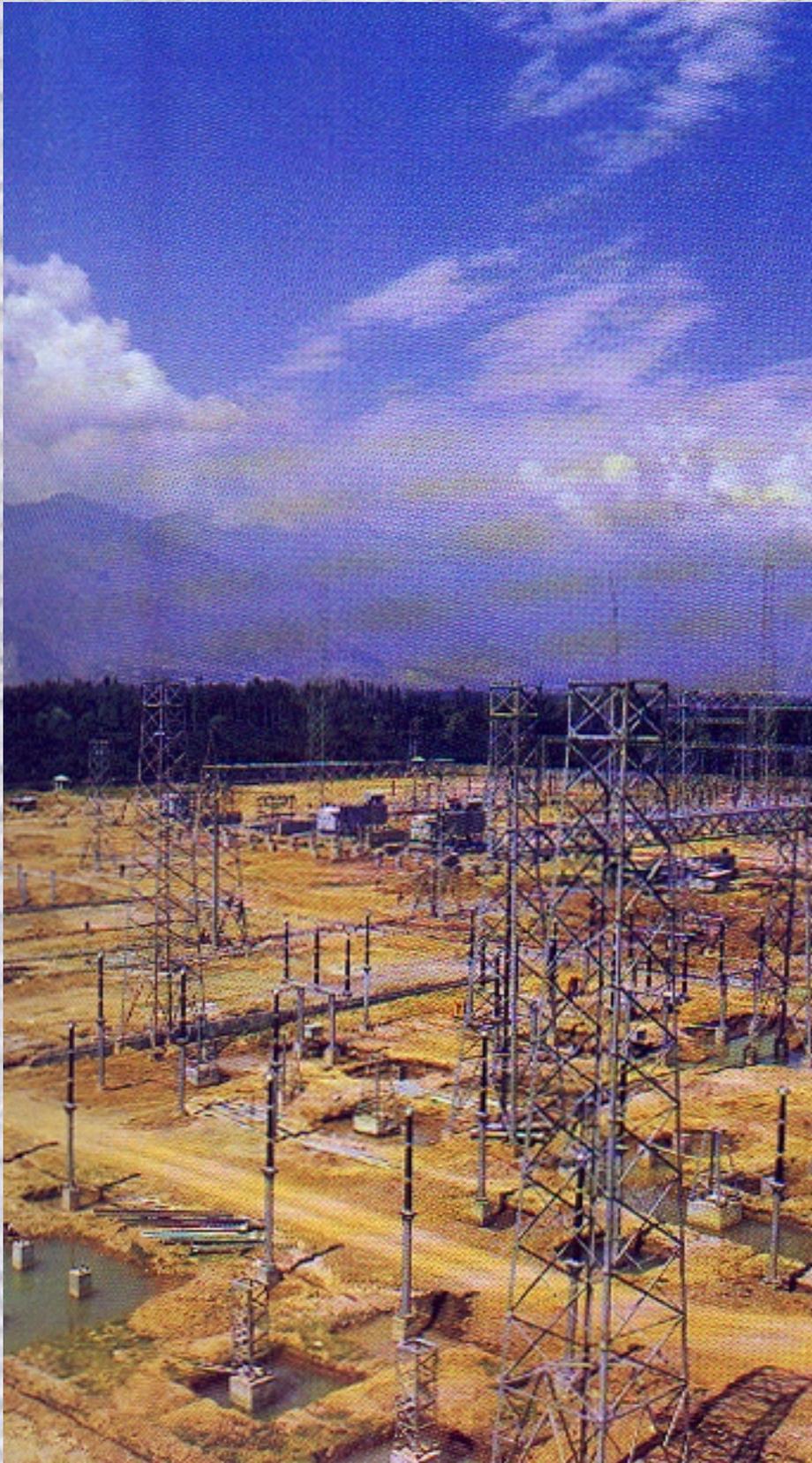
includes 2nd loan from the World Bank, on a time slice basis, amounting to around US \$ 1.2 billion (Rs.4,200 crores) for a basket of projects.

In addition to sourcing of funds from the International funding agencies, POWERGRID has also tapped the Domestic Debt market. Till September 96, POWERGRID has successfully raised Rs.1,050 crores by issuing Power Bonds and it proposes to issue another Rs.250 crores worth of Bonds during 1996-97.

### POWERGRID LONG TERM PERSPECTIVE

The Long term perspective of POWERGRID entails that it will be a "facilitator-cum-change Agent" in restructuring the Indian Power Sector.

Towards this, POWERGRID will have business areas, namely Transmission Services, System Operation, Energy Accounting and System Administrator and Facilitator in Energy Trading. POWERGRID plans to promote creation of Regional Power Pools in all the power regions of the country, on a voluntary cooperation basis, of public and private utilities, for benefits of the pool members. POWERGRID envisages the concept of "Joint Network Operator" with SEBs for integrated regional system planning. Under this concept, SEBs will remain responsible for their investments and would own, maintain & operate their own lines & sub-stations. POWERGRID's role would be of a transparent Grid operator and would evolve as a facilitator for scheduling & dispatching and settlement services.



## **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 sound commercial principles.

## **OBJECTIVES**

The Corporation has set following objectives in line with its mission :  
Efficient operation and maintenance of transmission systems.  
Strengthen Regional Power Grids and establish Inter Regional links leading to formation of National Power Grid.

Establish/augment Regional load dispatch centres and communication facilities.

Introduce rational tariff structure for exchange of power.

Establish Power Pools to facilitate exchange of power between States/Regions leading to formation of National Power Grid.

Achieve constructive cooperation and build professional relations with stakeholders, peers and other related organizations.





**Shri Arun Gupta**



**Shri A. L. Jaggi**



**Shri R. P. Singh**



**Shri R. Natarajan**



**Shri R. K. Madan**



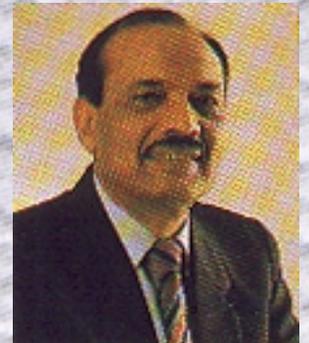
**Shri S. R. Shivrain**



**Shri Ajay Dua**



**Shri K. Ramanathan**



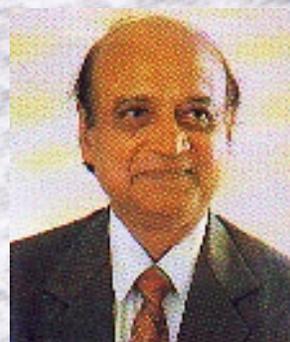
**Shri R. K. Narayan**



**Shri S. C. Parakh**



**Shri S. K. Chawla**



**Shri H. C. Mital**



**Ms. Gayathri  
Ramachandran**



# BOARD OF DIRECTORS

**Shri Arun Gupta** (Assumed Charge w.e.f. 30.1.96)  
(Chairman & Managing Director)

**Shri A. L. Jaggi** (Assumed Charge w.e.f. 7.12.93)  
(Director - Operations)

**Shri R. P. Singh** (Assumed Charge w.e.f. 11.9.95)  
(Director - Personnel)

**Shri R. Natarajan** (Assumed Charge w.e.f. 12.7.96)  
(Director - Finance)

**Shri R. K. Madan** (Assumed Charge w.e.f. 20.8.96)  
(Director - Projects)

**Shri S. R. Shivrain** (Assumed Charge w.e.f. 11.1.95)  
(Part Time Director)

**Shri Ajay Dua** (Assumed Charge w.e.f. 6.12.95)  
(Part time Director)

**Shri K. Ramanathan** (Assumed Charge w.e.f. 9.1.96)  
(Part Time Director)

**Shri R. K. Narayan** (Superannuated on 31.7.95)  
(Former Chairman & Managing Director)

**Shri S. C. Parakh** (Superannuated on 31.7.96)  
(Former Director - Projects)

**Shri S. K. Chawla** (Superannuated on 31.8.95)  
(Former Director - Personnel)

**Shri H. C. Mital** (From 3.12.91 to 1.11.95)  
(Part time Director)

**Ms. Gayathri Ramachandran** (From 27.6.95 to 6.12.95)  
(Part time Director)

**Company Secretary**  
Shri P. D. Tuteja

**M/s Umamaheshwar Rao & Co.,**  
12-B, Skylark Apartments,  
Basheer Bagh,  
Hyderabad - 500 029

**Statutory Auditors**  
**M/s Rasool Singhal & Co.,**  
R-402, Anupam Apartments,  
Arjun Nagar,  
New Delhi

**M/s B.M. Chatrath & Co.,**  
21, Old Court House Street,  
Calcutta - 700 001

## Bankers

- Indian Overseas Bank • Union Bank of India • Bank of Baroda • State Bank of Hyderabad
- State Bank of Travancore • State Bank of India • State bank of Patiala • State Bank of Bikaner & Jaipur
- Central Bank of India • Corporation Bank • Canara Bank • Oriental Bank of Commerce
- Syndicate Bank • Dena Bank

**Registered Office :** Hemkunt Chambers, 89, Nehru Place, New Delhi - 110 019







## CHAIRMAN'S SPEECH



### Gentlemen,

I take great pleasure in welcoming you to the Seventh Annual General Meeting of POWERGRID. Last year can certainly be qualified as one of the successful years of POWERGRID marked with steady operation, consistent growth and one of new direction. Remarkable achievements have been made since we started our full-fledged business operation four years ago. Company's performance in the last year demonstrated an efficient operation and we achieved a record Turn Over of Rs. 983.58 crores. I am sure that we will be able to continue with this growth rate and next year we will be able to join the select group of companies in India with over Rs. 1,000 crores Turn Over mark. Our profit figure of Rs. 275.96 crores, also recorded quite an appreciable jump of more than 25% over the previous year's profit. Our net Asset Base and Reserves & Surplus, for the year 1995-96 at about

Rs. 8,700 crores and at Rs. 1,285.01 crores also grew at an impressive growth rates of about 18% and 46% respectively over the previous year.

Like previous years, POWERGRID is well poised to achieve an overall **"Excellent" performance rating** for 1995-96 as per the MOU targets with the ministry of Power for the 3rd consecutive year. During the year, we have commissioned 1,669 CKMs of 400, 220, and 132KV transmission lines along with 1,575 MVA of transformation capacity. The overall average line availability of POWERGRID transmission lines during the year has been 98.29% surpassing the MOU target. Further, we have constructed 1,753 CKMs of EHV lines against the MOU target of 1,700 CKMs.

With operating base today standing at 27,250 CKMs of EHV transmission lines and over 22,000 MVA of transformation capacity distributed over 53 Sub-stations, POWERGRID distinctly stands among the largest transmission Utilities in the world. We also figure as one of the six top Transmission in the world we have consistently maintained transmission system at over 98% availability. With 12,333 CKMs of transmission system presently under construction, our capacity additions in transmission system is charted for a growth rate of over 9% per annum for the next 5 Years, excluding possible further addition of transmission system for mega independent Power Producer,s (IPPs) projects.

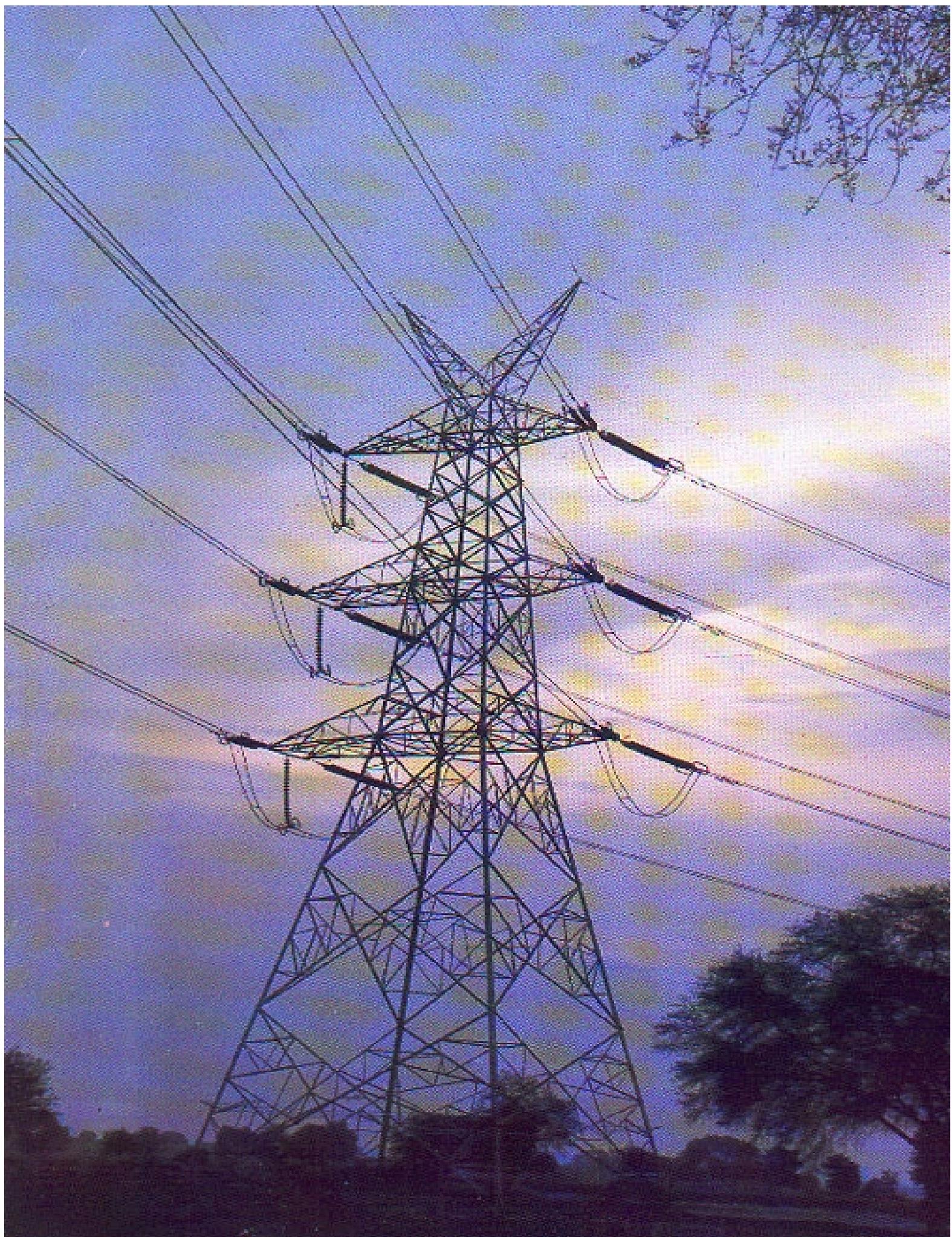
Our Project financing programme also improved this year further with the obtaining of sectoral loan of US \$ 275 million from the Asian Development Bank (ADB) and a commitment of Yen 3,538 million loan from OECF, Japan. This definitely displays a vote of

confidence from the Financial Institutions towards POWERGRID.

### **"POLICY VISION 2000"**

The liberalization of the economy and structural changes that were initiated in certain quarters of the economy about 5 years ago, appear to have not yielded expected results. Today, total loss in the Power Sector due to transformation, transmission & distribution including commercial loss stands in the range of 17-25% which is one of the highest among the developing countries and resulting in recurring heavy loss to the revenue in the Power Sector. The energy and peaking shortages are still quite high and are in the ranges of 7-8% and 16-18% respectively. Capacity addition programme expected to be achieved in the eight five year plan would be even less than 20,000 MW, hovering a growth rate of 6-7% per annum, whereas, the demand for power is increasing at geometrical progression. In the area of Transmission & Distribution the investment is also not commensurating with the capacity addition programme in the Power Sector. The total investment in T&D has been quite low at 28% of the total outlay in the Power Sector for the 8th plan. With the spiraling demand for power, the gap between the supply and demand is ever yawning. The industry is plagued with frequent power cuts, grid failures and are more and more depending on the alternative costly sources of diesel generated power.

It is needless to mention that today, providing a proper reliable infrastructure at reasonable cost is posing greatest challenge to the success of the ongoing liberalisation and economic development process. The prospect of



speedy development process. The prospect of speedy development will be at jeopardy if the right policy decisions are avoided or delayed for implementation.

Towards this end, to bring in additional investment and competition in power sector, Government of India in early 90's had already initiated restructuring of Central Power Sector coupled with host of privatisation measures, through unbundling of the Central Power Sector and creation of POWERGRID, thereby separating Generation, Transmission & Distribution. While important policies for private sector participation in Generation has been put in place, the same for transmission is under active consideration of the Government and is expected to be finalised soon. I would like to share with you some of the crucial policy decisions that are being finalised and likely to be implemented in near future.

## **JOINT VENTURES & DIS-INVESTMENT IN POWER TRANSMISSION**

To date, as per statistics more than 200 proposals of private power generation projects involving and estimated cost of Rs. 275 thousand crores have been received by Government of India. This would call for huge investment in constructing large associated transmission networks for power evacuation. This would mean that to meet such funding requirements, it is essential to allow private participation in power transmission area also. The various policy areas related to private participation in transmission which assumes immediate importance, are as follows:

### **(i) Amendment to Electricity (Supply) Act of 1948**

The E (S) Act is presently under active consideration for amendment by

GOI to include companies like POWERGRID, which is exclusively in transmission business. Towards this end, a report on the review and necessary amendments in the E (S) Act by a consultant has already been submitted which is under active consideration for further processing by Ministry. The proposed amendment to the Act would facilitate organizations like POWERGRID to take up transmission projects under joint Venture arrangement with private investors.

### **(ii) Formulation of Tariff Guidelines by GOI**

Keeping in view of the above, an approach paper outlining tariff guidelines for private sector transmission projects has been prepared by POWERGRID and the same is under finalization by CEAMOP, wherein a rational tariff structure with incentives to attract private investment in bulk power transmission as has been done in the case of private sector generation has also been considered.

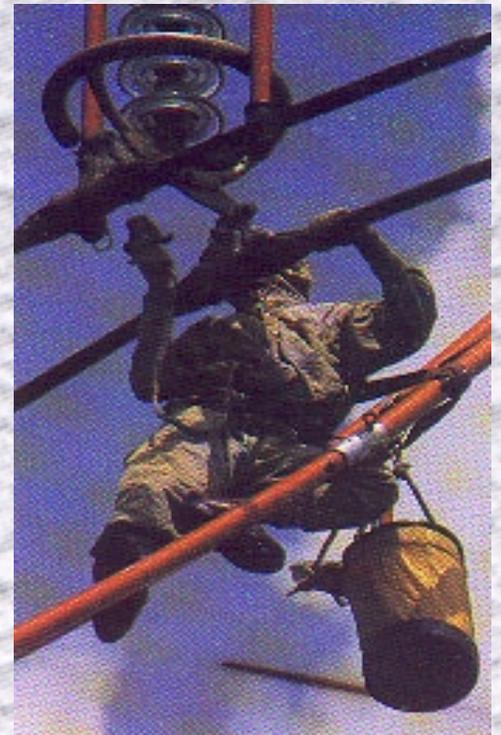
## **DEVELOPMENT OF MARKET FOR LONG TERM FINANCE**

As we move towards 21st Century, the concessional development assistance is virtually coming to an end. The market for long term finance in the country is not developed adequately to fund the huge investments required to continue with the pace of growth. Further, credible and transparent systems for inducting large scale private investments into effective infrastructure development, need to be put in place. However, country needs funds to fuel its growth in terms of infrastructure development. To overcome this predicament, organizations concentrating in infrastructure development are more and more depending on external capital to fund its projects. However, there are many hurdles to cross before

one could arrange the external capital of such proportion.

In POWERGRID, majority of the projects are financed through multilateral as well as bilateral funding agencies with limited local funding and with almost nil budgetary support from Government. Consequently, the share of funding other than multilateral is increasing due to non-availability of budgetary support and poor fund availability in domestic market.

The foreign investors are willing to commit funds involving long maturity accompanied by sovereign guarantee. As per the present policy, GOI guarantee may be available for multilateral financing but would be extremely difficult for bilateral or other commercial funding. In absence of sovereign guarantee, corporations have to go for other commercial borrowing of shorter maturity, affecting cash flow position which in turn affects the long term expansions programs. The cost of financing thus becomes higher leading to increase in tariff for the project which



will have cascading effect on all sectors of economy.

The above situation demands a fresh look towards, possibility of extending Government guarantee for bilateral or other commercial foreign loans for infrastructure projects taken up by organizations like POWERGRID. This will help POWERGRID during the intervening period, to keep its project investment programme going while the present capital market matures up for the long term finance.

## **REGULATORY MECHANISM/ INDEPENDENT REGULATORY BODY**

The restructuring and reform process which the Indian power sector is

There is a need for establishment of an independent regulatory body in power sector which could regulate private, state and central generating, transmission and distribution projects, endorsement of bulk power transmission tariff, establishment of standards and inspection, and audit of compliance of such laid down statutory provisions.

While formation of Independent Regulatory Body is under active consideration by Ministry of Power which will set standards and implement regulatory mechanisms in the Indian Power Sector, Government of India may, in the intervening period, choose the best candidate organization among the existing key players in the Power Sector, qualified to take up the role of a Regulator.

large network with possibilities of inter-regional link, etc. As per the present mandate, development of such mega IPP project is proposed through POWERGRID, NTPC & CEA. Whereas CEA is to identify the potential sites which have the requisite infrastructure and where site development has gone through the initial phases, "in principle" Environmental & State clearances acquired, fuel and water linkages available, etc. Thereafter, NTPC is to prepare a Feasibility Report, establishing the viability of the project and estimate capital cost requirement along with its tariff that the SEBs may have to pay. POWERGRID will then undertake selection of IPPs through International Competitive Bidding (ICB) through the process of RFQ/RFP. The beneficiaries of these projects will be identified by



poised for cannot be sustained unless requisite regulatory mechanisms characterized by its "Independence" supplemented with openness, clear accountabilities and adequate information availability is in place. In addition to open decision making process there must be means for enforcement of bringing in reality check for political and economic interest essential for an effective regulatory framework.

## **MEGA POWER PROJECTS/ (IPPs)**

Central Government has already decided to play a major role in developing mega IPPs, involving capacity of 1,000 MW or more with multiple beneficiaries which involve construction of associated transmission system of

Ministry of Power in consultation with POWERGRID keeping in view power deficits prevailing in various States, suitability of the State from the point of view of the project location and economics.

In addition to selection of IPPs, POWERGRID is to provide the transmission facilities for evacuation of power from such projects and transferring the

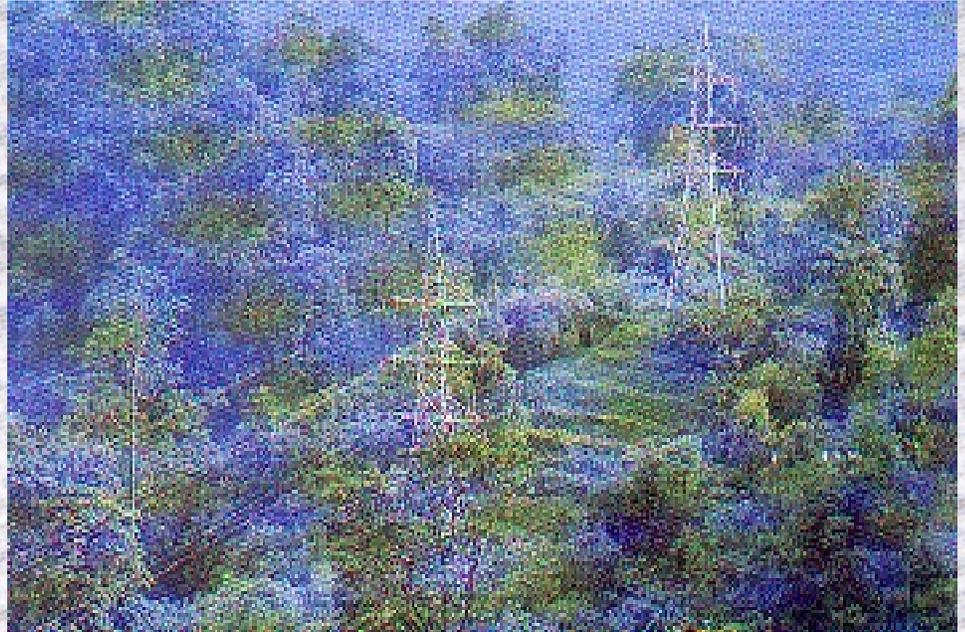
shares tied up to the concerned SEBs.

Further, in recent times, a number of project sponsors with proposals for generating projects of smaller capacity, like 100 MW, 200MW, 500MW etc. of IPP stations supplying power across the states are also approaching POWERGRID for meeting their power evacuation requirements either through POWERGRID's existing grid network or by augmenting the existing grid wherever necessary. This has raised additional dimensions to various issues. The issue of redefining the category of Mega Power Projects of IPPs/Pvt power developers, sharing the cost of augmentation, issue of commercial arrangements between the beneficiaries using the said grid network for their evacuation etc., are to be deliberated upon in detail before POWERGRID could venture into such arrangements.

In view of the above, there is an urgent need to develop policy guidelines for sharing of the transmission system cost owned by the various SEBs/ POWERGRID and being utilized for evacuation of IPP generated power, the commercial arrangements, and other related areas.

## TRANSMISSION SYSTEM APPROVAL PROCESS

While initial policy guidelines for Mega IPP projects of more than 1,000



MW is already in place, with responsibility of developing such projects shared among POWERGRID, NTPC & CEA, the aspect of investment approval process for the associated transmission schemes which will be taken up by POWERGRID need attention. As the completion schedule envisaged for IPP projects is quite short-less than 4 years, the matching transmission to be executed by POWERGRID would be found lagging behind such generation projects due to existing lengthy procedures involved in obtaining investment approval of Government of India. This assumes special importance as the transmission systems associated with IPP Projects are quite mammoth and capital intensive. It calls for streamlining and shortening the appraisal/approval process involved. Guidelines may have to be formulated to ensure that both the generation & transmission projects are considered by the appraising agencies parallelly in the same time schedules and on same footing right from the beginning of investment approval process. Power to incur advance expenditure on transmission would have to be given to the administrative ministry to ensure that all base works, statutory clearances are obtained by POWERGRID well ahead to facilitate commissioning the required transmission links in time.

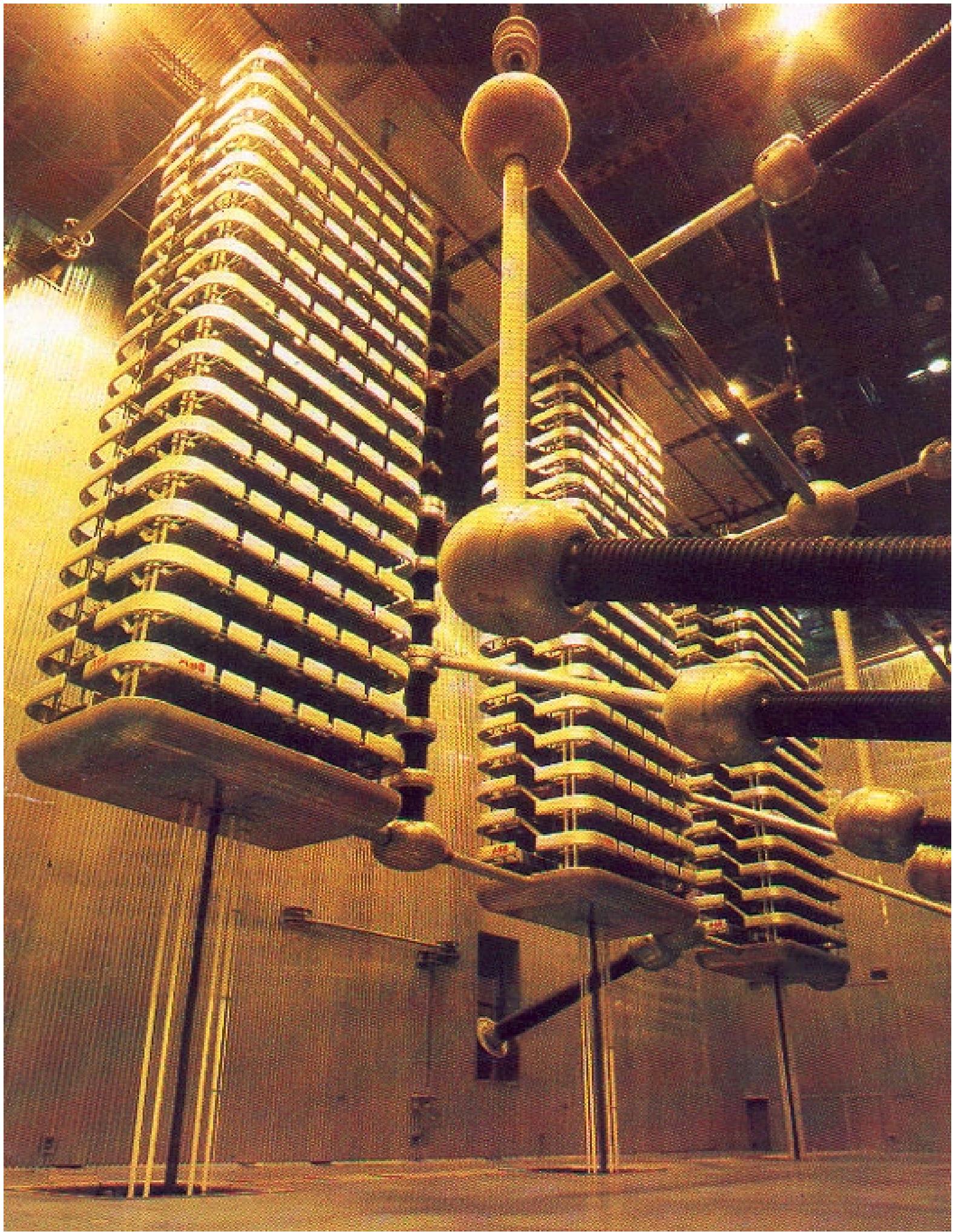
## INTO 21st CENTURY

As we progressively pursue the liberalisation measures coupled with privatisation and structural adjustments in the infrastructure sector, it is necessary that we steer clear the stumbling blocks in the eve years of the 21<sup>st</sup> Century and put in place well defined, transparent and credible policy & systems, heralding steadfast growth in the economy. I have full faith that during these years, our policy makers will be able to craft the shape of the future India quite confidently.

Arun Gupta  
Chairman & Managing Director

Place : New Delhi  
Dated : 27th September, 1996







# DIRECTORS' REPORT

To  
The Members,  
Gentlemen,

I am privileged to present to you on behalf of the Board of Directors, the 7th Annual Report on the operations of the Power Grid Corporation of India Limited (POWERGRID), together with the Audited Statements of Accounts for the financial year 1995-96.

As the transmission asset transfer from various central power utilities was effected from April 1, 1992, POWERGRID has completed four years of full fledged business operation with remarkable achievements in the areas of construction, operation as well as financial performance.

## SIGNIFICANT ACHIEVEMENTS DURING THE YEAR 1995-96

### MOU PERFORMANCE

Based on the provisional results of performance for the year 1995-96, POWERGRID again poised to achieve "Excellent Performance" rating as per its MOU with Ministry of Power, consecutively for the third year in a row

### OPERATIONAL

As on March 31, 1996, POWERGRID operates a total of 27,244 CKMs transmission lines consisting of 19,902 CKMs of 400 KV, 4,946 CKMs of 220 KV, 766 CKMs of 132 KV and 1,630 CKMs of HVDC system distributed over 53 sub-stations with 22,748 MVA of transformation capacity. The operational performance of POWERGRID transmission system has been impressive in all the five power



regions. Overall average availability of transmission lines during the year was 98.29% comparable with international standards. The state-of-the-art-Hotline maintenance technique adopted in various regions has facilitated high availability of transmission system.

During the year, POWERGRID has commissioned 1,669 CKMs of 400, 220, and 132KV transmission lines along with 1,575 MVA of transformation capacity. Major projects commissioned during 1995-96 include Mariani-Misa, Trichy-Madurai, Gandhar-Dehgam, Talcher-Rourkela of 400 KV and Dimapur-Misa of 220 KV transmission system. Further, 400 KV Kathalguri-Misa line was successfully test charged at 220 KV level.

### SYSTEM OPERATION

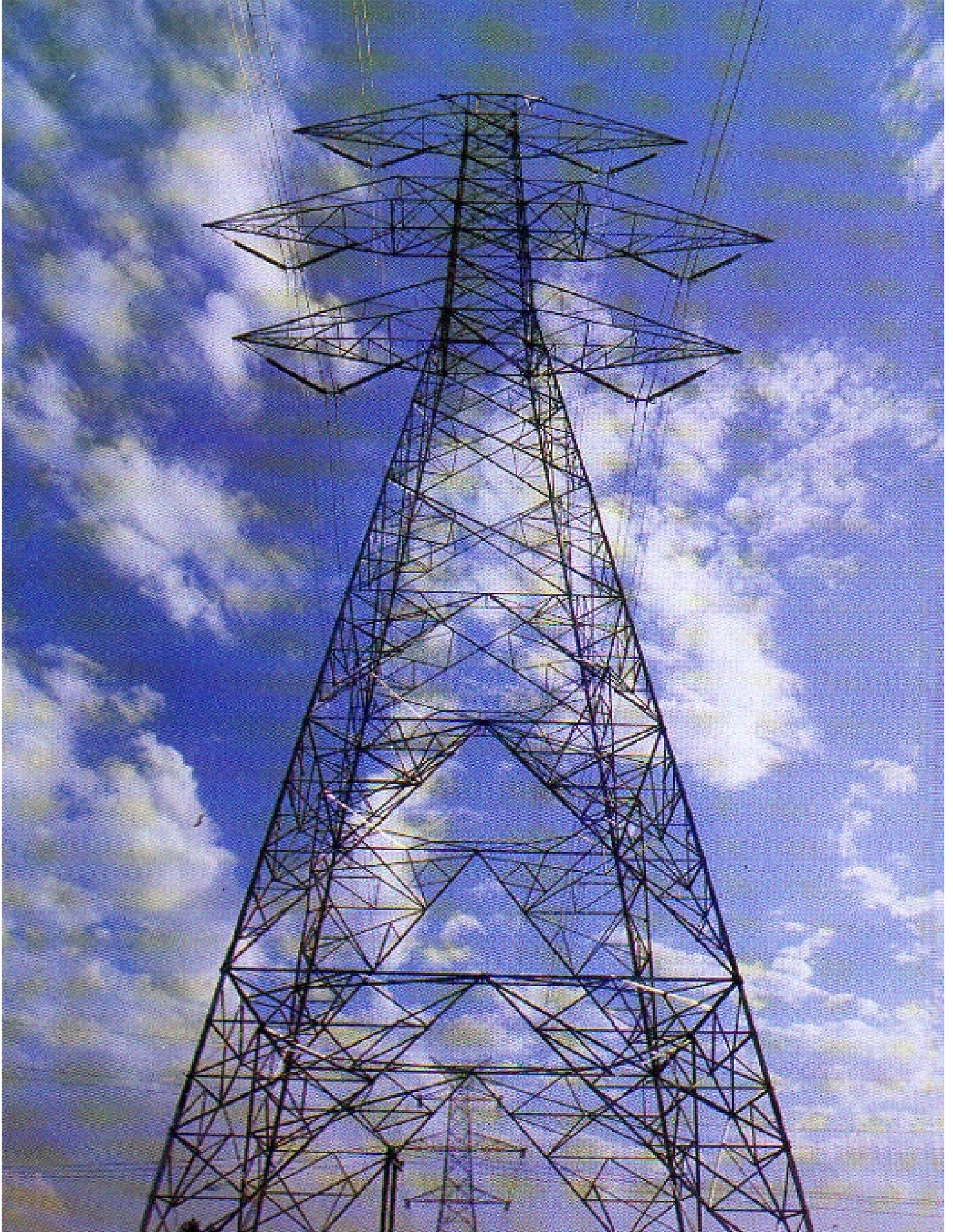
With the taking over of RLDCs in Western and Northern Regions, POWERGRID has become System Operator of Entire Indian Power System. Action has been initiated to bring in the uniformity in operation of all the

regional grids. To this effect, POWERGRID has prepared operating Procedures for all the five regions. Discussions have been initiated to implement these procedures with the constituents. This action when completed will optimize the regional grid operation. POWERGRID being a thinking and learning organization, shared the expertise of system operators of various regions, in its endeavour to achieve efficient and economic grid operation.

### CONSTRUCTION

Construction performance for the year 1995-96 has also been noteworthy. POWERGRID has constructed 1,753 ckt. kms. of transmission lines surpassing the target of 1,700 ckt.kms. and installed 5 transformers of 315 MVA each.

Presently, about 12,333 ckt. kms. of transmission lines with voltage levels varying from 132 KV to 800 KV and 25 substations including bays, are under construction which are expected to be



completed progressively during the next 5 years to match with the commissioning of generation projects.

## FINANCIAL

Financial performance of the Corporation has also been commendable for this financial year 1995-96. During the year, Corporation has earned a net profit of Rs. 275.95 crores against a total Turn Over of Rs. 983.58 crores, thereby registering an increase of 33% and 21.63% over the previous year respectively. Corporation's Gross Assets have also increased from about Rs. 5,066 crores (1994-95) to about Rs. 5,492 crores (1995-96).

The paid up capital of the company as on 31st March, 1996 stands at Rs. 2,992.24 crores (including Rs. 162.89 crores of share capital deposit) as against Rs. 2,972.24 crores (including Rs. 222.38 crores of share capital deposit) as on 31st March, 1995. The debt-equity ratio of the Corporation during the financial year, has remained satisfactory at 0.91 : 1.00 increasing only marginally over the last year ratio of 0.81 : 1.00.

## Dividend

The Directors recommended a lump sum dividend of Rs. 10 crores for the

year ended 31st March, 1996. Accordingly, a provision of Rs. 10 crores towards proposed dividend for the Financial Year 1995-96 has been made in the books of accounts. The dividend shall be paid to the President of India, after its approval by the shareholders in the Annual General Meeting.

## Transfer of Profit to Reserves

Profit earned for this year was Rs. 275.95 crores. Since the Corporation is not having any taxable income, no provision for tax has been made. However, a provision of Rs. 50,000/- has been made for Wealth Tax. An amount of Rs. 190 crores has been transferred to General Reserve, Rs. 72 crores to Bonds Redemption Reserve and Rs. 2 crores has been transferred to Self Insurance Reserve Account.

## BUDGET UTILIZATION

POWERGRID has been so far consistently meeting the budget allocation targets in the 8th plan. However, during the financial year 1995-96, POWERGRID has utilized Rs. 1,468.58 crores against a budget allocation of Rs. 1,516 crores resulting in a marginal shortfall of Rs. 48 crores. Accordingly, the actual budget

utilisation works out to 96.87%. The major reasons for this marginal shortfall include delay in supply of equipments, slow progress of civil works in Converter area for Chandrapur HVDC B/B project, delay due to repeated failures of the towers in type testing and law & order problem in some regions.

Though there has been a marginal shortfall in budget utilization, POWERGRID surpassed the external assistance utilization, target of Rs. 711 crores for the year and utilized Rs. 834 crores, which is a remarkable achievement.

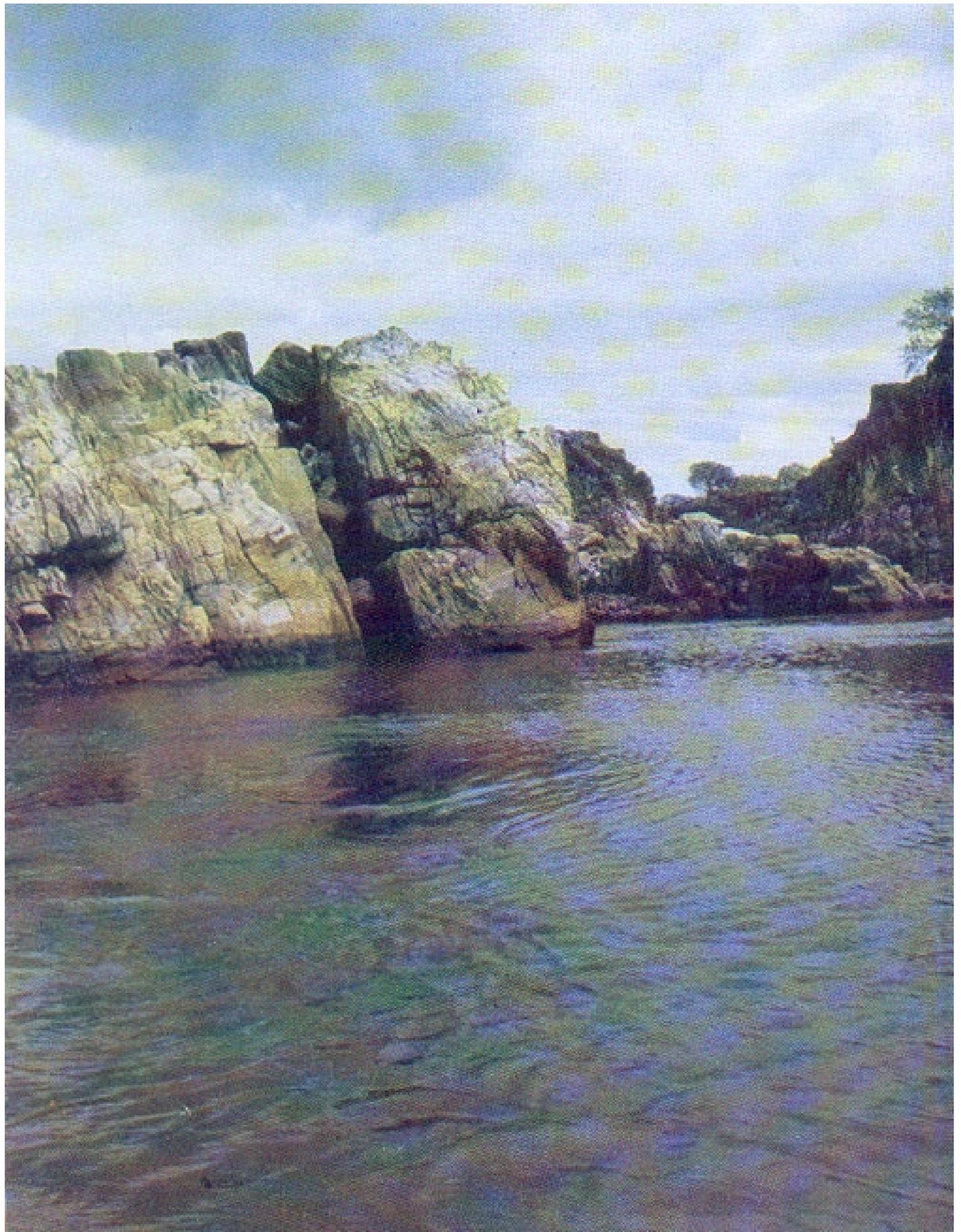
## VIII TH FIVE YEAR PLAN

POWERGRID has utilized a total of Rs. 3,579 crores till March 31, 1996 against the total approved 8th Plan allocation of Rs. 4,539 crores. For the terminal year of 8th Plan (1996-97), POWERGRID has proposed an outlay of about Rs. 1,500 crores.

## COMMERCIAL

During the Financial Year (FY) 1995-96, Gross Turn Over owing to Wheeling & Sale of Power is Rs. 968.55 crores as against Rs. 796.33 crores during FY 1994-95, registering an increase of





21.63%. The transmission charges billed amounted to Rs. 861.19 crores as compared to Rs.716.86 crores during the last year, thereby registering an increase of 20.13%. Similarly, there has also been increase in the sale of energy purchased from Chukha from Rs. 79.47 crores in FY 1994-95 to Rs. 107.36 crores in FY 1995-96. The increase in Turn Over for this year is on account of increase in sale of energy from Chukha, new capacity additions and increased Foreign Exchange Rate Variation (FERV) bills for FY 1995-96. During the same FY, realization from debtors is Rs. 870.75 crores and works out to 89.90% of the billed amount of Rs. 968.55 crores.

Total amount of debtors owing to Wheeling and Sale of Power as on March 31, 1996 is Rs. 406.13 crores which is an increase of Rs. 109 crores over previous year's debtors. This is primarily due to delay in notifications of tariff amounting to Rs. 178.20 crores comprising of Foreign Exchange Rate Variation (FERV) for the year 1995-96 (Rs. 42.97 crores), additional capitalization for the year 1993-94 ( Rs. 11.98 crores) and NHPC transmission line tariff (Rs. 123.25 crores). Though POWERGRID have raised bills to the beneficiaries pending such notifications, beneficiaries have not released full payment contributing towards increase in amount of outstandings.

Further, Rs. 74.64 crores towards March 1996 bills, realized in the month of April 1996, has been accounted for in the FY 1995-96. This together with the bills outstanding or accounts of non-availability of notification of tariff, amounts to Rs. 252.84 crores. This amount if reduced from the total debtors of Rs. 406.13 crores, the balance debtors works out to Rs. 153.29 crores which is equivalent to 1.9 months of average monthly billing.

It may be mentioned that continu-



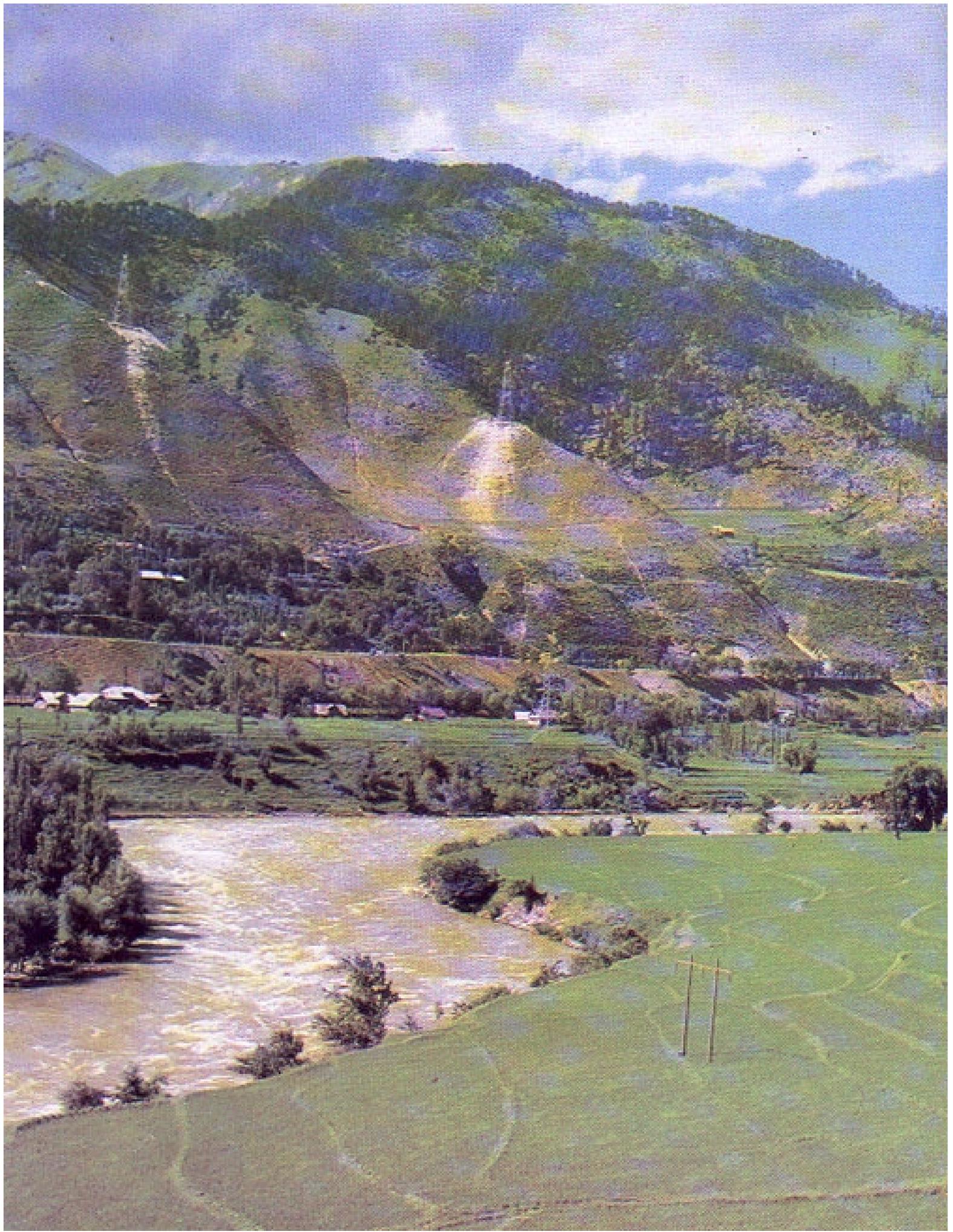
ous efforts by POWERGRID and with the sustained support of the concerned Ministers and various other agencies, we could resolve some of the long pending issues/disputes in commercial area. Out of the above outstanding, tariff notification for an amount of Rs. 105.69 crores against total outstanding of Rs. 178.20 crores towards ex-NHPC transmission system has been issued on June 14, 1996. Similarly, Umpires appointed for the Northern Region and Eastern Region have also given their award in respect of the disputes raised by the SEBs in the regions concerned, in the month of May 1996. Further, tariff notification towards Foreign Exchange Rate Variation (FERV) bills for FY 1995-96 has also been issued in the month of August 1996. As these notifications/decisions have been declared after the financial closure of POWERGRID accounts, the position of debtors as indicated above for the year 1995-96

remains unaffected.

### **Steps taken to reduce outstanding dues**

With POWERGRID launching major drive for timely recovery of monthly bills, it has been possible to stall the accumulation of arrears. The vigorous follow up at various levels and constant efforts by Regional Offices and Corporate Centre, have yielded favourable results. This is clearly reflected in the trend of monthly collections which have gradually improved and sustained at 100% from December 1994 onwards for undisputed billings. The marked improvement in realization has also been acknowledged by various agencies and commended by International Financial Institutions like World Bank, ADB, etc.

In order to contain the building up of arrears, certain concrete actions including issue of notices and regulation of power supply to major defaulters were taken. These



measures have been fruitful in establishment of LCs by the beneficiaries as well as liquidation of arrears. A strategy to keep constant check on the defaulting States has been evolved to ensure maximum realization on a sustained basis. Continuous efforts are being made to get the full LC coverage for monthly billing amount.

## BUSINESS DEVELOPMENT

POWERGRID has made great strides in the Consultancy area. Today we are executing total turnkey consultancy contract of worth about Rs. 24 crores of West Bengal Power Development Corporation (WBPDCL) for design, Engineering, procurement & supervision of the transmission system for evacuation of power from Bakreshwar Thermal Power Project, which is being funded by OECF, Japan. POWERGRID has also been engaged as sub-consultant by Merz & Maclellan, UK for Power Sector Reform project being undertaken by Government of Orissa/OSEB with assistance of ODA, UK.

POWERGRID has bagged Consultancy projects from Delhi Electric Supply Undertaking (DESU), Karnataka Electricity Board (KEB) and Andhra Pradesh State Electricity Board (APSEB) for various projects of turnkey execution of sub-stations Design & Engineering of EHV sub-stations and Quality Assurance & Inspection services of 400/220/132 KV sub-stations & equipments.

Further, negotiations are on with KEB for a contract for operation & maintenance of 400KV transmission line and with DESU for total turnkey consultancy contract for SCADA systems. Few more projects from various utilities are also under various stages of negotiations.

## POWERGRID PROJECTS

The projects undertaken by POWERGRID are broadly classified as Generation Linked Projects power

evacuation and Grid Strengthening Projects-Inter-regional links and Unified Load Despatch & Communication Schemes, etc. Further, in view of the entry of the various large Independent Power Producers in the Power Sector, POWERGRID is also contemplating possible investments towards imple-



mentation of transmission projects related to IPP projects. The details of the specific projects being undertaken by POWERGRID under various categories, are as follows :

## EXISTING PROJECTS

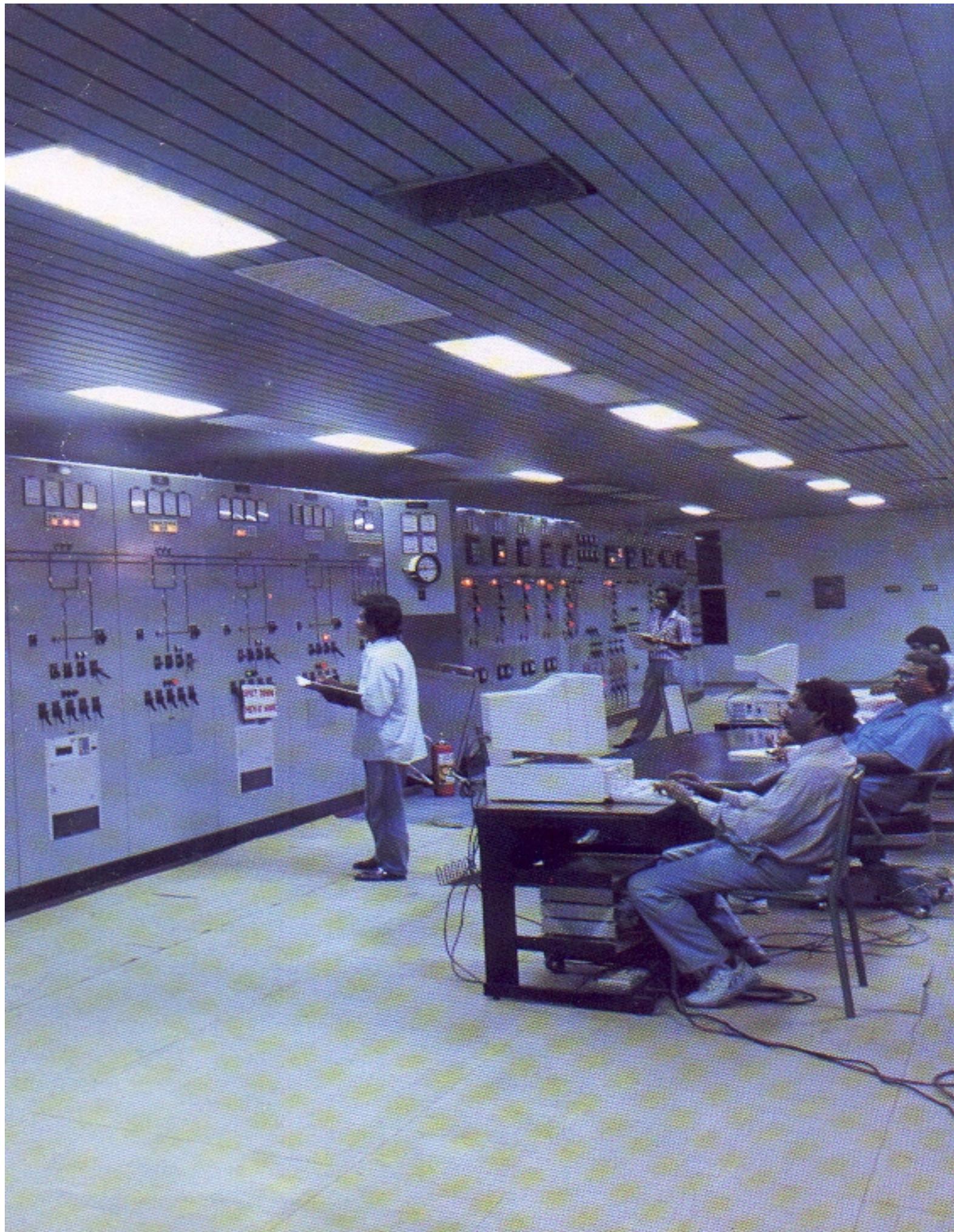
As mentioned earlier, presently POWERGRID operates about 27,244 CKMs of EHV transmission lines consisting of 400 KV, 220 KV, 132 KV and HVDC system, along with over 50

Sub-stations having a total transformation capacity of 22,748 MVA. This EHV transmission network is spread across the entire length and breadth of the country, and today, POWERGRID possesses one of the largest EHV power transmission systems in the world.

## ONGOING PROJECTS

At present, 12,333 CKMs of transmission lines are under construction by POWERGRID, consisting of 569 CKMs of 800 KV, 8,966 CKMs of 400 KV, 1,624 CKMs of 220 KV, and 1,174 CKMs of 132 KV, lines to be distributed over 25 Sub-stations. Some of the important generation linked transmission projects, under implementation by POWERGRID include, Nathpa-Jhakri (400 KV) and Kathalguri (400 KV), Vindhyachal Stage-II (400 KV), Kayamkulam (220KV), RAPP-B (220 KV) and Unchahar (220 KV), Ganga Valley (Thri) (800 KV), etc. The Grid Strengthening schemes include Kishenpur-Moga (800 KV), Vindhyachal additional (400KV) and NER Augmentation (132 KV) transmission systems.

The inter-regional links will facilitate to integrate the regional grid systems into the national grid, establish inter-regional flow of surplus power, avoid frequent grid collapses and lead to the achievement of a nation-wide optimal hydrothermal mix. Keeping in view the importance of these inter-regional links in the development of the National Power Grid, POWERGRID has drawn up a programme for interconnecting the various power regions of the country through these links. Presently, POWERGRID has an existing HVDC back-to-back link Vindhyachal (2x250 MW), which connects the Northern and the Western grid systems. The other HVDC inter-regional link projects, under execution, are (i) Chandrapura HVDC back-to-back project (2x500 MW), connecting Western and Southern Regions and (ii) Vizag HVDC back-to-back project (1x500 MW), connecting Eastern and Southern Regions.





Load Dispatch and Communication facilities is one of the basic pre-requisites for economic despatch of power between Regions/States leading to effective and efficient on-line management of Regional and National Power Grids. POWERGRID has undertaken implementation of state-of-the-art Unified Load Despatch and Communication (LD&C) facilities in all the Power Regions of the country. At present the implementation of LD&C facilities is in progress in Southern & Northern Regions.

### **FUTURE PROJECTS**

Keeping in pace with the development of Indian economy vis-a-vis the ever increasing demand of power, POWERGRID has drawn up its investment plans to enhance Regional and National Power Grids.

In this endeavour, some of the crucial generation linked transmission projects proposed to undertaken by POWERGRID which are presently at various stages of approval, include the transmission system associated with Talcher-II (400 KV), Dhauliganga (400 KV), Kawas-II (400 KV), etc.

The inter-regional HVDC back-to-back projects, likely to be undertaken by POWERGRID in the near future, include the Biharshariff-Rihand HVDC back-to-back (1x500 MW) inter-regional link between Northern and Eastern Regions and a synchronous inter-regional link between Eastern and Western Regions.

The North-Eastern Regional Load



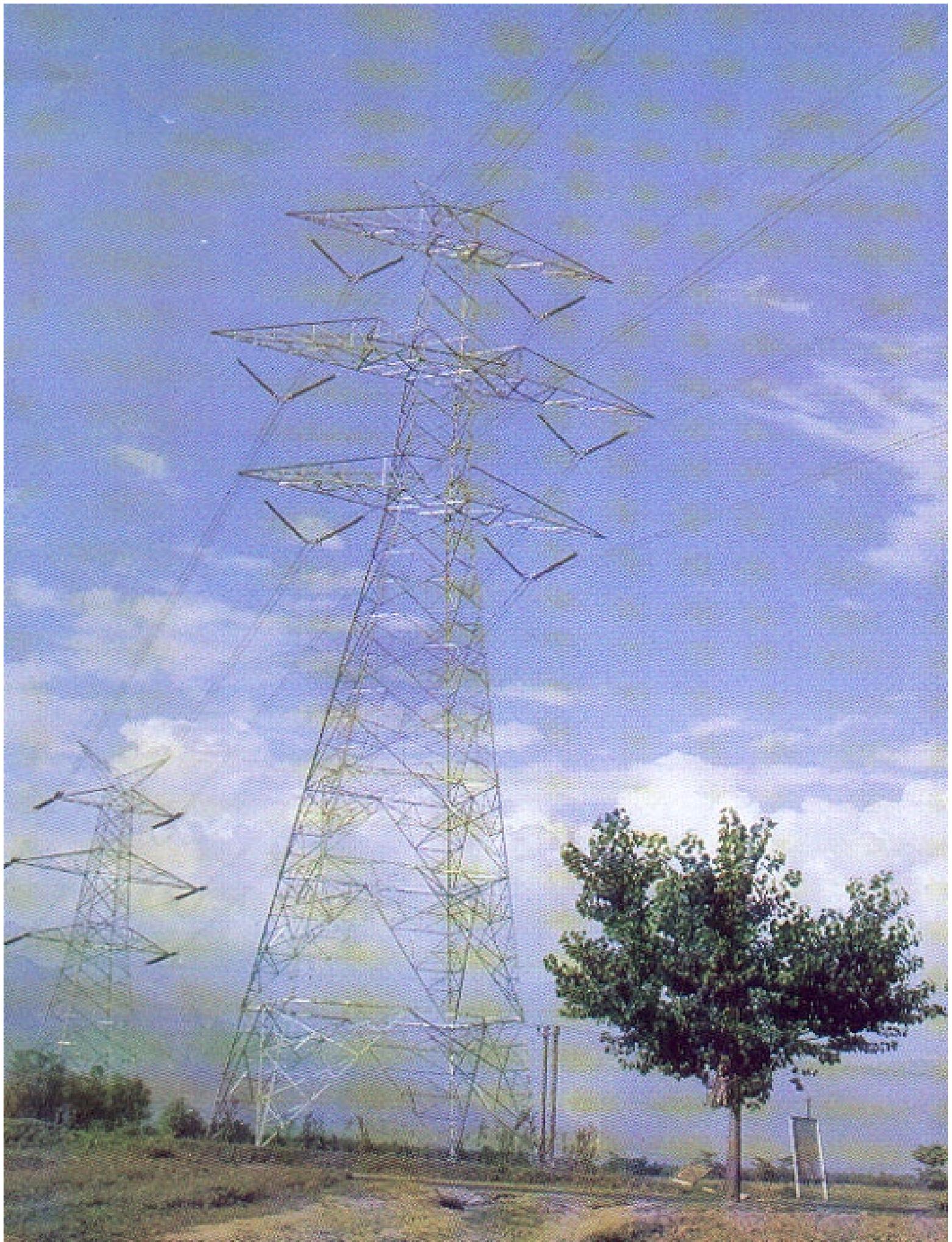
Despatch and Communication (NE-RLDC) project is at an advanced stage of investment approval. In addition, POWERGRID also plans to undertake the implementation of the Western (W-RLDC), Eastern (E-RLDC) and National Load Despatch & Communication (National-LDC) Schemes, in the near future.

POWERGRID has drawn out ambitious investment plans in the coming plan periods. The estimated 9th Five Year Plan investment scenario works out to about Rs.11, 000 crores. Further, with the investment requirements in developing the associated power system of the forthcoming IPP power stations, POWERGRID is also contemplating additional investment to the tune of about Rs. 12,000 crores during the 9th Five Year Plan.

### **STRATEGIC STUDIES**

POWERGRID has taken up various long term strategic studies to ensure that proper management structure & systems are in place facilitating the organizational development and growth. This would call for establishment of the most optimal corporate structure, compatible systems & processes, rationalized commercial principles, refined role of POWERGRID along with formulation of a long term POWERGRID's organizational development plan, including adoption of appropriate technology and development of system planning softwares.

To accomplish this, POWERGRID has undertaken Strategic Studies funded and supported by the World Bank in the area of "Institutional Development Study of POWERGRID", conducted by a consortium of Consultants led by Coopers & Lybrand, U.K. This involved detailed study on refinement of Role of POWERGRID in the Indian Power Sector, mechanism for Power Pooling and Organizational restructuring of POWERGRID. Necessary actions are being taken to implement the recommendations of this study.



POWERGRID by engaging M/s PTI, USA as Consultants has evolved a long term transmission plan (upto 10th Plan) which will assist in defining transmission system and the investment requirement during next 10 years. This will enable to develop the financial plan as well as explore and mobilize additional financial resources.

Further, POWERGRID was also instrumental in carrying out study under



others, have expressed their confidence in POWERGRID's capabilities to operate, monitor and construct the Regional and National power grids. They have already committed around Rs. 5,766 crores, which includes the loans transferred from the transferor organizations, and have further earmarked about Rs. 6,000 crores for financing new projects of POWERGRID.

The World Bank loan commitment today amounts to about USD \$ 1.5 billion for financing various projects of POWERGRID. This includes the World Bank direct loan to POWERGRID for an amount of US \$ 350 million for POWERGRID System Development

Project (PSDP) and the World Bank loans transferred from the transferor generating organizations to POWERGRID. The major loans which stand transferred to POWERGRID, and are being drawn, include loan for Northern Region Transmission Project (NRTP) amounting to US\$ 475 million.

Further, the World Bank has agreed "in principle" to extend the 2nd loan to POWERGRID, on a time slice concept, amounting to around US \$ 1.20 billion, in three tranches of US\$ 300-400 million each, against a basket of projects, spread in a time slice of 5-7 years. The various projects proposed to be covered under the funding of the 2nd loan of

the funding of Asian Development Bank on "Rationalization of Power Tariff & Regulatory Framework", which was conducted by ECC Inc., USA. The recommendations of the study are in advanced stages of implementation.

## **SOURCING OF FUNDS**

### **International Sources**

The International Financial Institutions have actively supported POWERGRID since its very inception. These International Financial Institutions, namely, the World Bank, Overseas Economic Cooperation Fund (OECF) of Japan, European Investment Bank (EIB), the Asian Development Bank (ADB) and







the World Bank include, RLDC Schemes of Eastern & Western Regions; Inter-Regional Links, namely, East-West & East-North Inter- Connectors; System Improvement Programmes in the Western and the Southern Regions and associated transmission systems of the Ramagundam-III, Rihand-II and other associated transmission systems of the Private Generation projects, namely, the CEPA (6x660 MW) project in the Eastern Region, etc.

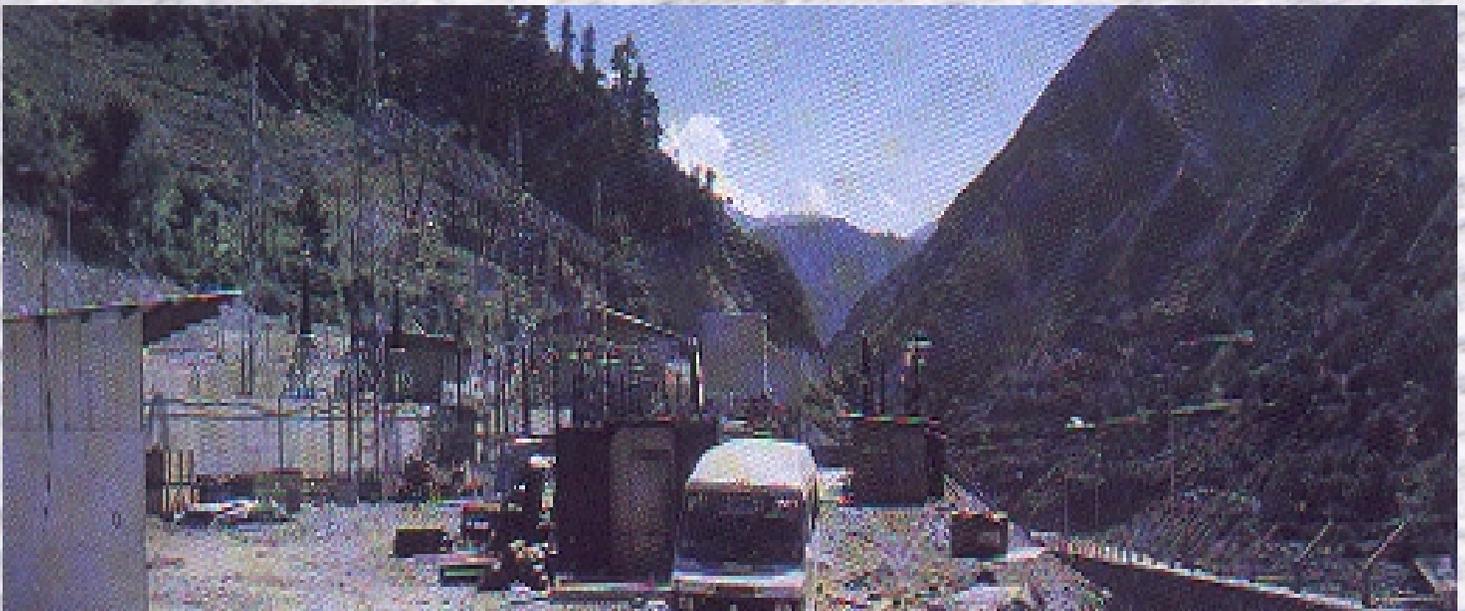
The loan negotiation with Asian Development Bank (ADB), has successfully been completed with the signing of the agreement on July 1996 for an amount of US\$ 275 million. This is the first sectoral loan sanctioned by

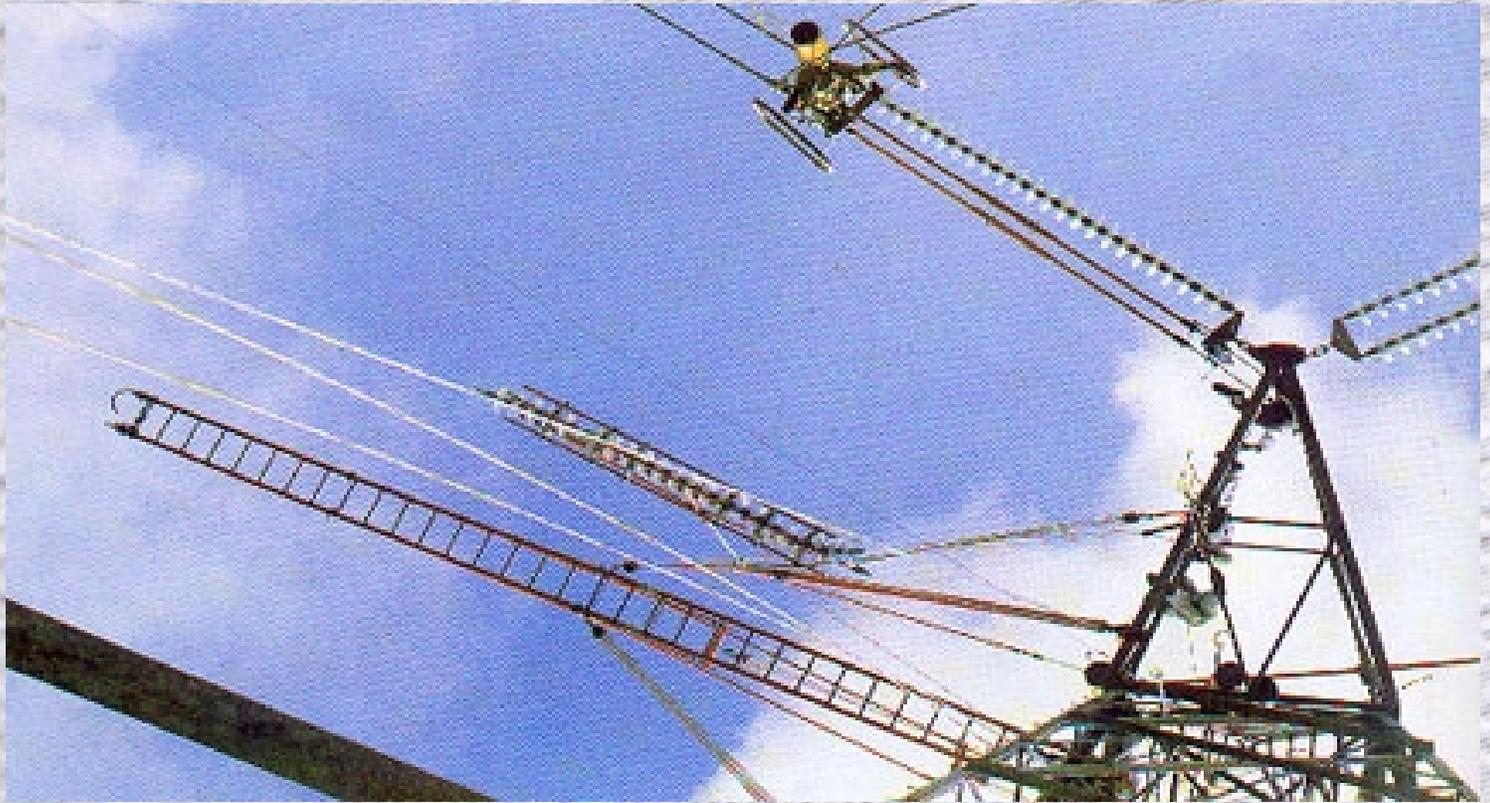
ADB to POWERGRID as also in the Indian Power Sector. The highlights of the loan is that the basket of the projects to be funded by ADB, occupy high priority by POWERGRID and GOI towards transmission development plan of the country. The major components include augmentation of transmission system in North-Eastern Region (NER), transmission system associated with Agartala, Kopili Stage-I extension, NER Load Despatch & Communication Scheme, Jeypore-Gazuwaka, Vindhyaachal Stage-II and Unchahar Stage-II. Presently, all the necessary actions have been initiated by Government of India towards loan effectiveness to facilitate drawals from this loan towards the various packages already awarded (amounting to US\$ 74 million).

The Overseas Economic Cooperation Fund (OECF), Japan has already provided a loan amounting to Yen 32.754 billion towards the implementation of transmission system associated with the Gas Power Projects of Gandhar (Yen 7.115 billion), Kathalguri (Yen 22.101billion), and Faridabad (Yen 3.538 billion). The Gandhar transmission system has since been completed

Going by the credibility of the organization and the availability of necessary expertise in engineering procurement etc. towards the implementation of various transmission projects in time, an appraisal mission from OECF, Japan had visited India for appraisal of various POWERGRID transmission projects in July 96 and have further agreed to finance Dhauliganga transmission project and Jalandhar-Hamirpur transmission project to the tune of about Yen 7.724 billion. Necessary activities have also been initiated by POWERGRID towards the various issues addressed by OECF during their appraisal mission for final loan signing, expected to be held around December 1996.

European Investment Bank (EIB) has also extended the first ever sectoral loan to POWERGRID as well as in Asia. It is co-financing the Southern Region Load Despatch & Communication (SRLDC) Project to





the extent of 55 million European Currency Unit (ECU) amounting to Rs. 198 crores.

Other Financial Institutions and Banks, such as the Overseas Development Administration, UK, the West Merchant Bank (WMB), UK, the Banque Indosuez, Paris and Credit Nationale, Paris, have extended loans and grant commitments of the order of £ 112.5 million and FFr 396 million.

Industrial Bank of Japan (IBJ) and Export-Import Bank of Japan (J-Exim) both have already financed POWERGRID projects and have shown keen interest in financing new projects worth about US\$ 400-500 million.

### **Domestic Borrowings**

Till March 31, 1996 POWERGRID has successfully raised Rs. 843 crores (including Rs. 214 crores tax free bonds) by issuing Power Bonds. During the current financial year, Rs. 207 crores of Power Bonds were raised.

### **AWARD OF CONTRACTS**

During the year, POWERGRID has awarded a total of 40 contracts which are valued at Rs. 295 crores. The average time taken for completing the evaluation of these contracts was around 4-5 months.

In line with ADB's concurrence for advance procurement action, POWERGRID had released Notice Inviting Tenders (NITs) for packages relating to various transmission projects under the proposed sector loan from ADB amounting to US\$ 190 million out of the total committed loan of US\$ 275 million. These steps would enable POWERGRID to disburse the ADB loan expeditiously.

The pre-qualifications process for EMS/SCADA packages for Unified Loan Despatch and Communication Schemes in Northern and Southern regions, was completed, concurred by the World Bank and the Bid documents were issued to bidders.

### **MATERIALS**

#### **Total Exemption of Custom Duty for "Gazuwaka HVDC B/B project"**

Total exemption of the customs duty plus additional duty on import of equipments relating to Jeypore-Gazuwaka HVDC Back-to Back project meant for inter-region transfer of 500 MW power between SR & ER has been obtained from Government of India resulting into a saving of Rs. 65 crores to the POWERGRID.

#### **Reduction of Custom Duty on Import of equipments for Transmission Line Projects**

During the year, POWERGRID made vigorous efforts with the help of MOP & MOF and was able to get reduction in the rate of basic custom duty to 20% from 25% as applicable on equipmensts/materials to be imported for transmission projects (66 KV & above). This will benefit POWERGRID and various SEBs including other power utilities in terms of reduction of cost of the project.

## Disposal of Scrap

Scrap of conductor bits and other unusable materials in the various Regions of POWERGRID amounting to value of Rs. 3.35 crores has been disposed off during the current financial year. This brings the total value of scrap disposed off since formation of POWERGRID to approximately Rs. 8.5 crores.

## Liquidation of Surplus Inventory

Utilization of Surplus Inventories to the tune of Rs. 24.85 crores, was achieved during April, 1995 till end August 1996 by diverting the same from surplus regions to the needy regions and to that extent fresh procurements were curtailed.

## Inventory Holding Norms & Steel Procurement Policy

In order to minimise accumulation of inventory beyond a certain level, Inventory Holding Norms for various



category of items have been evolved and are being implemented. Further, uniform steel Procurement Policy has also been evolved for implementation at all regional sites.

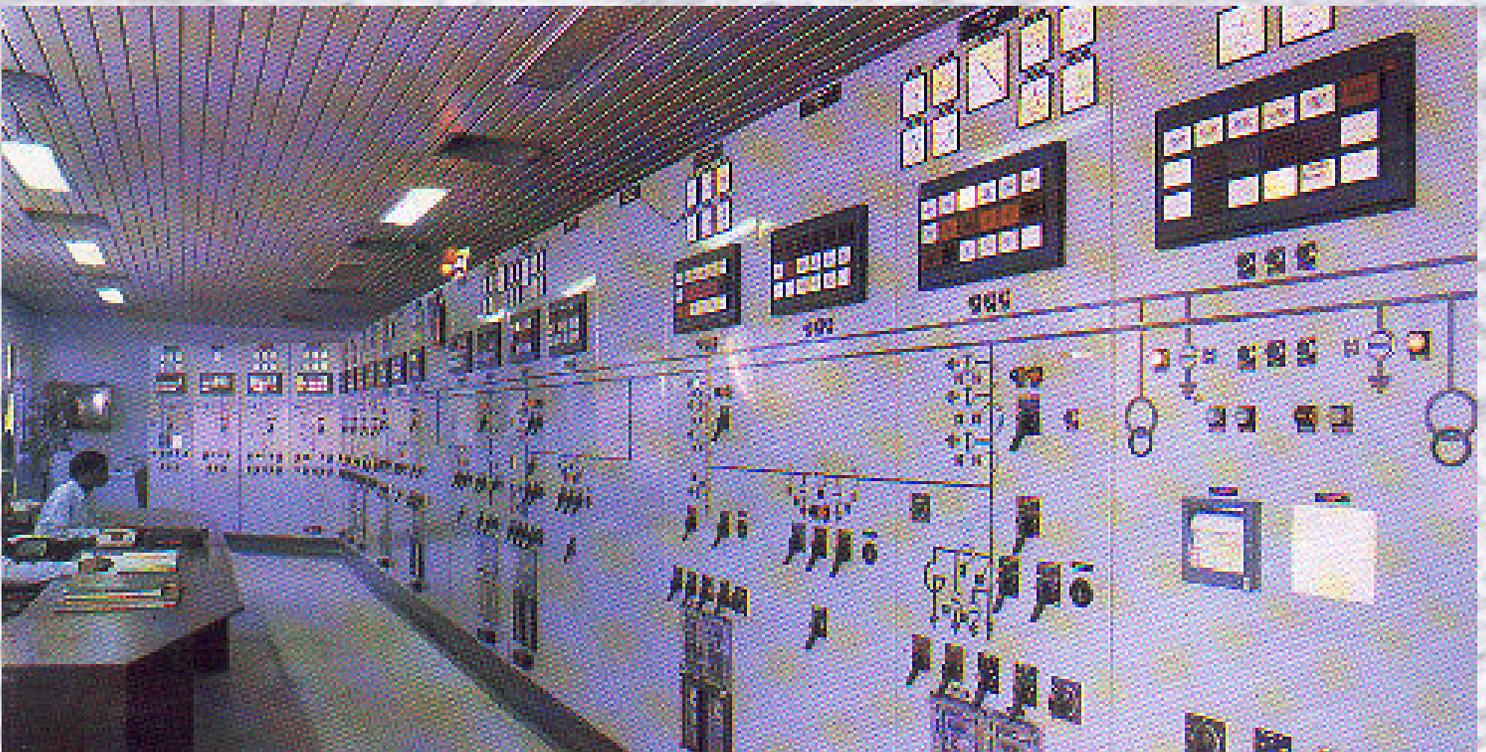
## Unified Materials Codification System

As a first step towards computerization of inventories in POWERGRID, "Unified Materials Codification Systems

(UMCS)" for Power Transmission Projects has been evolved in house for codifying various transmission line & sub-station equipments & materials. UMCS is being extensively followed in various peer organizations around the world like NGC, UK and is now under implementation at all regions of POWERGRID.

## QUALITY SYSTEMS IN POWERGRID

As you are aware, POWERGRID Quality Systems have been certified for ISO 9000 (1994) by NQA Quality System Registrar for "Turnkey execution of transmission and sub-station projects upto 400 KV inclusive of design, engineering procurement, construction, operation and maintenance" in 1994-95. For continuous upgradation and upkeep of the quality systems, periodical inhouse audits were carried out on POWERGRID Quality Systems followed by surveillance audits by the external auditor-the Quality System Auditors of NQA, the Certifying Body.



## RESEARCH AND DEVELOPMENT

POWERGRID in association with Central Power Research Institute (CPRI), has undertaken study for measurements of AC/DC fields in EHV transmission lines and sub-stations, which has already been completed. The second phase of the study involving biological effects of EHV transmission system is likely to commence in 1996-97.

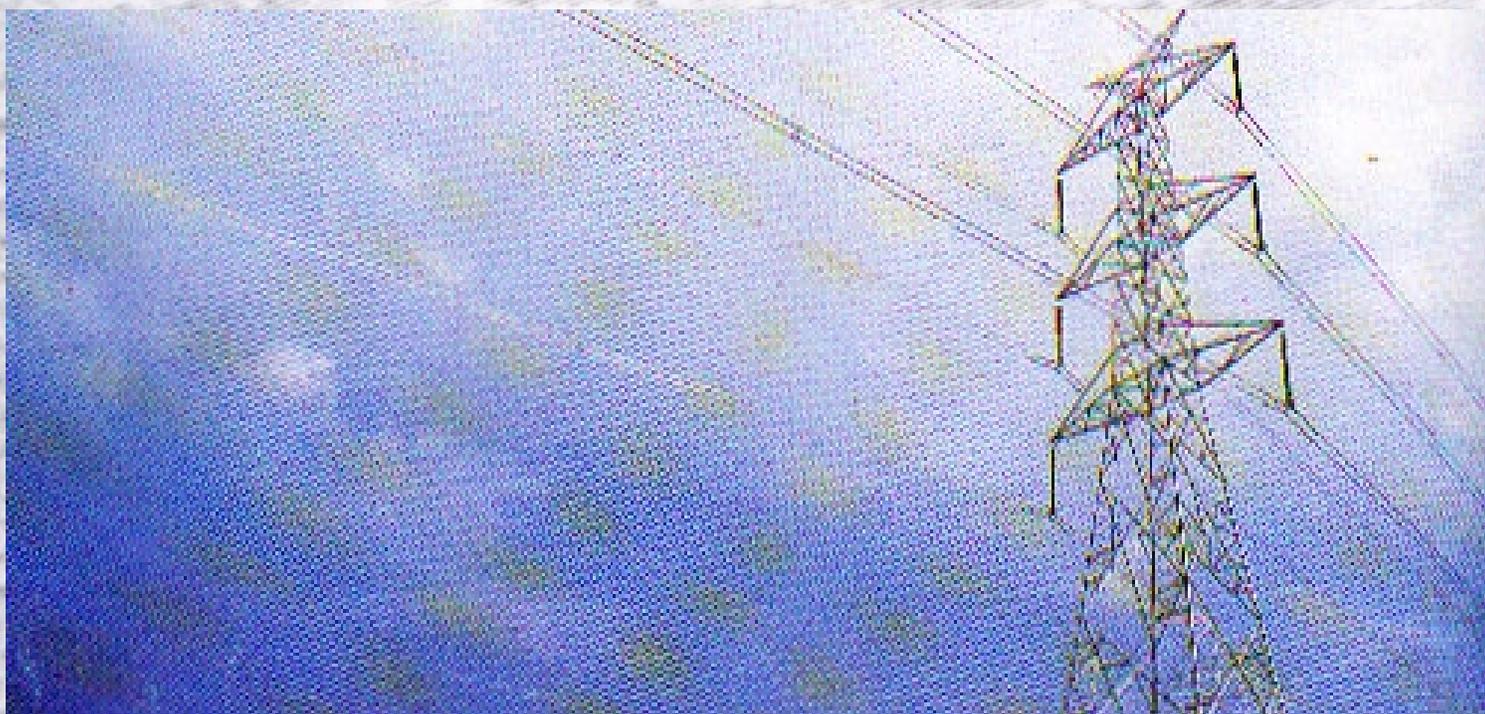
signed. It has shown keen interest in developing artificial neural-networks for load flow study to be used as part of the system operation.

## NEW TRANSMISSION SYSTEMS

During the year, transmission system for the following projects were developed by POWERGRID:

capabilities, phase shifting transformers to adjust flow of power in parallel circuits to improve the transient & dynamic performance of the system, flexible A.C transmission systems, upgrading & uprating the existing transmission system, etc.

Keeping in view the changing needs, POWERGRID is adopting latest Tools & Techniques in all the fields of power transmission such as use of OPGW for



POWERGRID has also taken up in association with CPRI, field testing on 400 KV transmission system to evaluate the need or otherwise for pre-insertion resistors, which is likely to be completed in 1996-97.

Further, POWERGRID has also entered into MOU with IIT, Kharagpur and has taken up the work pertaining to development of Real Time Digital Simulator for Northern Region. It is for first time that such indigenous development of this nature has been taken up the any Utility in the power sector in the country. Software for load flow, state estimation have been developed. Software for graphic user interface and dynamic stability are under development. Similarly, MOU with IIT, Delhi for taking R&D projects has also been

- CEPA Project (6x660) MW
- Kayamkulam Project
- Congentrix 1000 MW at Mangalore
- Nagarjuna Fertilizer TPP 500 MW at Mangalore.
- Inter- regional transmission system between Eastern and Northern Regions.

## STATE-OF-THE-ART TECHNOLOGIES

POWERGRID is in the process of the inducting the state-of-the-art technology in power transmission which includes series compensation and static var compensation on existing lines to increase the power transfer

date transmission and communication, application of numerical relays for protection of lines and transformers, AAAC conductors, emergency restoration system and composite insulators, etc.

As a matter of record, POWERGRID for the first time successfully undertook under-water rectification work in the mid stream of Godavari pile foundation of 400KV Vijawada-Gazuwaka transmission line and avoided major breakdown of the line.

## HUMAN RESOURCES DEVELOPMENT(HRD)

The year 1995-96 has been most significant year in the journey of POWERGRID HRD. We have bagged the most coveted 1996 ARTDO-Asia

PACIFIC HRD Award for our contribution to the cause of Human Resources Development . It is the only Public sector in Asian Pacific Nations to have bagged this award. We have implemented the approved HRD plan in a systematic and professional manner. As a part of this implementation , special efforts have been made to implement tailor-made developmental programmes to update the qualification level of the workmen and gainfully redeploy them. These efforts resulted in direct recurring financial saving . During the year HRD coordinators were identified from various Departments at Corporate Centre and from Regions for developing , coordinating and implementing the HRD calendar for 1995-96 A total of 2,961 employees (equivalent to 70,000 training man-days) have been trained both at the Corporate and the Regional Centres consisting of 1,496 Executives ,445 Supervisors and 1,020 workmen.

In the area of providing HRD consultancy, POWERGRID has witnessed a significant achievement during the year. Apart from bagging HRD related consultancy assignments to Orissa State Electricity Board (OSEB), progress in this front has been very satisfying . During the year .ESKOM,a South African Power Utility has evinced



in interest in enlisting the help of POWERGRID has also organized "HRD Strategy Workshop"for Nepal Electricity Authority (NEA) at Kathmandu, besides conducting a workshop on HRD Strategy for the Officers of the division of Power,HMG of Royal Bhutan.

POWERGRID HRD has undergone Value Audit (Cost-Benefit Analysis ) by the professional Chartered Accountant firm. As per the audit, total savings on account of HRD efforts during 1995-96 works out to Rs. 986.26 lacs and cumulative saving till March31, 1996 works out to Rs.20 crores .This study is the first of its kind to be conducted in any organization in India.



## HUMAN RESOURCES MANAGEMENT (HRM)

During the year, the final phase of consolidation by transfer of asset and manpower was almost accomplished .With the taking over of NRLDCand WRLDC, POWERGRID has absorbed 226 personnel from CEA and has undertaken the responsibility of managing all the Regional Load Despatch centers in the country.

Manpower growth during the period 1995-96 has been about 5.0% over the year 1994-95 .During the years 69 executives,94 supervisors and 13 workmen were recruited.



**ARTDO**

Asian Regional Training and  
Development Organization

Presents the

**1996 ARTDO ASIA-PACIFIC HRD AWARD**

to

**POWERGEN CORPORATION OF INDIA LIMITED**

IN RECOGNITION of its outstanding Human Resource Development Model which the Overseas Development Administration (ODA) of the United Kingdom has described as "probably the best in the world" and has endorsed it as a model for other ODA-assisted projects in India and other countries.

IN ACKNOWLEDGMENT of its highly successful, multi-pronged training and development programmes which have benefited its diverse workforce from the lowest to the highest levels and brought substantial savings for the company to the tune of Rs. 103 million.

GIVEN this 7th day of November 1996 at Mandaluyong City, Metro Manila, Philippines.

Attested:

  
BERNARDO F. OPLE  
Secretary General

  
HERMOGENES "MOSE" RAMOS AQUINO  
President

Special emphasis was laid on infusing fresh blood into the organization as also to fulfill the social obligation of increasing representation of reserved categories. The full batch of Executive Trainees recruited in 1995-96 belong to the reserved categories. With the addition of manpower through takeover as well as recruitment, the employee strength of POWERGRID in 1995-96 stood at 6,769. There was an upward trend in the labour productivity indices compared to last year. The CKMs per employee has increased from 4.00 in 1994-95 to 4.01 in 1995-96. Profit per employee has increased from Rs. 3.23 lacs in 1994-95 to Rs. 4.07 lacs in 1995-96.

The wage revision has been successfully implemented in respect of unionized employees and was signed in July 1995. Further POWERGRID has streamlined the formal Personnel Policies mostly adopted from its parent organizations and brought out consolidated manuals besides booklets. This year also our employee has bagged the prestigious Prime Minister's "Shram Shree" Award for the third consecutive year.

For the promotion of Rajbhasha and use of Hindi in the office jobs, special "Hindi Mah" was observed by organizing various competitions in Hindi. Keeping in view encouraging participation by the employees POWERGRID has received praise from MOSP. For the, POWERGRID has received various Awards and Shields for its participation in the Rajbhasha conferences organized in India and abroad (Mauritius).

## REGIONAL HIGHLIGHTS

The Major highlights of the six regions of POWERGRID during the year are as follows :

### Northern Region (NR)

The Northern Region of POWERGRID is the largest among all



the regional grid systems in the country. For ease of management and control of the NR, POWERGRID has further divided the region into two regions, namely Northern Region (NR-1) and Northern Region -II (NR-II). The regions together has a total of 9,742 CKMs of transmission system under operation, consisting of 5,660 CKMs of 400KV, 2,452 CKMs of 220KV and 1,630 CKMs of HVDC system distributed over 12 Sub-stations, with a total of around 8,000 MVA of transformation capacity. During the year we have commissioned a total of 35 CKMs of transmission lines in this Region. Some of the important ongoing projects in this region include Nathpa-Jhakri (400KV), Kishenpur-Moga (800KV), etc. Presently, around 4,124 CKMs of 800KV, etc. Presently, around 4,124 CKMs of transmission lines are under construction, consisting of 569 CKMs of 800 KV, 2,337 CKMs of 400KV and 1,218 CKMs of 220 KV transmission

lines along with 1 sub-station. The line availability was maintained at well over the MOU target.

### EASTERN REGION (ER)

The Eastern Region has a total of 4,379 CKMs of transmission system under operation, consisting of 3,221 CKMs of 400 KV & 1,158 CKMs of 220 KV transmission system distributed over 13 Sub-stations, with a total of around 5,700 MVA of transformation capacity. Eastern Region has been awarded Runner-up in "Best Region Award -1995". Shri Surendra Prasad was Runner-up in "Best Workman Award-1995"

During the year, we have commissioned a total of 342 CKMs of transmission lines and one substation in this Region. Stringing during the year for this region has well surpassed the target of 393 CKMs of transmission lines. Further, stringing of Rangit-Rammam (132KV) and Rangit -Melli (66KV) have also been completed during the same year. Presently, 185 CKMs of 132KV transmission lines and one extension of Sub-station is under Construction. The important ongoing projects in this region include Kathalguri (400KV) & Rangit (132KV) transmission system. Presently, around 1,073 CKMs of transmission lines are under construction, consisting of 267 CKMs of 132 KV transmission lines. The line availability was maintained at well over the MOU target.

### Western Region (ER)

The Western Region has a total of 5,356 CKMs of transmission system under operation, consisting of 4,548 CKMs of 400 KV and 808 CKMs of 220KV transmission system distributed over 4 Sub-stations, with a total of 950 MVA of transformation capacity.

During the year, 314 CKMs of 400KV has been commissioned along with addition of 315 MVA of transformation capacity. Some of the important ongoing projects in this region include the Gandhar Transmission System



and Vindhyachal Stage-I & II additional 400KV transmission system. Presently, around 3,929 CKMs of transmission lines of 400KV is under construction. Further, the work on HVEC back-to-back station of 1000 MW capacity at Chandrapur is also progressing on full swing. During the year Dehgam Sub-station of 400KV was dedicated to the nation by the Hon'ble Minister of Power, Shri N.K.P. Salve. Further, TOD metering system have been commissioned at 35 locations in Western Region. The line availability was maintained at well over the MOU target.

### **SOUTHERN REGION (SR)**

The Southern Region has total of 5,781 CKMs of transmission system under operation, consisting of 5,717 CKMs of 400 KV and 64 CKMs of

220KV transmission system distributed over 15 Sub-stations, with a total of 6367 MVA of transformation capacity.

During the year, we have commissioned 260 CKMs of 400 KV double circuit transmission line and one sub-station in this Region. Some of the important ongoing projects in this region include Ramagundam-Hyderabad (400



KV), Kaiga-Sirsi (400KV), Jeypore-Gazuwaka (400KV) and Kayamkulam (220 KV) transmission system. Presently, around 1037 CKMs transmission lines consisting of 734 CKMs of 400 KV and 303 CKMs of 220 KV transmission lines along with one extension Sub-station are under construction. Further, this region has installed Special Energy Meters for measuring frequency dependent energy for the first time in the country. The line availability was maintained at well over the MOU target.

### **North-Eastern Region (NER)**

The North-Eastern Region has total of 1986 CKMs of transmission line under operation, consisting of 756 CKMs of 400 KV, 464 CKMs of 220KV and 766 CKMs of 132 KV transmission system distributed over 9 Sub-stations, with a total of around 500 MVA of transmission capacity.

During the year, we have commissioned a total of 718 CKMs of transmission lines and 3 sub-stations in this Region. Presently, 3,058 CKMs of transmission lines are under construction in this region, consisting of 1,966 CKMs of 400 KV, 103 CKMs of 220 KV and 989 CKMs of 132 KV transmission lines alongwith 8 new Substations having transformation capacity of 1,050 MVA. Some of the important ongoing projects in this region include the transmission system associated with Kathalguri (400 KV & 220 KV), Doyang (220KV & 132 KV), Ranganadi (132 KV), Kopili Stage-1 (Extn. 220KV) and Augmentation of North-Eastern Regional System. Further, the region has already installed Special Energy Meters in 91 locations. The line availability was maintained at well over the MOU target.

It is worth mentioning that the Prime Minister's "Shram Shakti Award" was conferred for individual excellence to Shri M.M. Laskar, Lineman employed in North-Eastern Region.

## **PARTICULARS OF EMPLOYEES**

The particulars of employees of the Corporation who were in receipt of

remuneration in excess of the limit prescribed under Section 217 (2A) of the Companies Act, 1956 is given in Annexure-1 to this Report.

## **CONSERVATION OF ENERGY, TECHNOLOGY ABSORPTION AND FOREIGN EXCHANGE EARNINGS AND OUTGO**

As regards the requirement of the disclosure under Section 217 (1)(e) of the Companies Act, 1956 read with Rule 2 of the Companies (Disclosure of Particulars in the Report of Board of Directors) Rules, 1998 relating to conservation of energy, technology absorption and foreign exchange earnings and outgo information is given in Annexure-II to this Report.

## **COMPTROLLER AND AUDITORS GENERAL'S COMMENTS**

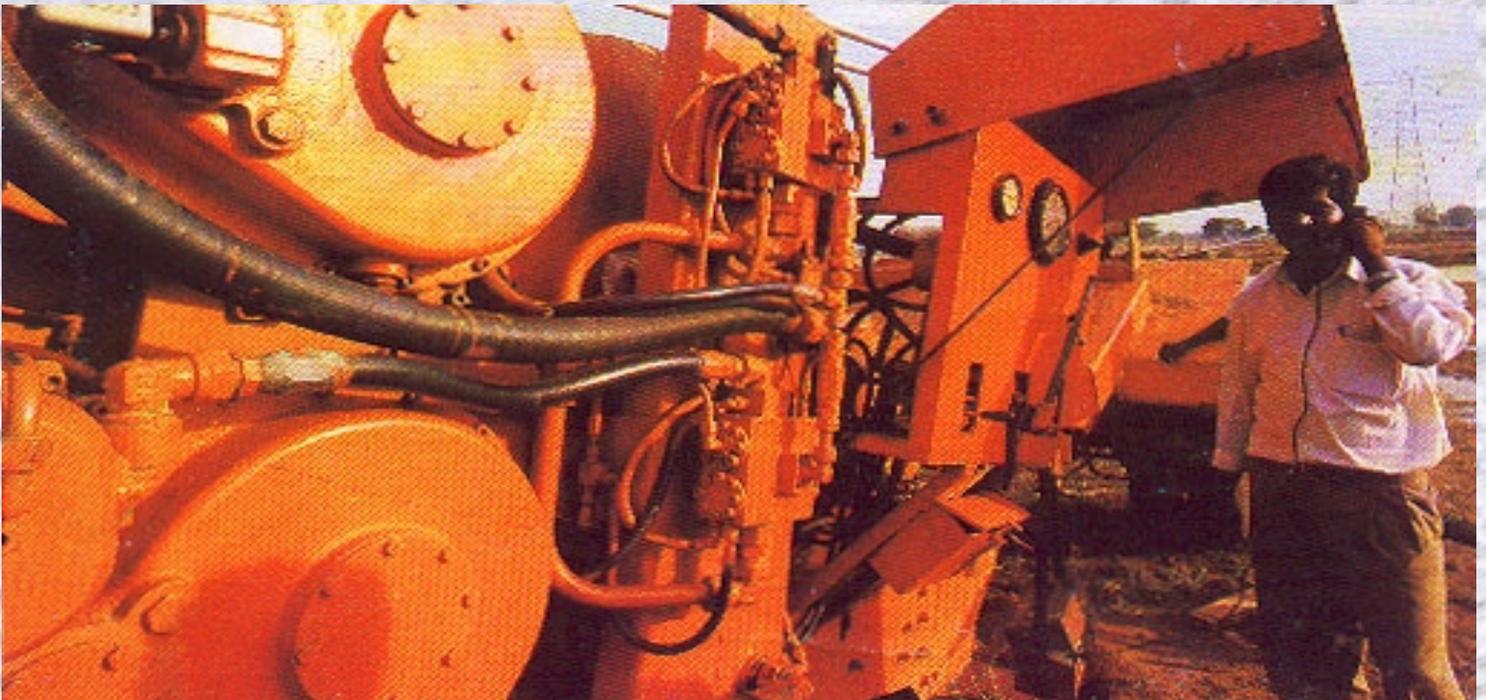
Review of the accounts for the year ended 31st March, 1996 by the Comptroller and Auditor General of India along with Directors' comments on the points raised by the CAG u/s 619(4) of the Companies Act, 1956 is given in Annexure-III of the Report.

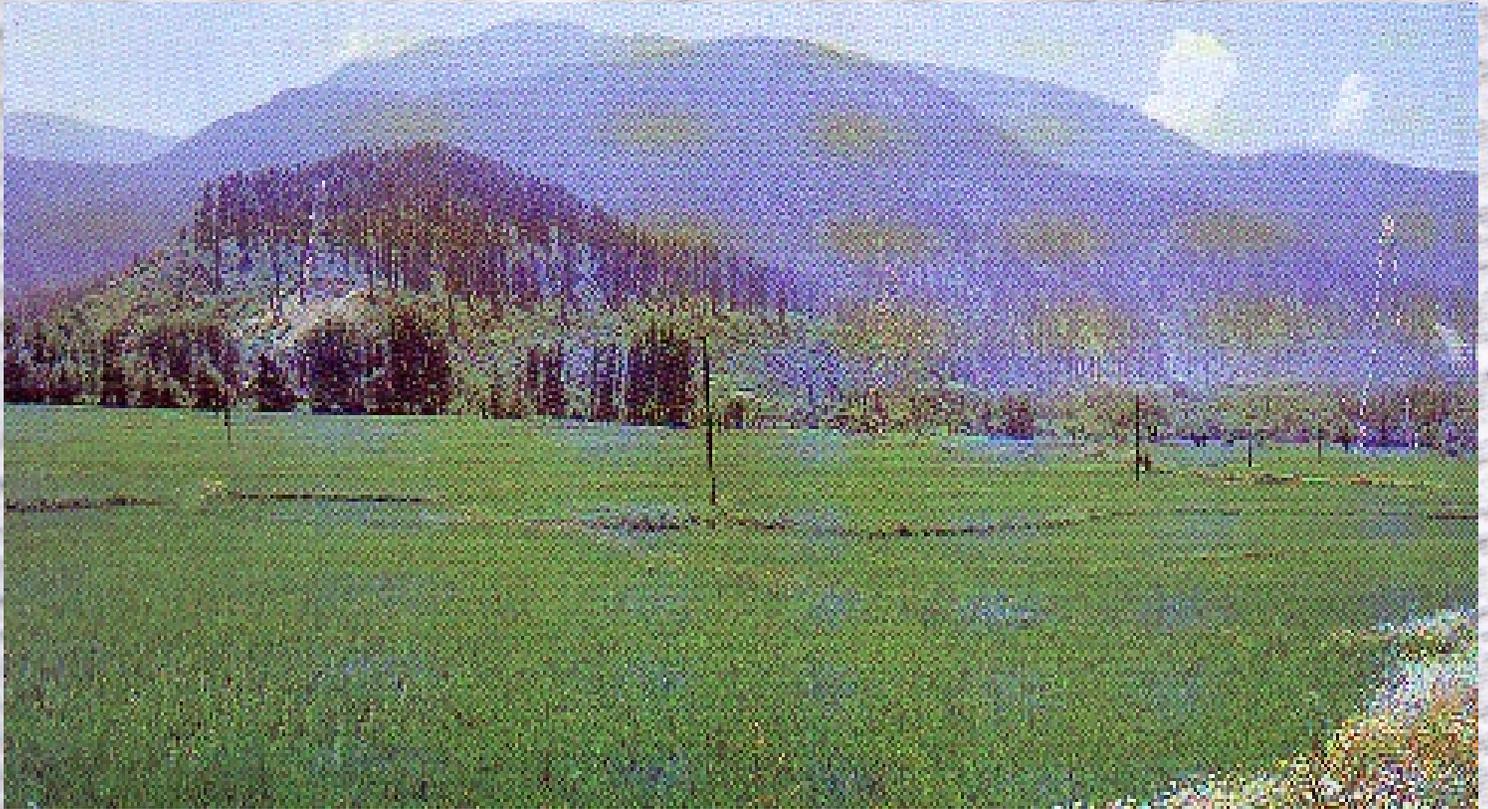
## **ENVIRONMENT MANAGEMENT**

POWERGRID takes adequate care to avoid forest and ecologically sensitive areas while selecting routes for laying lines. POWERGRID looks into the environmental matters of the projects and pursues the forest proposals while formulating, processing for investment approval and implementation.

For effective results, POWERGRID imparts specific training to its Executives involved regarding concept to commissioning of project(s). POWERGRID has also plans to take up plantation of some diminishing species at POWERGRID owned substations. This would help in improving the environment and in keeping the ecosystem healthy.

Environmental Examination report and Summary Environmental Examination Report for the ADB funded projects were prepared and the loan negotiations were carried out successfully. These projects include North-Eastern transmission augmentation projects, transmission system associated with





Agartala, Kopili Stage-1 extension, Jeypore-Gazuwaka and Vindhyaachal Stage-II Power projects.

Total 10 Forest Proposals were submitted by State Government to MOE&F for the POWERGRID projects, out of which 9 proposals got cleared and another one is in process at MOE&F.

Keeping in view the requirements of the international funding agencies, global awareness in environmental matters and mandatory & prescriptive national rules & regulations on draft Environmental and Social Policy and Procedure (ESPP) of POWERGRID transmission projects have been formulated. On finalization of this document, POWERGRID will be able to streamline the procedures and its commitment to environment.

## **CONSTRUCTION MANAGEMENT**

POWERGRID has been striving to meet the mandatory quality standards and the execution of the various

projects within the given timeframe and cost. To equip our field personnel working at construction sites, "Users Manual" have been developed by POWERGRID providing various guidelines and procedures to be followed. Users Manuals for Line Survey, Environmental Management for transmission lines, Tower erection and Standard field quality plans have already been developed and are being followed in letter and spirit. Development activity for other user manuals have already been initiated, which include Soil investigation & Foundation of transmission lines: String of transmission lines: Auxiliary packages of sub-stations; Standard field quality plan-II; Procedures and guidelines for measurement books.

## **FUTURE PERSPECTIVE Power Pooling**

POWERGRID plans to promote creation of Regional Power Pools of public and private utilities in all the

power regions of the country, on a voluntary co-operation basis. The concept of power pooling, as applicable in the country, would imply that each SEB and distribution company would be responsible for supplying the power in its own area. This could be achieved either by using its own generation, or power purchased from other generating utilities, in accordance with the agreements made among the parties. The principles and procedures governing relationships between users of transmission system and the system operator to facilitate trading by providing common rules in states and regions as also to facilitate planning, development and maintenance of an integrated regional network, will be enforced as a condition of framework contract for transmission services by way of a well documented Grid Code. In a power system where the generation facilities are owned and operated by a mix of Central agencies, SEBs and Private agencies, POWERGRID

intends to operate loose regional power pools as a facilitator/clearing house for the power trading between various entities.

As an operator of power pools, POWERGRID will provide information on available capacity and energy to members for their needs and a price range; a forum for coordinating generation maintenance schedules; monitor tieline flows for ensuring system reliability and informing the parties accordingly; deviations from agreed transactions; information for raising bills and settlement etc. This system will ensure most economic generation of power based on commercial principles.

POWERGRID will play a vital role in settlement system viz. accounting for trading. It will provide information on metered power and energy flows, prices, transmission pricing aspects of contractual agreements and the trading rules. It will compute applicable charges in accordance with the contractual and trading arrangements for each generator to their customers. POWERGRID will help in reducing the overall cost of supply by helping SEBs trade power in



accordance with merit order dispatch, without actually participating in the transactions for its own account.

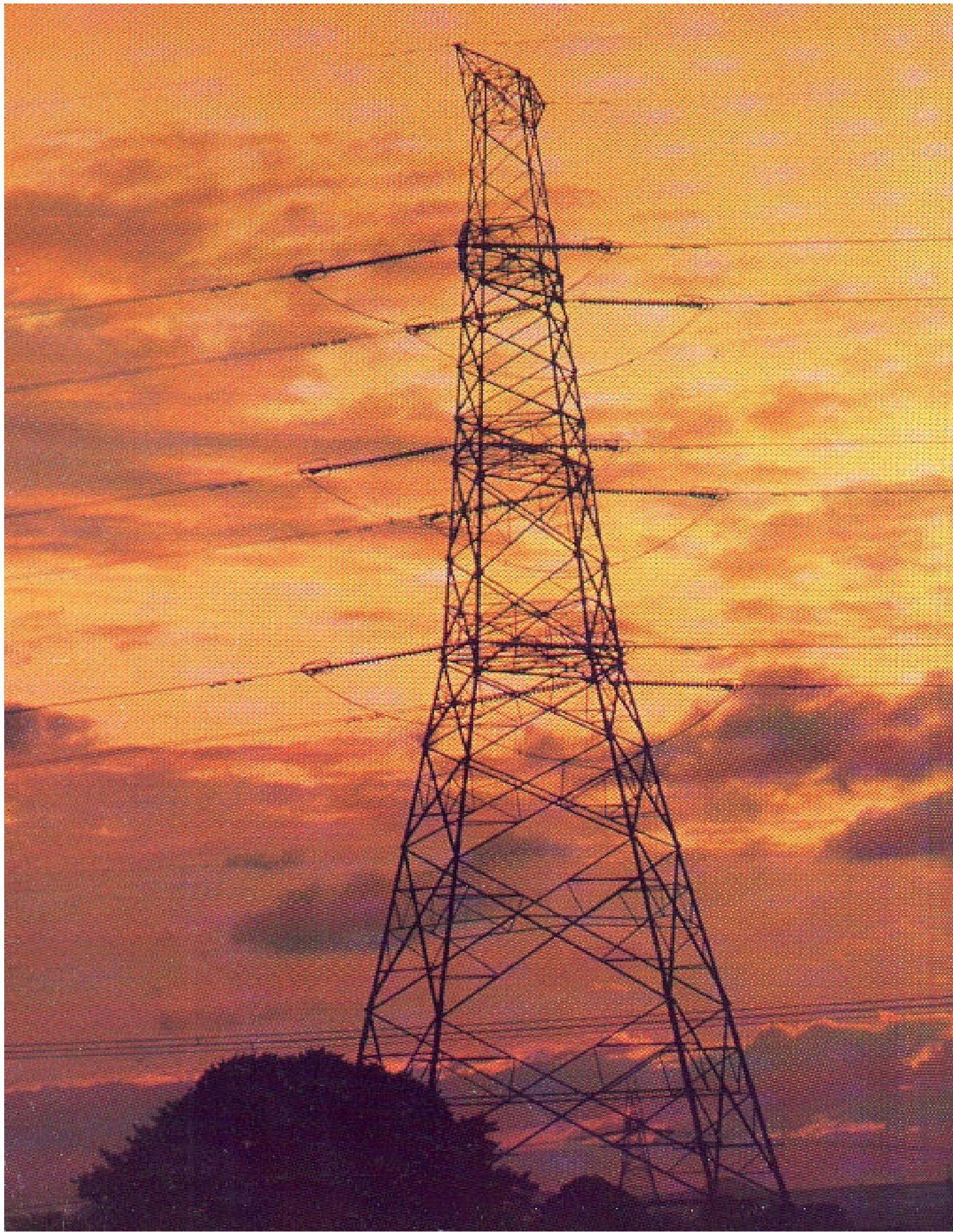
## JOINT VENTURE (JV)

After the policy decision taken by the Government of India to permit private sector participation in power sector a large number of private entrepreneurs have evinced interest in investing in the Indian power sector. As on the date, large number of proposals have been received by the Government of India for setting up of generating stations with an aggregate capacity of about 93,000 MW involving an investment of more than Rs. 300,000 crores. Looking into such large addition and investment in generation side, huge amounts would be needed to be invested in transmission & distribution sector too. To pave the way for private sector participation in transmission, POWERGRID had signed an MOU with NGC, UK. Its proposals for formation of joint venture and amendment in the existing provisions of Electricity Supply Act are under active consideration of Government of India and a policy framework towards this end is expected to be in place soon.

## CEPA Power Project

The Memorandum of Understanding (MOU) between Consolidated Electric Power Asia (CEPA) and POWERGRID which was valid up to September 22, 1996 is being extended for a further period of one year. CEPA plans to implement their 1st phase comprising of 6x660 MW units at Hirma Village in the state of Orissa, for which "in principle" clearance of CEA has been obtained. The power from the phase-1 Project of CEPA is proposed to be shared by the States in Northern & Western Regions, namely Rajasthan (1200MW), Punjab (960 MW) and Haryana (500 MW) in Northern Region and Gujarat (700 MW) & Madhya Pradesh (600 MW) in Western Region. For evacuation of power generated from CEPA project, POWERGRID will be augmenting/ implementing the associated transmission systems.





The associated transmission system of CEPA power project will be to the tune of 5,000 CKMs of mostly 400 KV transmission system and 1,200 KMS of HVDC bipole of 3,000 MW capacity with 3 dedicated sub-stations. The estimated cost of transmission system is more than Rs. 5,000 crores.

For funding of the above, the detailed proposal has been submitted to World Bank in July 1996. However, keeping in view the Bank's conditionality regarding restructuring/reforms of beneficiary SEBs, a route through formation of joint venture is also being explored for which discussions are in progress with M/s National Grid Company, U.K.

To help the beneficiary SEBs for negotiation of CEPA's Generation Traffic M/s ICICI, Mumbai has been commissioned as Consultant. Further, for negotiation and finalization of PPAs, transmission and other related agreements including evolution of implementation strategy of associated transmission system, the International Consultants are being engaged.

### Mega Power Projects

For development of mega power projects having capacity of 1000 MW or more and envisaging more than one State as beneficiary, in private sector, Government of India has framed guidelines to such power projects. According to the guidelines, CEA is to identify the potential project location and M/s NTPC is to prepare the Feasibility Report and obtain initial clearances required for the project. POWERGRID has been entrusted with the task to undertake the pre-qualification and selection of IPPs on Competition Bidding basis and to provide escort and facilitator services to IPPs.

The first mega power project (2,000 MW) has been identified at Nabinagar, Bihar along with development of associated coal Mines at North Karanpura. The Request For Qualification (RFQ) document for pre-qualification of the IPPs has been finalized. The press notification for the same has been issued in August 1996. Keeping in view the multiplicity and



intricacy involved in bidding process for such mega project, the services of International Technical, Financial & Legal Consultants are considered necessary, for which POWERGRID has already initiated action.

### Extending the National Power Grid to Neighbouring Nations

POWER Grid's long term perspective plan looks forward to dovetailing its grid into the power grids of neighboring nations. Some of India's neighbouring countries have vast hydro-potential, but do not have adequate demand or finance to harness them. POWERGRID plans to

tap these sources and import power to India. In the endeavour, POWERGRID is already exchanging power with from its Chukha hydro-electric project and has also started a dialogue for interconnection and power sharing arrangements with other neighbouring countries, to take advantages of diversity of resources and load pattern for mutual benefit of each other.

### EVOLVING ROLE OF POWERGRID

In its brief but significant appearance in the Indian Power Sector, POWERGRID has opened up new vistas ushering in "Change" in every facet of Electric Power Utility Services in the country.

POWERGRID is evolving as a "Facilitator-cum-Change Agent" to oversee the manifestation of change in redefining and restructuring the Indian Power Sector. The future perspective of POWERGRID thus entails multiple role of POWERGRID, with various business areas, such as, Provider of Transmission Services, System Operator, Energy Accounting and System Administrator and Facilitator in Energy Trading. Further, POWERGRID also plans to diversify in the areas of Distribution, Telecommunication, etc., through Joint Ventures besides providing its expertise as Consultancy Services in all aspects of Transmission & Distribution of power.

### BOARD OF DIRECTORS

During the year, POWERGRID Board has undergone quite a few changes. Our founder Chairman & Managing Director (CMD), Shri R.K. Narayan, laid down his office on July 31, 1995 on superannuation. The Board would like to very gratefully acknowledge and place on record the exceptional institutional growth that POWERGRID could achieve, in almost all disciplines, during his leadership. It is needless to mention that his dedicated endeavour especially in the formative years of POWERGRID, were highly noteworthy and

POWERGRID's sound standing today, largely owes to his dogged determination and campaign to make POWERGRID as one of the flagship companies of the Ministry of Power. The Board sincerely places on record the loss of such member asset of POWERGRID and wishes all the best in his personal & professional life.

Further, Shri S.K Chawla and Shri S. C. Parakh also laid down the offices of Director (Personnel) and Director (Projects) respectively on superannuation. Shri H.C. Mital, Member (Power system) ceased to be a part time Director w.e.f. 1.11.95. Shri Mital was on the Board for four years and Board places on record the inestimable contribution of Shri Mital during his tenure on the Board. The Board wishes to place on record the invaluable and precious contribution made by them during their long innings with POWERGRID especially when this organization was at nascent stage. Ms. G Ramachandran, Joint Secretary (systems), Ministry of Power also ceases to be a member of POWERGRID Board w.e.f. 06.12.95. Board places on record its deep appreciation for the valuable guidance received from her.

POWERGRID Board welcomes Shri Arun Gupta, CMD of Nathpa Jhakri Power Corporation Ltd. (NJPC) who has joined with additional charge in POWERGRID as Chairman & Managing Director. During the year, Shri R.P.

Singh also took over as Director (Personal) of POWERGRID w.e.f. 11.9.95, Shri R. Natarajan, Director (Finance) of National Hydro –electric Power Corporation Ltd. (NHPC), has joined with additional charge in POWERGRID Board, as Director (FINANCE) w.e.f. 12.7.1996. Shri R.K. Madan has also taken over as Director (Projects) w.e.f.20.8.96. Shri Ajay Dua, joint Secretary (Systems & External Assistance), Shri S.R. Shivrain, joint Secretary & Financial Advisor, Ministry of Power, and Shri K. Ramanathan, Member (Power System), CEA have joined POWERGRID Board of Directors, w.e.f. 6.12.95, 11.1.95 and 9.1.96, respectively.

## ACKNOWLEDGEMENTS

The Directors place on record their grateful thanks for the guidance and cooperation extended all through by Ministry of Power, Central Electricity Authority, Ministry of Home Affairs, Deptt. of Economic Affairs, Ministry of Finance and other concerned Govt. departments/agencies at the Central and State level without whose active support the achievements by the Corporation during the year under review would not have been possible.

The Directors further wish to place on record their sincere thanks to the Principal Director of Commercial Audit and Ex-Officio Member Audit Board-III for the co-operation extended during the

year. Your Directors also acknowledge the valuable suggestions and guidance received from the statutory auditors M/s. B.M. Chatrath & Co., M/s. Umamaheshwar Rao & Co. & M/s Rasool Singhal & Co. during the course of audit of accounts of the company for the year under review.

Your Directors take this opportunity to express their thanks to the various national/international financial institutions/banks for the continued trust and confidence reposed by them by rendering the continuous timely assistance and patronage for successful implementation of the various projects by the company.

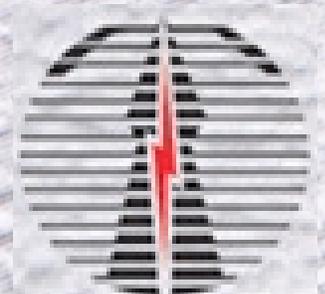
Last but not the least, the Board of Directors places on record the valuable contribution and appreciation for the support and the cooperation extended by each member of the POWERGRID family in the affairs of the company.

On behalf of the Board



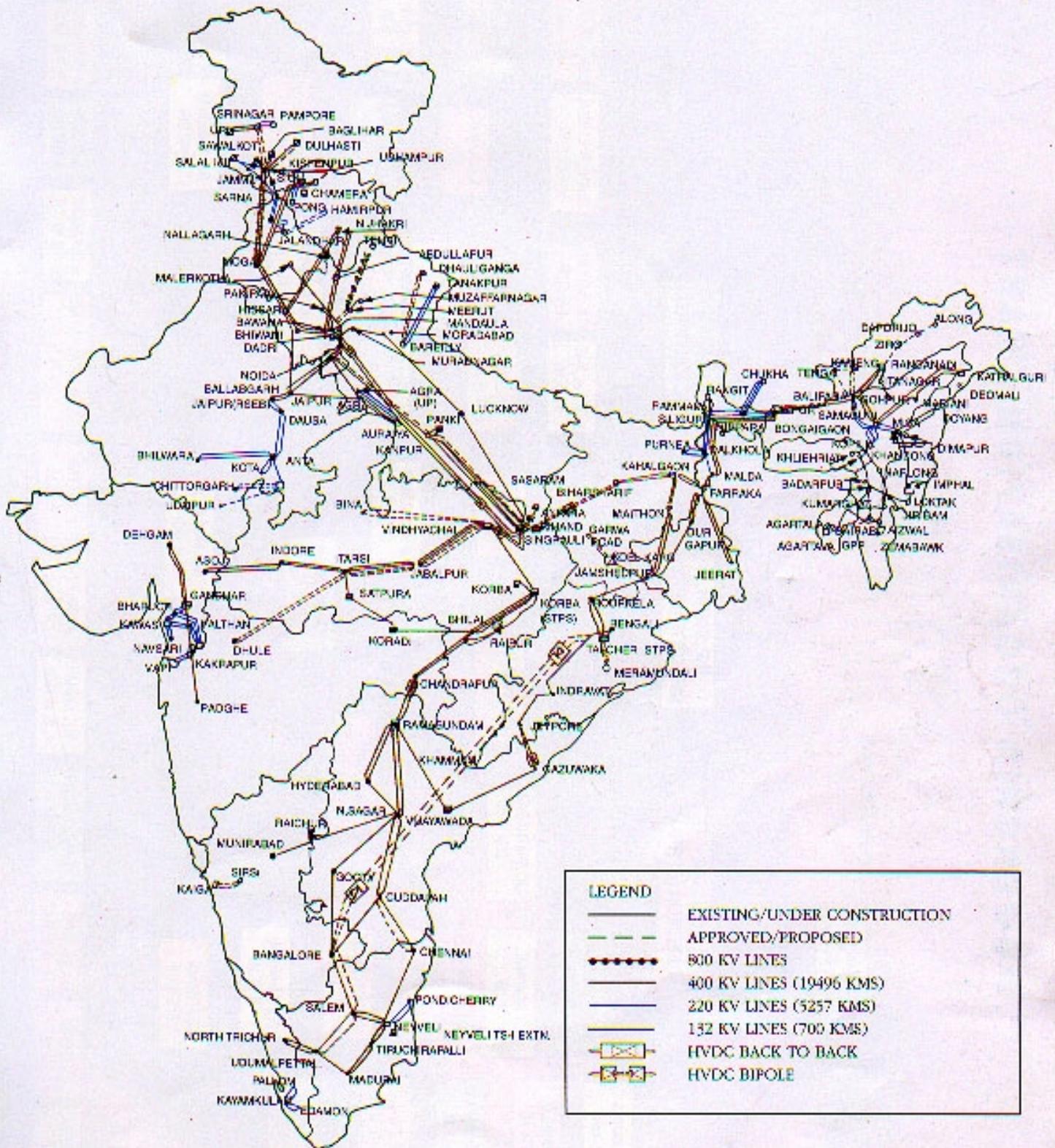
(Arun Gupta)  
Chairman & Managing Director

Place : New Delhi  
Dated : 24th September, 1996





# POWER MAP OF INDIA (POWERGRID LINES)



# POWERGRID ORGANISATION CHART

ARUN GUPTA  
C M D

S Majumdar  
A G M

CORPORATE PLANNING

VIGILANCE

P ANANTHAKRISHNAN  
EXE DIR.

FINANCE

OPERATION

PERSONNEL

PROJECT

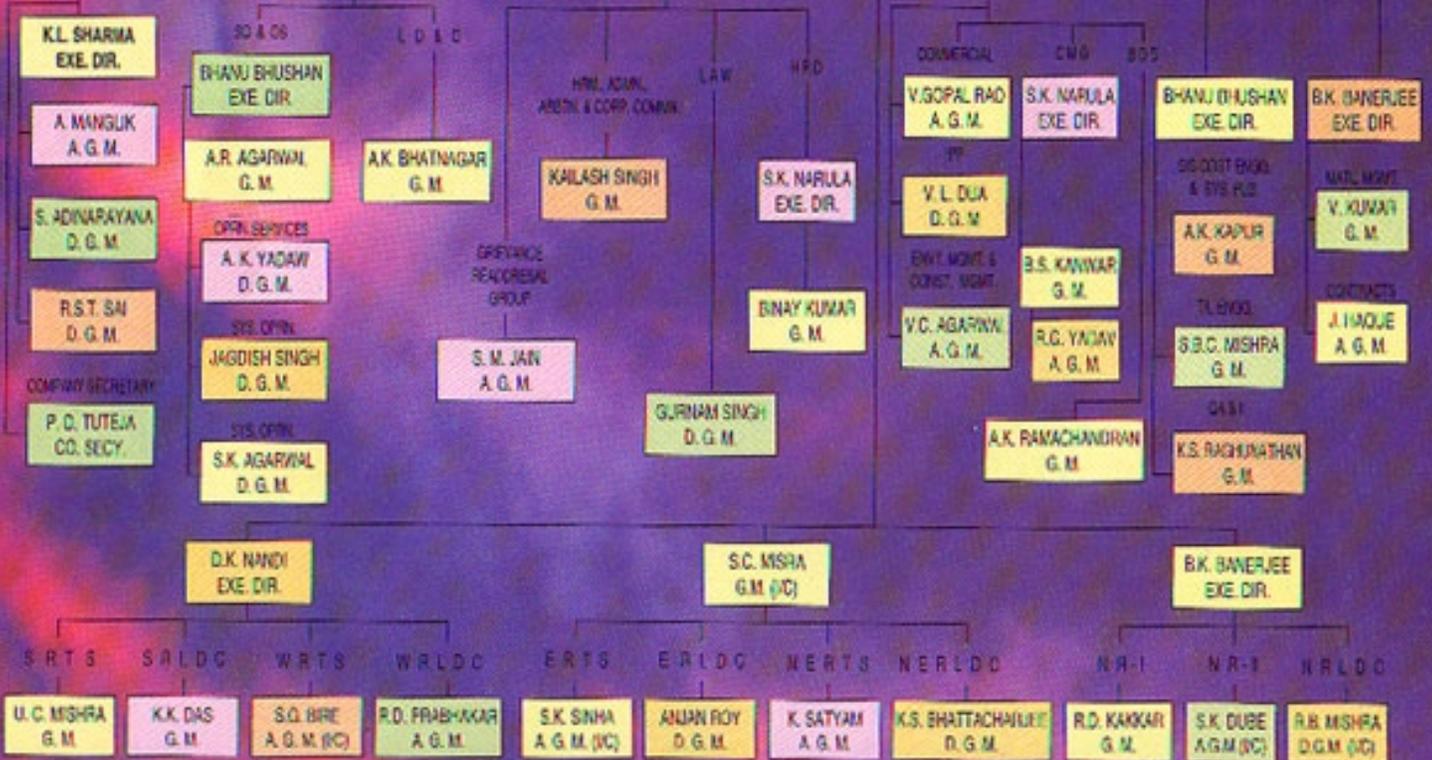
ENGG &  
Q A & I

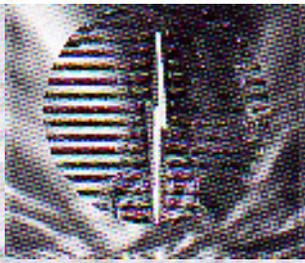
CONTRACTS &  
MATERIALS

A.L. JAGGI  
DIRECTOR (OPRN)

R.P. SINGH  
DIRECTOR (PERS)

R.K. MADAN  
DIRECTOR (PROJ.)

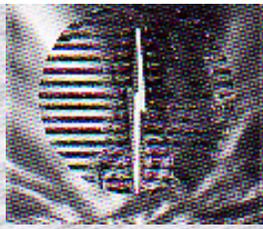




## REVENUE EXPENDITURE ON SOCIAL OVERHEADS FOR THE YEAR ENDED 31ST MARCH 1996

(Rupees in Thousands)

Sl. No.	Particulars	Township	Education & School Facilities	Medical Facilities	Subsidised Transport	Social & Cultural Activities	Subsidised Canteen	Total	Previous Year
1.	Payment to Employees		1142	26568	2748	1238	7138	38834	23565
2.	Material consumed	460						460	527
3.	Rates & Taxes	369			51			420	408
4.	Welfare expenses	1055	2491	10100	2859	11584	980	29069	27897
5.	Others Including Repair & maintenance	10783				33		10816	7299
6.	Depreciation	22480						22480	17328
7.	Sub total (1 to 6)	35147	3633	36668	5658	12855	8118	102079	77024
8.	Less Recoveries	1611						1611	1034
9.	Net expenditure (7-8)	33536	3633	36668	5658	12855	8118	100468	75990
10.	Previous year	25423	2169	25335	3758	14608	4697	75990	



## ACCOUNTING POLICIES

### 1.0 Methods of Depreciation

- 1.1 a. Depreciation is charged on straight line method as per rates prescribed under the Electricity (Supply) Act, 1948. In respect of assets, where rates have not been laid down under the aforesaid Act, depreciation is provided on straight line method as per rates prescribed under the Income Tax Act, 1961.
- b. Depreciation on fixed assets is being provided from the year following that in which the assets become available for use, in accordance with the Electricity (Supply) Act, 1948, in preference to the Accounting Standard No.6 of Institute of Chartered Accountants of India.
- c. Depreciation is provided retrospectively to give effect of foreign exchange fluctuations relating to the fixed assets, in accordance with the Electricity (Supply) Annual Accounts Rules, 1985, in preference to the Accounting Standard No.6 of Institute of Chartered Accountants of India.
- d. Capital expenditures on assets not owned by the company is amortized over a period of 4 years from the year following the years in which the first line/sub-station of the project comes into commercial operation and thereafter from the year following the year in which the relevant assets have been completed and become available for use.
- 1.2 In the case of operating transmission system, assets of National Thermal Power Corporation Limited (NTPC), National Hydro-electric Power Corporation Limited (NHPC), North Eastern Electric Power Corporation Limited (NEEPCO) and Neyveli Lignite Corporation Limited (NLC) trans-

ferred w.e.f. 1.4.92 Jammu and Kashmir Lines w.e.f. 1.4.93 and Tehri Hydro Development Corporation Limited (THDC) w.e.f. 1.8.93, depreciation has been charged based on gross block as indicated in transferors, books with necessary adjustments so that the life of the assets as laid down under Electricity (Supply) Act, 1948 is maintained.

- 1.3 Plant and Machinery, Loose Tools and items of scientific appliances included under different heads of assets, 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 Treatment of Expenditure during Construction

- 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 there to. Interest during construction is apportioned on the closing balance of capital work-in-progress.
- 2.3 Deposit work/cost plus contracts are accounted for on the basis of statement of account received from the contractors.
- 2.4 Claims for price variation/exchange rate variation in case of contracts are accounted for on acceptance.
- 2.5 Expenses for the year, common to operation and construction activities are allocated to Profit and Loss Account and incidental expenditure

during construction in proportion to 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 availment of the loan and equity which is reallocated in the year of conversion to the approved norms for the said project.

### 3.0 Renovation and Modernisation

- 3.1 Expenditure having the effect of extending the useful life of an asset, increasing output, capacity, efficiency of an asset, decreasing operating cost of an asset, alteration, replacement, renovation of building or plant and asset rebuilt by replacement of its components over a period of time shall be capitalised. Major replacement/substitution of one fixed asset by another, particularly of an old part by a new part with an expenditure limit of Rs. 10 lacs and above for each transmission line (i.e. between two substations, switching stations or company's Bays situated in State Electricity Boards' sub-stations) and each substation, during a financial year shall be capitalised. However, the cost of replaced/substituted asset alongwith accumulated depreciation shall be withdrawn when the expenditure on the new replacing asset is capitalised. In the light of this policy, framed in line with Electricity (Supply) Annual Accounts Rules, 1985 the following items will accordingly be capitalised for value exceeding Rs. 10 lacs:
- a. Towers, Conductors & Earthwires, Insulators, Accessories & Hardware and foundations etc.



- b. Transformers, Shunt Reactors, Circuit Breakers, Isolators Current Transformers (CTS), Current Voltage Transformers (CVTs), Lightning Arrestor, Structures, Bus Post Insulators, Busbars, main and auxiliary structures, cables and cables trenches, protection, control Power Line Carrier Communication (PLCC) equipments, other switchyard equipments, High Voltage Direct Current (HVDC) equipment and associated buildings etc.

#### **4.0 Conversion or Translation of Foreign Currency Items**

- 4.1 Foreign Currency loans/ deposits / liabilities are translated/ converted with reference to the rates of exchange ruling at the year end. Difference is transferred to capital work-in-progress/fixed assets in case of capital assets and is charged off to revenue, in case of current assets.

#### **5.0 Valuation of Inventories**

- 5.1 Inventories, other than scrap, are valued at cost on weighted average basis.
- 5.2 Scrap, other than steel and conductor scrap is accounted as and when sold.
- 5.3 Steel scrap and conductor scrap are valued at estimated realizable value.

#### **6.0 Treatment of Retirement Benefits.**

- 6.1 Gratuity is provided on actuarial valuation basis.

#### **7.1 Recognition of Income from Consultancy/Contracts**

- 7.2 Income from Consultancy/Contract Services is being accounted for on

the basis of factual progress/ technical assessment of work executed except in cases where contracts provide otherwise.

#### **8.0 Valuation of Fixed Assets**

- 8.1 In the case of commissioned assets, where final settlement of bills with contractors is yet to be effected, capitalization is made on provisional basis subject to necessary adjustments in the year of final settlement.
- 8.2 Assets and Systems common to more than one Transmission System are capitalized on the basis of engineering estimates/ assessments
- 8.3 Net pre-commissioning expenditure is adjusted directly in the cost of relate assets and system.
- 8.4 The cost of land includes provisional deposits , payments/ liabilities towards compensation, rehabilitation and other expenses, excluding the deposits/expenditure incurred wherever possession of land is not taken.
- 8.5 Capital expenditure on assets not owned by the company is reflected as a distinct item in capital work in progress till the period of completion and thereafter in fixed assets.

#### **9.0 Capital Reserve**

- 9.1 Grants-in-aid received from Central Government or other authorities towards capital expenditure for projects and betterment of transmission systems, as well as consumers' contribution to capital works are treated as capital reserve. However, grants received for specific projects/assets are treated as capital reserve, while the same are under construction and deducted from fixed assets as and when assets are capitalised.

#### **10.0 Self Insurance**

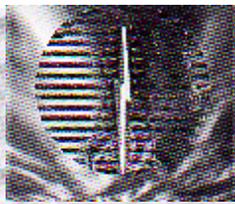
- 10.1 An appropriation on estimated basis is made in the accounts in respect of future losses which may arise from uninsured risks of machinery breakdown for Shunt Reactors and Fire risk for the equipment in operating sub-stations including buildings and cable galleries, etc, except operating High Voltage Direct Current (HVDC) sub-station equipment and credited to Insurance Reserve Account.

#### **11.0 Mandatory Spares**

- 11.1 Mandatory spares in the nature of sub-station equipments/capital spares, i.e. stand by/service/ rotational equipments and unit assemblies either procured alongwith the equipments or subsequently are being capitalised and depreciation is charged as per rates applicable to those equipments.
- 11.2 Mandatory spares of consumable nature, transmission line items are treated as inventory items, after commissioning of the line.

#### **12.0 Miscellaneous**

- 12.1 Expenses on Training and Recruitment, Research and Development are charged to revenue.
- 12.2 Pre-paid expenses, prior-period expenses and income of items of Rs. 5,000/- and below are accounted to appropriate heads of accounts.
- 12.3 Interest/surcharge recoverable from debtors and on advances to suppliers, as well as warranty claims/ liquidated damages are accounted for on receipt/acceptance.
- 12.4 Bonds issue expenses/front-end fees are being written off over maturity period of bonds/loans.



# BALANCE SHEET

AS AT 31ST MARCH 1996

(Rupees in Thousands)

	SCHEDULE NO		AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
<b>SOURCES OF FUNDS</b>				
<b>Shareholders' funds</b>				
Capital	1		2992,24,07	2972,24,07
Reserves and Surplus	2		<u>1285,01,40</u>	881,83,33
			4277,25,47	3854,07,40
<b>Loan Funds</b>				
Secured loans	3		1067,97,21	736,26,25
Unsecured loans			<u>2831,64,44</u>	2382,60,64
			3899,61,65	3118,86,89
			<u>8176,87,12</u>	<u>6972,94,29</u>
<b>APPLICATION OF FUNDS</b>				
<b>Fixed Capital Expenditure</b>				
<b>Fixed Assets</b>				
Gross Block	4	5491,67,97		5066,54,53
Less: Depreciation		<u>950,76,09</u>		630,02,08
Net Block		4540,91,88		4436,52,45
Capital Work-in-Progress	5	2467,60,11		1316,42,72
Construction stores and advances	6	<u>613,92,35</u>		662,63,41
			7622,44,34	6415,58,58
Investment	7		25	25
<b>Current Assets, Loans and Advances</b>				
Inventories	8	107,42,71		71,74,84
Sundry debtors		407,46,16		297,67,93
Cash and Bank balances		244,87,52		173,97,75
Other current assets		11,62,55		11,04,22
Loans and Advances		<u>333,93,27</u>		409,60,86
		1105,32,21		964,05,60
<b>Less: Current Liabilities and Provision</b>				
Liabilities	9	546,19,84		408,48,57
Provision		<u>11,07,61</u>		5,34,35
Net current assets		557,27,45		
			548,04,76	550,22,68
<b>Miscellaneous expenditure (to the extent not written off or adjusted)</b>				
	10		<u>6,37,77</u>	7,12,78
			8176,87,12	6972,94,29
Contingent liabilities	11		<u>314,99,80</u>	252,60,24
Notes on accounts	18			
Schedule 1 to 18 and Accounting Policies form integral part of Accounts				

**P. D. TUTEJA**  
Secretary

**K. L. SHARMA**  
E.D. (Finance)

**S. C. PARAKH**  
Director (Projects)

**ARUNGUPTA**  
Chairman & Managing Director

For Rasool Singhal & Co.  
Chartered Accountants

**M H Singhal**  
Partner

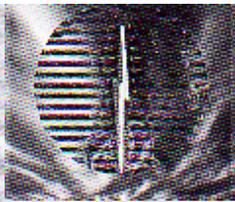
As per our report of even date  
For Umamaheswara Rao & Co.  
Chartered Accountants

**G.Siva Rama Krishna Prasad**  
Partner

For B M Chatrath & Co.  
Chartered Accountants

**P R Paul**  
Partner

Place: New Delhi  
Date: 29th June, 1996



# PROFIT & LOSS ACCOUNT

FOR THE YEAR ENDED 31ST MARCH 1996

(Rupees in Thousands)

	SCHEDULE NO		FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
<b>INCOME</b>				
Transmission charges			861,18,56	716,86,24
Sale of Electric Power			107,35,91	79,47,08
Consultancy Project Management and Supervision Fees			1,41,37	3,04,31
Other Income	12		<u>13,62,29</u>	<u>10,55,02</u>
			<u>983,58,13</u>	<u>809,92,65</u>
<b>EXPENDITURE</b>				
Purchase of Electric Power			75,66,23	50,36,69
Transmission and Administration Expenses	13	164,26,89		125,79,93
Depreciation		321,95,90		290,95,28
Prior Period adjustment (Net)	17	<u>-3,35,28</u>		5,93,97
		482,87,51		422,69,18
Less: Incidental expenditure during construction - transferred to Capital Work-in-progress	16A		<u>50,07,95</u>	38,33,27
			432,79,56	384,35,91
Provision	14		61,46	83,61
Loss on Fixed Assets discarded			<u>34,17</u>	<u>48,59</u>
			<u>509,41,42</u>	<u>436,04,80</u>
Profit (before interest & finance charges)			474,16,71	373,87,85
Interest and finance charges	15	378,27,71		271,70,71
Less: Interest & finance charges transferred to capital work-in-progress	16B			105,42,47
			198,21,24	166,28,24
Profit for the year (before tax)			275,95,47	207,59,61
Provision for taxation (Wealth tax)			50	-
Profit after tax			275,94,97	207,59,61
Balance profit from last year's account			7,26,29	4,66,68
Proposed Dividend			10,00,00	5,00,00
Transferred to Bonds Redemption Reserve			72,00,00	38,00,00
Transferred to Self Insurance Reserve			2,00,00	2,00,00
Transferred to General Reserve			<u>190,00,00</u>	<u>160,00,00</u>
Balance of profit carried over to Balance Sheet			<u>9,21,26</u>	<u>7,26,29</u>

**P.D.TUTEJA**  
Secretary

**K.L.SHARMA**  
E.D. (Finance)

**S.C. PARAKH**  
Director (Projects)

**ARUN GUPTA**  
Chairman & Managing Director

As per our report of even date  
For Umamaheswara Rao & Co.  
Chartered Accountants

For Rasool Singhal & Co.  
Chartered Accountants

**M.H. Singhal**  
Partner

**G.Siva Rama Krishna Prasad**  
Partner

For B M Chatrath & Co.  
Chartered Accountants

**P R Paul**  
Partner

Place: New Delhi  
Date: 29th June, 1996



## CAPITAL SCHEDULE-1

(Rupees in Thousands)

	AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
<b>AUTHORISED</b>		
5,00,00,000 (Previous year 5,00,00,000) equity shares of Rs. 1000/- each.	<u>5000,00,00</u>	<u>5000,00,00</u>
<b>ISSUED, SUBSCRIBED AND PAID-UP</b>		
282,93,540 (Previous year 274,98,630) equity shares of Rs. 1000/- each fully Paid up	2829,35,40	2749,86,30
Share capital deposit	162,88,67	222,37,77
	<u>2992,24,07</u>	<u>2972,24,07</u>

## RESERVES AND SURPLUS SCHEDULE-2

(Rupees in Thousands)

	BALANCE AS AT 1ST APRIL, 1995	ADDITIONS	BALANCE AS AT 31ST MARCH, 1996
Capital Reserve	112,05,85	-	112,05,85
Grants in aid	149,51,19	137,23,10	286,74,29
Self Insurance Reserve	2,00,00	2,00,00	4,00,00
General Reserve	560,00,00	190,00,00	750,00,00
Bonds Redemption Reserve	51,00,00	72,00,00	123,00,00
	874,57,04	401,23,10	1275,80,14
Surplus as per Profit & Loss Account	7,26,29		9,21,26
	<u>881,83,33</u>		<u>1285,01,40</u>

## LOAN FUNDS SCHEDULE-3

(Rupees in Thousands)

	AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
<b>SECURED LOANS</b>		
<b>BONDS I SERIES</b>		
a. 16.75% / 17% Taxable 7 years Redeemable non-convertible Bonds of Rs 1000/- each redeemable at par on 10/13thMrch, 1999	36,80,00	36,80,00
b. 9% Tax-Free 10 years Redeemable Non- convertible Bonds of Rs 1000/- each redeemable at par on 10th March, 2002	39,00,18	39,00,19
Both secured by equitable mortgage of Korba & Singrauli Transmission Lines	<u>75,80,18</u>	75,80,18





**LOAN FUNDS**  
**SCHEDULE-3 (Contd.)**

(Rupees in Thousands)

	ASAT 31ST MARCH, 1996	ASAT 31ST MARCH, 1995
<b>WEST MERCHANT BANK, UK</b>		
Guaranteed by consortium of Bankers, which is secured by hypothecation of Machinery of Jeypore-Gazuwaka HVDC transmission system and equitable mortgage of Land of Indravati Sub-station and Vishakhapatnam project site (Title deed yet to be deposited)	10,58,27	
PENDING FINALISATION OF TRIPARTITE AGREEMENT BACK TO BACK AGREEMENT, AMOUNT PAYABLE TO GOVERNMENT OF INDIA ON ACCOUNT OF		
<b>NHPC PURCHASE CONSIDERATION</b>		
9% B series 10 years Bonds of Rs. 1000/- each redeemable at par on 11th Dec , 1997 Secured by equitable mortgage of Chukha Transmission lines	19,13,24	19,13,24
<b>NLC PURCHASE CONSIDERATION</b>		
a. 13% E Series 7 years Bonds of Rs 1000/- each redeemable at par in December , 1996	35,49,00	35,49,00
b. 9% E series 10 Years Bonds of Rs. 1000/- each redeemable at par in December , 1999/ March, 2000 Both secured by equitable mortgage of Neyveli-Salem-Madras Line.	35,49,00	35,49,00
	<u>70,98,00</u>	70,98,00
<b>Total Secured Loans</b>	<b>1067,97,21</b>	<b>736,26,25</b>
<b>UNSECURED LOANS</b>		
<b>BONDS III SERIES</b>		
a. 13.5% Taxable 7 years Redeemable non-convertible Bonds of Rs 1000/- each Redeemable at par on 28th February, 2002		16,00,00
b. 9.75% tax free 7 years Redeemable non-convertible Bonds of Rs 1000/- each redeemable at par on 28th October, 2001		100,00,00
c. 16.25% Taxable 5 years Redeemable non-convertible Bonds of Rs 1000/- each Redeemable at par on 1st September, 2000 To be secured by equitable mortgage of Auriya & Moga-Bhivani Transmission Lines	134,00,00	-
	<u>134,00,00</u>	116,00,00



**LOAN FUNDS**  
**SCHEDULE-3 (Contd.)**

(Rupees in Thousands)

	ASAT 31ST MARCH, 1996	ASAT 31ST MARCH, 1995
<b>BONDS IV SERIES</b>		
a. 17% Taxable 5 years redeemable non-convertible Bonds of Rs. 1000/- each redeemable at par on 8th January, 2001	106,85,50	-
b. 17.5% Taxable 5 years redeemable non-convertible Bonds of Rs. 1000/- each redeemable at par on 29th March, 2001	36,26,00	-
Both to be secured by equitable mortgage of Transmission Lines Assets	<u>143,11,50</u>	-
LOAN FROM GOVERNMENT OF INDIA	885,17,26	577,03,74
LOANS GUARANTEED BY GOVT OF INDIA		
a. West Merchant Bank, UK & State Bank of India, London	60,03,91	3,78,57
b. Credit National , France	94,52,13	48,22,19
c. Banque Indosuez , Switzerland	81,46,01	25,13,21
d. Skandinaviska Enskilda Banken I, Sweden	39,37,71	50,64,03
e. Skandinaviska Enskilda Banken II, Sweden	<u>235,81,26</u>	279,76,19
	511,21,02	407,54,19
PENDING FINALISATION OF TRIPARTITE AGREEMENT/ BACK TO BACK AGREEMENT AMOUNT PAYABLE TO GOVERNMENT OF INDIA ON ACCOUNT OF		
A. NTPC PURCHASE CONSIDERATION		
1. Loans from		
a. Industrial Bank of Japan and Nippon Life Insurance	41,53,71	45,55,39
b. Syndicated Loan from Industrial Bank of Japan & other Japanese Banks/Financial Institutions	249,83,24	296,23,39
c. Exim Bank, Japan	262,35,73	312,76,27
d. Unit Trust of India	3,04,09	5,06,82
2. Bonds issued by NTPC	<u>292,65,00</u>	292,65,00
	849,41,77	952,27,00
2. NHPC PURCHASE CONSIDERATION		
a. Export Development Corporation , Canada	38,88,42	40,82,16
b. Bonds issued by NHPC	<u>135,82,57</u>	135,82,57
	174,70,99	176,64,73



**LOAN FUNDS  
SCHEDULE-3(Contd.)**

(Rupees in Thousands)

		AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
3. NLC PURCHASE CONSIDERATION			
Bonds issued by NLC		89,02,00	89,02,00
UNSECURED LOANS FROM OTHERS			
a. Nuclear Power Corporation			15,00,00
b. Neyveli Lignite Corporation	44,99,90		49,08,98
		44,99,90	64,08,98
<b>Total Unsecured Loans</b>		<b>2831,64,44</b>	<b>2382,60,64</b>
<b>GRANT TOTAL (SECURED + UNSECURED)</b>		<b>3899,61,65</b>	<b>3118,86,89</b>

**FIXED ASSETS - TRANSMISSION LINES  
SCHEDULE- 4A**

(Rupees in Thousands)

	GROSS BLOCK			DEPRECIATION		NET BLOCK	
	AS AT 1.4.95	ADDITION	SALES/ADJ.	AS AT 31.3.96	UPTO 31.3.96	AS AT 31.3.96	AS AT 31.3.95
LAND (Including Development)							
a) Freehold	1,32,38	12,06	-	1,44,44	-	1,44,44	1,32,38
b) Leasehold	77,86	2,64,16	58	3,41,44	1,21	3,40,23	75,82
Roads, bridges & culverts	2,72	-	-	2,72	8	2,64	2,72
BUILDINGS							
Others	5,87	-	-	5,87	1,47	4,40	4,78
Temporary erection	86	10	-	96	74	22	9
Water Supply drainage & sewerage	1,15	-	-	1,15	4	1,11	1,15
Plant & Machinery	3051,21,18	278,74,52	64,34,11	3265,61,59	468,74,20	2796,87,39	2739,86,84
Construction and Workshop equipment	21,90	1	4	21,87	6,99	14,88	17,03
Electrical Installation	32,19	7	-29,63	61,89	30,01	31,88	19,49
Vehicles	19,06	-	10,40	8,66	5,83	2,83	3,74
Furniture, Fixtures and Other equipment	8,79	7,68	-	16,47	1,37	15,10	8,20
EDP & WP Machines	18,69	4,05	-	22,74	2,54	20,20	18,69
<b>Total (A)</b>	<b>3054,42,65</b>	<b>281,62,65</b>	<b>64.15,50</b>	<b>3271,89,80</b>	<b>469,24,48</b>	<b>2802,65,32</b>	<b>2742,70,93</b>



## FIXED ASSETS - SUBSTATIONS SCHEDULE- 4B

(Rupees in Thousands)

	GROSS BLOCK			DEPRECIATION		NET BLOCK	
	AS AT 1.4.95	ADDITIONS	SALES/ADJ.	AS AT 31.3.96	UPTO 31.3.96	AS AT 31.3.96	AS AT 31.3.95
LAND (Including Development)							
a) Freehold	26,12,46	32,23	-60,59	27,05,28	-	27,05,28	26,12,46
b) Leasehold	5,53,44	1,23,75	-1,24,71	8,01,90	42,53	7,59,37	5,28,63
c) Unclassified	2,46,44	-	12	2,46,32	-	2,46,32	2,46,44
Roads, bridges & culverts	16,46,79	1,10,63	48,51	17,08,91	1,35,02	15,73,89	15,54,39
BUILDINGS							
a) Main Plant	28,86,69	2,78,57	-1,55,13	-33,20,39	5,03,26	28,17,13	25,81,73
Others	29,87,77	2,00,98	-66,73	32,55,48	4,51,52	28,03,96	26,75,89
Temporary erection	1,35,62	7,51	3,60	1,39,53	89,47	50,06	76,11
Water Supply, drainage & sewerage	3,69,29	61,49	-2,63	4,33,41	62,66	3,70,75	3,27,64
Plant & Machinery	1767,74,79	119,43,36	-53,10,22	1940,28,37	445,77,92	1494,50,45	1472,29,85
Construction and							
Workshop equipment	4,82,86	19,69	5,38	4,97,17	1,34,63	3,62,54	3,86,81
Electrical Installtion	4,37,06	95,62	-43,44	5,76,12	1,50,09	4,26,03	3,36,85
Vehicles	1,48,39	46,48	7,38	1,87,49	1,09,77	77,72	38,39
Furniture, Fixtures and							
Other equipment	5,40,13	1,75,57	-1,10,35	8,26,05	2,16,87	6,09,18	4,32,35
EDP & WP Machines	1,17,08	60,07	-52,74	2,29,89	73,18	1,56,71	93,37
Laboratory and							
Workshop equipment	2,48,26	12,34	-25,02	2,85,62	1,41,94	1,43,68	1,72,38
Capital Expenditure on Assets not owned by Company	-	67,97	-46,33	1,14,30	15,29	99,01	-
<b>Total (B)</b>	<b>1901,89,54</b>	<b>132,36,26</b>	<b>-59,32,90</b>	<b>2093,58,70</b>	<b>467,04,69</b>	<b>1626,54,01</b>	<b>1592,95,40</b>



## FIXED ASSETS - RESEARCH & DEVELOPMENT SCHEDULE- 4C

(Rupees in Thousands)

	GROSS BLOCK			DEPRECIATION		NET BLOCK	
	AS AT 1.4.95	ADDITIONS	SALES/ADJ.	AS AT 31.3.96	UPTO 31.3.96	AS AT 31.3.96	AS AT 31.3.95
<b>BUILDING</b>							
Others	70,80	-	2,22	68,58	5,48	63,10	67,28
<b>Total (C)</b>	<b>70,80</b>	<b>-</b>	<b>2,22</b>	<b>68,58</b>	<b>5,48</b>	<b>63,10</b>	<b>67,28</b>

## FIXED ASSETS - OFFICE COMPLEX SCHEDULE- 4D

(Rupees in Thousands)

	GROSS BLOCK			DEPRECIATION		NET BLOCK	
	AS AT 1.4.95	ADDITIONS	SALES/ADJ.	AS AT 31.3.96	UPTO 31.3.96	AS AT 31.3.96	AS AT 31.3.95
<b>LAND (Including Development)</b>							
Leasehold	6,43,49	56,16	-	6,99,65	4,06	6,95,59	6,39,81
<b>BUILDINGS</b>							
Others	5,20,37	-	1,07,12	4,13,25	42,98	3,70,27	4,89,73
Temporary erection	1,35,15	44,24	48	1,78,91	99,99	78,92	83,40
Water Supply, drainage & sewerage	-	57	-	57	2	55	-
Electrical Installation	30,55	-	33	30,22	4,34	25,88	27,76
Vehicles	50,30	17,51	2,29	65,52	37,34	28,18	18,09
<b>Furniture, Fixture and Other equipment</b>							
Other equipment	9,04,96	1,52,03	97,08	9,59,91	2,63,63	6,96,28	7,25,86
EDP & WP Machines	4,41,07	2,73,62	9,33	7,05,36	1,47,83	5,57,53	3,53,87
<b>Total (D)</b>	<b>27,25,89</b>	<b>5,44,13</b>	<b>2,16,63</b>	<b>30,53,39</b>	<b>6,00,19</b>	<b>24,53,20</b>	<b>23,38,52</b>



**FIXED ASSETS - TOWNSHIP ASSETS  
SCHEDULE- 4E**

(Rupees in Thousands)

	GROSS BLOCK			DEPRECIATION		NET BLOCK	
	AS AT 1.4.95	ADDITIONS	SALES/ADJ.	AS AT 31.3.96	UPTO 31.3.96	AS AT 31.3.96	AS AT 31.3.95
LAND (Including Development)							
a) Freehold	1,38,45	72	-18,11	1,57,28	-	1,57,28	1,38,45
b) Leasehold	78,74	-	13,95	64,79	7,12	57,67	72,88
Roads, bridges & culverts	6,41,30	42,71	-87,39	7,71,40	62,69	7,08,71	6,06,51
BUILDINGS							
Others	56,72,82	8,06,35	-1,98,24	66,77,41	5,18,32	61,59,09	53,35,49
Temporary erection	43,22	7,39	2,94	47,67	24,85	22,82	26,33
Water Supply, drainage & sewerage	10,30,69	68,09	-9,08	11,07,86	1,03,04	10,04,82	9,64,91
Electrical Installation	4,66,19	36,68	25,57	4,77,30	91,39	3,85,91	4,06,69
Vehicles	10,00	-	3,78	6,22	3,87	2,35	2,08
Furniture, Fixtures and Other equipment	1,41,14	37,32	-2,31	1,80,77	29,23	1,51,54	1,24,39
Hospital equipment	58	-	-	58	18	40	47
School Equipment	2,52	-	-	2,52	56	1,96	2,12
Capital Expenditure Assets not owned by Company	-	3,70	-	3,70	-	3,70	-
<b>Total (E)</b>	<b>82,25,65</b>	<b>10,02,96</b>	<b>-2,68,89</b>	<b>94,97,50</b>	<b>8,41,25</b>	<b>86,56,25</b>	<b>76,80,32</b>



**FIXED ASSETS  
SCHEDULE- 4**

(Rupees in Thousands)

	GROSS BLOCK			DEPRECIATION		NET BLOCK	
	AS AT 1.4.95	ADDITIONS SALES/ADJ.		AS AT 31.3.96	UPTO 31.3.96	AS AT 31.3.96	AS AT 31.3.95
LAND (Including Development)							
a) Freehold	28,83,29	45,01	-78,70	30,07,00	-	30,07,00	28,83,29
b) Leasehold	13,53,53	4,44,07	-1,10,18	19,07,78	54,92	18,52,86	13,17,14
c) Unclassified	2,46,44	-	12	2,46,32	-	2,46,32	2,46,44
Roads, bridges & culverts	22,90,81	1,53,34	-38,88	24,83,03	1,97,79	22,85,24	21,63,62
<b>BUILDINGS</b>							
a) Main Plant	28,86,69	2,78,57	-1,55,13	33,20,39	5,03,26	28,17,13	25,81,73
Others	92,57,63	10,07,33	-1,55,63	104,20,59	10,19,77	94,00,82	85,73,17
Temporary erection	3,14,85	59,24	7,02	3,67,07	2,15,05	1,52,02	1,85,93
Water Supply, drainage & sewerage	14,01,13	1,30,15	-11,17	15,42,99	1,65,76	13,77,23	12,93,70
Plant & Machinery construction and workshop equipment	4818,95,97	398,17,88	11,23,89	5205,89,96	914,52,12	4291,37,84	4212,16,69
Electrical Installation	5,04,76	19,70	5,42	5,19,04	1,41,62	3,77,42	4,03,84
Vehicles	9,65,99	1,32,37	-47,17	11,45,53	2,75,83	8,69,70	7,90,79
Furniture, Fixture and Other equipment	2,27,75	63,99	23,85	2,67,89	1,56,81	1,11,08	62,30
EDP & WP Mchines	15,95,02	3,72,60	-15,58	19,83,20	5,11,10	14,72,10	12,90,80
Laboratory and workshop equipment	5,76,84	3,37,74	-43,41	9,57,99	2,23,55	7,34,44	4,65,93
Hospital equipment	2,48,26	12,34	-25,02	2,85,62	1,41,94	1,43,68	1,72,38
School Equipment	58	-	-	58	18	40	47
Capital Expenditure on Assets not owned by Company	2,52	-	-	2,52	56	1,96	2,12
	-	71,67	-46,33	1,18,00	15,29	1,02,71	-
<b>Grand Total</b>	<b>5066,54,53</b>	<b>429,46,00</b>	<b>4,32,56</b>	<b>5491,67,97</b>	<b>950,76,09</b>	<b>4540,91,88</b>	<b>4436,52,45</b>
Previous year	4228,65,02	668,32,40	-169,57,11	5066,54,53	630,02,08	4436,52,45	



**CAPITAL WORK IN PROGRESS - TRANSMISSION LINE PROJECTS  
SCHEDULE- 5A**

(Rupees in Thousands)

	Balance As at 1st April, 1995	Additions by Transfer of Assets	Additions During the year	Adjustments	Capitalised During the year	Balance As at 31st March, 1996
<b>PLANT &amp; MACHINERY</b> (including associated civil works)						
On own Account & on supply-cum-erection contract	906,37,34	-	823,88,73	6,88,07	282,39,86	1440,98,14
Survey, Investigation Consultancy & Supervision Charges	4,39,41	-	3,42,68	36,74	20,65	7,24,70
Survey & Soil Investigation	6,10,25	-	21,29	-	13,97	6,17,57
Difference in Exchange on foreign Loans						
a) Skandinorviska Enskilda Banken I Sweden	-	-	5,59	-	5,59	-
b) Skandinorviska Enskilda Banken II Sweden II	-	-	8,92,57	-	8,92,57	-
c) Industrial Bank of Japan and Nippon Life Insurance	-	-	-3,55,92	-	-3,55,92	-
d) Syndicated Loan from Industrial Bank of Japan and other Japanese Banks /Financial Institutions	-	-	-4,30,90	-	-4,30,90	-
e) Exim Bank, Japan	-	-	-5,49,05	-	-5,49,05	-
f) International Bank of Reconstruction & Development	13,01,88	-	-1,92,36	3,49,98	-	7,59,54
<b>Total (A)</b>	<b>929,88,88</b>	<b>-</b>	<b>821,22,63</b>	<b>10,74,79</b>	<b>278,36,77</b>	<b>1461,99,95</b>



**CAPITAL WORK IN PROGRESS - SUB STATIONS  
SCHEDULE- 5B**

(Rupees in Thousands)

	Balance As at 1st April, 1995	Additions by Transfer of Assets	Additions During the year	Adjustments	Capitalised During the year	Balance As at 31st March, 1996
Development of land	4,23,01	-	38,60	87,30	1,36,82	2,37,49
Roads, bridges, & culverts	2,68,70	-	2,06,20	-9	1,29,77	3,45,22
Buildings (others)	10,43,81	-	7,58,84	-10,84	5,57,00	12,56,49
Temporary erection	15,54	-	15,43	7,46	9,65	13,86
Water supply, drainage and Sewerage	54,39	-	45,51	-7,19	67,42	39,67
<b>PLANT &amp; MACHINERY</b> (including associated civil works)						
a. On own account & on supply- cum-erection contract	217,24,05	-	642,89,23	5,02,72	72,35,38	782,75,18
b. Others	61,36,36	-	88,77,47	1,13,77	23,35,50	125,64,56
Electrical installations	3,21,77	-	95,19	-8,37	83,65	3,41,68
Furniture fixtures & other office equipments	13,00	-	4,72	-48	12,62	5,58
Survey, Investigation, Consultancy & Supervision Charges	9,27,08	-	21,65,17	19,95	4,69	30,67,61
Survey & Soil Investigation	6,57,22	-	-1,34	13,26	2,49	6,40,13
Difference in Exchange on foreign Loans						
a) Skandinorviska Enskilda Banken I Sweden	-	-	3,80,65	-	3,80,65	-
b) Skandinorviska Enskilda Banken II Sweden	-	-	10,81,36	2,33	10,79,03	-
c) Industrial Bank of Japan and Nippon Life Insurance	-	-	-45,60	-	-45,60	-
d) Syndicated Loan from Industrial Bank of Japan and other Japanese Banks/ Financial Institutions	30,72	-	-21,16,14	-13,64,99	-7,22,26	1,83
e) Exim Bank, Japan	3,87,57	-	-22,08,73	-8,13,63	-11,55,60	1,48,03
f) Export Development Bank (Canada)	-	-	3,48,23	3,48,23	-	-
g) International Bank of Reconstruction & Development	2,26	-	-1,66,98	-69,28	-62,56	-32,88
h) West Merchant Bank , U.K. & State bank of India London	31,81	-	7,27	-	-	39,08
i) Credit National , France	4,19,29	-	2,02,86	-	-	6,22,15
j) Banque Indo suez, Switzerland	12,99	-	29,02	-	-	42,01
k) West Merchant Bank , U.K	-	-	-35,74	-	-35,74	-
Capital expenditure on assets not owned by Company	-	-	31,41	-	31,41	-
<b>Total (B)</b>	<b>324,69,53</b>	<b>-</b>	<b>740,02,63</b>	<b>-11,79,85</b>	<b>100,44,32</b>	<b>976,07,69</b>



## CAPITAL WORK IN PROGRESS - OFFICE COMPLEX SCHEDULE- 5C

(Rupees in Thousands)

	Balance As at 1st April, 1995	Additions by Transfer of Assets	Additions during the year	Adjustments	Capitalised during the year	Balance As at 31st March, 1996
Buildings (others)	13,54	-	2,22	11,36	-	4,40
Temporary erection	9,01	-	-	9,01	-	-
Electrical installations	61,45	-	30,76	-	-	92,21
Furniture Fixtures & Other office equipment	13,27	-	-	-	13,27	-
<b>Total (C)</b>	<b>97,27</b>	<b>-</b>	<b>32,98</b>	<b>20,37</b>	<b>13,27</b>	<b>96,61</b>

## CAPITAL WORK IN PROGRESS - township assets SCHEDULE- 5D

(Rupees in Thousands)

	Balance As at 1st April, 1995	Additions by Transfer of Assets	Additions during the year	Adjustments	Capitalised during the year	Balance As at 31st March, 1996
Development of land	24,08	-	7,04	-4,48	7,46	28,14
Roads, bridges, culverts	1,05,14	-	67,20	7,58	1,28,87	35,89
Buildings (others)	12,68,69	-	12,34,27	-54,11	9,68,28	15,88,79
Temporary erection	1,83	-	16,16	-	5,29	12,70
Water supply drainage and sewerage	92,86	-	68,80	-3,18	67,34	97,50
Electrical installations	1,32,13	-	48,59	69,82	35,86	75,04
Furniture fixtures & other office equipments	12,97	-	10,34	-1,23	13,88	10,66
Capital expenditure on assets not owned by Company	-	-	3	-3,67	3,70	-
<b>Total (D)</b>	<b>16,37,70</b>	<b>-</b>	<b>14,52,43</b>	<b>10,73</b>	<b>12,30,68</b>	<b>18,48,72</b>

## CAPITAL WORK IN PROGRESS - INCIDENTAL EXPENDITURE DURING CONSTRUCTION SCHEDULE- 5E

(Rupees in Thousands)

	Balance As at 1st April, 1995	Additions by Transfer of Assets	Additions during the year	Adjustments	Capitalised during the year	Balance As at 31st March, 1996
INCIDENTAL EXPENDITURE DURING CONSTRUCTION	44,49,34	-	226,49,56	-	-	270,98,90
Less: Allocated to Capital Work in Progress	-	-	260,91,76	-	-	260,91,76
<b>Total (E)</b>	<b>44,49,34</b>	<b>-</b>	<b>-34,42,20</b>	<b>-</b>	<b>-</b>	<b>10,07,14</b>
<b>Grand Total (A+B+C+D+E)</b>	<b>1316,42,72</b>	<b>-</b>	<b>1541,68,47</b>	<b>-73,96</b>	<b>391,25,04</b>	<b>2467,60,11</b>
Previous year	1307,14,36	-	880,94,84	98,86,20	772,80,28	1316,42,72



## CONSTRUCTION STORES & ADVANCES SCHEDULE-6

(Rupees in Thousands)

	AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
CONSTRUCTION STORES (at cost) (As certified by the Management)		
Steel	48,82,74	50,66,79
Cement	2,23,40	12,34,75
Others	267,70,57	205,21,37
	<u>318,76,71</u>	268,22,91
<b>ADVANCE FOR CAPITAL EXPENDITURE</b>		
Secured	11,83,63	33,88
Unsecured, considered good against Bank guarantees	251,84,44	332,33,87
Others (i.e unsecured without B.G)	31,47,57	61,72,75
	<u>295,15,64</u>	394,40,50
	<u>613,92,35</u>	662,63,41
construction stores includes Materials in transit, under inspection and with contractors	260,70,49	228,50,06

## INVESTMENTS SCHEDULE- 7

(Rupees in Thousands)

	AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
OTHER THAN TRADE INVESTMENTS (Unquoted at cost)		
500 Fully paid up shares of Rs. 10/- each in Employees Co-op Society Limited Bhadravati	5	5
500 Fully paid up shares of Rs. 10/- each in Employees Co-op Society Limited Itarsi	5	5
500 Fully paid up shares of Rs 10/- each in Employees Co-op Society Limited Nagpur	5	5
500 Fully paid up shares of Rs 10/- each in Employees Co-op Society Limited, Jabalpur	5	5
500 Fully paid up shares of Rs 10/- each in Powergrid Primary Consumer Co-operatie Society, Rourkela	5	5
	<u>25</u>	25



## CURRENT ASSETS, LOANS AND ADVANCES SCHEDULE-8

(Rupees in Thousands)

	AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
<b>INVENTORIES</b>		
(At cost as certified by Management)		
Loose tools	99,58	1,08,65
Consumable stores	85,66	92,00
Components, Spares & other spare parts	<u>105,57,47</u>	69,74,19
	107,42,71	71,74,84
Inventories includes stores in transit Rs 31.86 Lakhs (Previous Year Rs. 5.58 Lakhs)		
<b>SUNDRY DEBTORS</b>		
(unsecured, considered good)		
Debts outstanding for a period exceeding six months	161,39,47	180,72,82
Other debts	<u>246,06,69</u>	116,95,11
	407,46,16	297,67,93
<b>CASH &amp; BANK BALANCES</b>		
Cash, drafts, stamps and imprest	36,72,81	11,54,98
Remittance in transit	4,89,88	32,72
SHORT TERM DEPOSTS -Indian Banks	48,75,19	35,00,23
Balance with scheduled banks on current accounts	158,63,37	134,13,38
Less: Funds, held on customers' A/c	<u>4,13,73</u>	7,03,56
	<u>154,49,64</u>	127,09,82
	244,87,52	173,97,75
<b>OTHER CURRENT ASSETS</b>		
Interest accrued	9,99,13	9,22,88
Others	<u>1,63,42</u>	1,81,34
	11,62,55	11,04,22
<b>LOANS AND ADVANCES</b>		
<b>LOANS</b>		
Employees	35,16,21	28,60,73
Others	<u>47,03</u>	47,98
	35,63,24	29,08,71



## CURRENT ASSETS, LOANS AND ADVANCES SCHEDULE-8 (Contd.)

(Rupees in Thousands)

	AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
<b>ADVANCES</b>		
<b>ADVANCES RECOVERABLE IN CASH OR IN KIND OR FOR VALUE TO BE RECEIVED AND CONSIDERED GOOD FROM</b>		
Contractors & Suppliers, including		
material issued on loan	3,43,69	4,57,13
Employees	3,84,34	4,27,32
Claims recoverable	7,99,36	9,43,51
Amount Recoverable through Central Appropriation	156,29,00	232,60,00
Others	10,24,36	8,15,50
	<u>181,80,75</u>	259,03,46
Less: Provision for bad and doubtful advances and claims	3,14,03	2,67,84
	<u>178,66,72</u>	256,35,62
Deposits with customs, port trust and other authorities	119,63,31	119,06,53
Public deposit A/c. with Government of India	-	
	<u>298,30,03</u>	380,52,15
	333,93,27	409,60,86
	<u>1105,32,21</u>	964,05,60
<b>PARTICULARS OF LOANS AND ADVANCES</b>		
Secured	24,99,85	21,94,51
Unsecured considered good	308,93,42	387,66,35
Considered doubtful and provided for	3,14,03	2,67,84
	<u>337,07,30</u>	412,28,70

Due from Directors & Officers of the company	MAXIMUM AMOUNT 1995-96	MAXIMUM AMOUNT 1994-95
Directors	5,11	3,59
Officers	1,57,03	80,34
	4,41	49
	1,35,93	53,94



## CURRENT LIABILITIES AND PROVISIONS SCHEDULE-9

(Rupees in Thousands)

	AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
<b>CURRENT LIABILITIES</b>		
<b>SUNDRY CREDITORS</b>		
For capital expenditure	205,97,77	92,57,67
Other goods and services	18,79,91	20,76,51
Book overdraft (Banks)	<u>73,84</u>	7,70,24
	225,51,52	121,04,42
Deposits, retention money from contractors and others.	120,72,10	89,30,15
Less: Investments held as security	<u>17,45</u>	26,47
	120,54,65	89,03,68
Other Liabilities	124,99,00	131,11,31
<b>INTEREST ACCRUED BUT NOT DUE ON LOANS FROM</b>		
Government of India	26,60,31	29,43,57
Foreign Banks/Financial Institutions		
Industrial Bank of Japan and Nippon Life Insurance	34,14	36,82
<b>Syndicated Loan from Industrial Bank of</b>		
Japan & other Japanese Banks/Financial Institutions	19,46	47,60
Exim Bank , Japan	53,34	41,62
Skandinorviska Enskilda Banken I Sweden	40,03	50,64
Skandinorviska Enskilda Banken II Sweden	3,41,60	3,76,46
Export Development Bank (Canada)	62,59	63,56
International Bank of Reconstruction and Development	5,50,40	2,57,57
West Merchant Bank , U.K. & State Bank of India, London	16,08	7,27



**CURRENT LIABILITIES AND PROVISIONS  
SCHEDULE-9 (CONTD.)**

(Rupees in Thousands)

	AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
Credit National , France	17,23	92
Banque Indosuez	1,84,67	4,07
West Merchant Bank , U.K	6,73	-
Other loans	7,00,92	6,85,74
Interest accrued but not due on Bonds	<u>28,27,17</u>	22,13,32
	<u>75,14,67</u>	67,29,16
	546,19,84	408,48,57
<b>PROVISIONS</b>		
Taxation (Wealth Tax)	50	-
Provisions for shortages in materials	37,16	31,38
Others	69,95	2,97
Proposed dividend	<u>10,00,00</u>	5,00,00
	11,07,61	5,34,35
	<u>557,27,45</u>	413,82,92

**MISCELLANEOUS EXPENDITURE  
(To the extent not written off or adjusted )  
SCHEDULE-10**

(Rupees in Thousands)

	BALANCE AS AT 1ST APRIL, 1995	ADDITIONS	DEDUCTIONS	BALANCE AS AT 31ST MARCH, 1996
Deferred Revenue expenditure	7,12,78	74,90	1,49,91	6,37,77
	<u>7,12,78</u>	74,90	1,49,91	6,37,77



## CONTINGENT LIABILITIES SCHEDULE-11

(Rupees in Thousands)

	AS AT 31ST MARCH, 1996	AS AT 31ST MARCH, 1995
Claims against the Company not acknowledged as debts	299,70,27	235,28,38
Others	15,29,53	17,31,86
	<u>314,99,80</u>	<u>252,60,24</u>

## OTHER INCOME SCHEDULE-12

(Rupees in Thousands)

	FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
Hire charges for equipment	13,15	38,12
Interest from		
Indian Banks	7,29,60	3,86,46
Foreign Banks	28,79	2,65,98
Others	<u>3,26,07</u>	2,48,19
	10,84,46	9,00,63
Profit on fixed assets discarded	12,20	9,16
Miscellaneous income	<u>6,17,34</u>	5,08,25
	17,27,15	14,56,16
Less: Income transferred to incidental expenditure during construction-Sch 16C	3,64,86	4,01,14
	<u>13,62,29</u>	<u>10,55,02</u>



## TRANSMISSION, ADMINISTRATION & OTHER EXPENSES SCHEDULE-13

(Rupees in Thousands)

	FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
<b>EMPLOYEE COST</b>		
<b>EMPLOYEES' REMUNERATION AND BENEFITS</b>		
Salaries, wages, allowances & benefits	65,32,28	47,82,62
Contribution to provident and other funds	4,40,63	3,93,63
Welfare expenses	10,08,13	8,79,46
	<u>79,81,04</u>	60,55,71
<b>TRANSMISSION EXPENSES</b>		
<b>REPAIRS &amp; MAINTENANCE</b>		
Buildings	2,95,63	2,40,14
<b>PLANT &amp; MACHINERY</b>		
Sub Staion	5,71,72	4,94,88
Transmission lines	2,66,28	2,29,18
Construction equipment	3,12	2,64
Others	1,55,62	1,23,97
	<u>12,92,37</u>	10,90,81
Power charges	12,27,30	9,17,60
Less : Recovery from contractors	60	-
	<u>12,26,70</u>	9,17,60
Stores consumed	-	48
Water charges	7,19	4,10
	<u>25,26,26</u>	20,12,99
<b>ADMINISTRATION EXPENSES</b>		
Training & Recruitment expenses	1,94,86	1,33,00
Less: Fees for training and application	2,63	3
	<u>1,92,23</u>	1,32,97
Legal expenses	21,33	22,80
Professional charges (including TA/DA)	4,38,81	40,75
Consultacy expenses (including TA/DA)	44,87	3,47,73
Communication expenses	8,14,46	5,38,10
Travelling expenses (excluding foreign travel)	13,48,42	10,22,86
Foreign travel	1,71,24	65,26
	<u>15,19,46</u>	10,88,12
Tender expenses	90,60	66,10
Less : Sales of tenders	33,77	32,24
	<u>56,83</u>	33,86



**TRANSMISSION, ADMINISTRATION & OTHER EXPENSES  
SCHEDULE-13 (Contd.)**

(Rupees in Thousands)

	FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
<b>PAYMENT TO STATUTORY AUDITORS</b>		
Fees (subject to approval of company law board)	3,00	2,50
Tax Audit Fees	90	75
Fees for other services	-	1,49
Expenses	<u>13,05</u>	20,42
	16,95	25,16
Advertisement and publicity	39,14	44,44
Printing and stationery	2,18,03	1,88,59
EDP hire and other charges	32,65	23,92
Entertainment expenses	58,54	40,55
Brokerage & Commission	5,51	6,10
Donations	5	10
Research & development expenses	-	8,58
Rent	3,57,51	3,11,82
Construction stores written off	62	3,27
Temporary works charged off	32	47
Miscellaneous expenses (excluding Director's fee)	13,03,72	10,55,62
Insurance	5,34,03	5,52,10
Rates and taxes	19,35	24,13
Non operating expenses	2,27,57	94
Expenses for Guest House	17,99	21,73
Less Income from Guest House	<u>58</u>	62
	17,41	21,11
	<u>59,19,59</u>	45,11,23
	<u>164,26,89</u>	<u>125,79,93</u>
Stores consumption included in repair and maintenance	2,02,75	2,32,88

**PROVISIONS  
SCHEDULE-14**

(Rupees in Thousands)

	FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
Shortage in stores	15,27	15,59
Doubtful debts, loans and advances	9,06	9,79
Doubtful claims	37,13	56,77
Others	-	1,46
	<u>61,46</u>	<u>83,61</u>



## FINANCE AND OTHER CHARGES SCHEDULE-15

(Rupees in Thousands)

	FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
<b>INTEREST ON</b>		
Loans from Government of India	92,62,41	49,25,84
<b>LOANS FROM BANKS</b>		
Indian	6,82,77	33,78
Foreign		
Industrial Bank of Japan & Nippon & Life Insurance	2,20,00	2,08,31
Industrial Bank of Japan & other Japanese Banks and financial Institutions	11,51,26	12,84,28
Exim Bank, Japan	14,79,15	16,47,27
Skandinorviska Enskilda Banken I Sweden	1,38,30	1,66,94
Skandinorviska Enskilda Banken II Sweden	7,95,85	7,45,95
Export Development Corporation (Canada)	4,02,68	4,17,82
International Bank for Reconstruction & Development	12,60,67	5,96,74
West Merchant Bank , U.K & State Bank of Inda , London	32,82	10,32
Credit National , France	1,26,34	55,37
Banque Indosuez , Switzerland	2,88,30	4,07
West Merchant Bank	11,72	-
	<u>59,07,09</u>	51,37,07
<b>LOANS FROM FINANCIAL INSTITUTIONS</b>		
Unit Trust of India	24,56,77	24,83,54
Life Insurance Corporation of India	3,85,33	5,13,87
	<u>28,42,10</u>	29,97,41



## FINANCE AND OTHER CHARGES SCHEDULE-15 (Contd.)

(Rupees in Thousands)

	FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
Secured/Unsecured redeemable bonds	140,16,96	119,28,80
Less: Interest earnings on bonds	<u>2,96,71</u>	7,45,15
	137,20,25	111,83,65
Others	<u>11,30,89</u>	11,78,30
	335,45,51	254,56,05
<b>FINANCE CHARGES</b>		
Bond issue expense	1,58,57	1,36,31
Rebate to Customers	12,17,83	6,00,74
Commitment charges	3,31,54	4,34,44
Foreign credit insurance premium	87,99	-
Management / Arrangers Fees	2,74,10	61,25
Legal expense on foreign loan	-	4,80
Other finance charges	1,53,95	1,28,17
Other expenses on foreign currency loans	7,69,24	3,48,95
Export Credit Guarantee Dept Premium	<u>12,88,98</u>	-
	<u>42,82,20</u>	17,14,66
	<u>378,27,71</u>	<u>271,70,71</u>



## INCIDENTAL EXPENDITURE DURING CONSTRUCTION SCHEDULE-16

(Rupees in Thousands)

FOR THE YEAR  
ENDED  
31ST MARCH, 1996

FOR THE YEAR  
ENDED  
31ST MARCH, 1995

### A. EXPENSES

#### EMPLOYEES' REMUNERATION AND BENEFITS

Salaries, wages, allowances and benefits	19,43,89	14,89,06
Construction to provident and other funds	1,30,63	1,05,69
Welfare expenses	<u>2,89,99</u>	2,41,56
	23,64,51	18,36,31

#### REPAIRS & MAINTENANCE

Buildings	56,63	40,97
Construction equipment	36	1,57
Others	<u>46,09</u>	32,26
	1,03,08	74,80
Power	82,40	73,29
Stores and oil etc consumed (excluding consumption for repairs and maintenance)	-	20
Water charges	<u>1,20</u>	1,62
	1,86,68	1,49,91

#### ADMINISTRATION EXPENSES

Legal expense	7,39	7,80
Professional charges	2,38,13	21,25
Consultancy expenses	29,08	1,66,58
Communication expenses	2,48,33	1,81,88
Travelling expenses (incl foreign Travel)	5,67,23	3,84,77



## INCIDENTAL EXPENDITURE DURING CONSTRUCTION SCHEDULE-16 (Contd.)

(Rupees in Thousands)

	FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
Tender expenses	62,35	40,42
Less: Income from sale of tenders	<u>18,83</u>	15,26
	43,52	25,16
Payment to Auditors	8,13	10,02
Advertisement and Publicity	21,29	17,75
Printing and stationery	92,23	67,09
EDP hire and other charges	11,22	8,53
Entertainment expense	26,79	16,51
Brokerage and commission	1,26	47
Rent	1,89,47	1,45,26
Construction Stores written off	11	5
Temporary works written off	-	47
Miscellaneous expenses	3,29,43	3,28,84
Insurance	92,49	1,30,56
Rates and taxes	8,73	8,33
Depreciation	1,56,31	1,86,88
Guest House Expenses	6,65	9,45
Less: Income from guest house	<u>9</u>	13
	6,56	9,32
Non Operation Expenses	<u>2,24,65</u>	37
	23,02,35	17,17,89
Prior Period adjustment (net)	<u>1,54,41</u>	1,29,16
Total (A)	<u>50,07,95</u>	<u>38,33,27</u>



**INCIDENTAL EXPENDITURE DURING CONSTRUCTION  
SCHEDULE-16 (Contd.)**

(Rupees in Thousands)

	FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
<b>B. INTEREST AND FINANCE CHARGES</b>		
INTEREST ON		
Loan from Government of India	52,39,03	20,12,64
LOAN FROM BANKS		
Indian	6,81,13	17,55
Foreign		
Export Development Corporation (Canada)	-	59,41
International Bank For Reconstn & Development	11,46,33	4,76,65
West merchant Bank , U.K. & State Bank of India, London	32,82	10,32
Credit National , France	1,26,35	55,37
Banque Indosuez , Switzerland	2,88,30	4,07
West Merchant Bank	11,72	6,05,82
	<u>16,05,52</u>	
LOANS FROM FINANCIAL INSTITUTIONS		
Loan from Unit Trust of India	18,32,28	21,03,59
Loan from Life Insurance Corporation of India	92,24	3,52,70
	<u>19,24,52</u>	24,56,29



## INCIDENTAL EXPENDITURE DURING CONSTRUCTION SCHEDULE-16 (Contd.)

(Rupees in Thousands)

	FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
Secured/Unsecured Redeemable		
Bonds	57,89,82	43,74,02
Others	3,41	2,96,94
<b>FINANCE CHARGES</b>		
Commitment charges	3,28,93	4,07,18
Management Fees/Arrangers Fee	56,79	2,50
Legal expenses on foreign loan	3,21	-
Export Credit Guarantee Dept Premium	14,21,24	59,22
Other finance Charges	9,36,33	3,10,31
Other Expenses on foreign loans	16,54	-
Total (B)	<u>180,06,47</u>	<u>105,42,47</u>
<b>C. LESS OTHER INCOME</b>		
Hire charges	21	-
<b>INTEREST FROM</b>		
Indian banks	23,56	25,38
Foreign banks	2,14,72	2,74,70
Others	1,10,58	55,92
Profit on fixed assets sold/discarded	1,53	-
Miscellaneous income	14,26	45,14
Total (C)	<u>3,64,86</u>	<u>4,01,14</u>
<b>GRAND TOTAL (A+B-C)</b>	<u>226,49,56</u>	<u>139,74,60</u>



## PRIOR PERIOD ADJUSTMENT (NET) SCHEDULE -17

(Rupees in Thousands)

	FOR THE YEAR ENDED 31ST MARCH, 1996	FOR THE YEAR ENDED 31ST MARCH, 1995
<b>INCOME</b>		
Depreciation Written back -others	20,03,88	1,44,99
Excess provision written back	24,46	1,71,37
Transmission charges	14,33,53	9,66,85
Interest written Back- Others	98	7,29,15
Others	<u>1,04,57</u>	2,75,23
	35,67,42	22,87,59
<b>EXPENDITURE</b>		
Salary, wages allowances & benefits	1,83,32	2,96,09
Power charges	24,76	53,11
Rates and taxes	6,26	10,30
Insurance	3,96	9,02
Depreciation	20,14,03	19,21,90
Transmission charges written back on account of revision of tariff	3,13,73	2,77,92
Interest	51,71	73,15
Others	<u>6,34,37</u>	2,40,07
	32,32,14	28,81,56
Prior period expenditure/income (Net)	<u>-3,35,28</u>	<u>5,93,97</u>



## NOTES ON ACCOUNTS SCHEDULE- 18

1. The Transmission System situated in Jammu and Kashmir associated with National Hydro-electric Power Corporation (NHPC) has been taken over w.e.f 1.4.93 as mutually agreed upon by NHPC and the company pending finalisation of legal formalities.
2. Pending compliance of necessary formalities the Transmission System of Neyveli Lignite Corporation (NLC) has been taken over w.e.f 01.04.1992 as per the Act of Parliament.
3. The Regional Load Despatch Centres of Central Electricity Authority were transferred to the company on management basis along with associated manpower as per orders of Ministry of Power, Govt. of India, from time to time. The expenditure on these RLDCs amounting to Rs. 633.93 lakhs was charged off to Profit & Loss account during the year under consideration alongwith Rs. 257.25 lakhs which was incurred during 1993-94 & 94-95 and was shown in those years as recoverable from Govt. of India.
4. The transfer of transmission system associated with Tehri Hydro Development Corporation Ltd. (THDC) to POWERGRID w.e.f. 01.08. 1993 and its purchase consideration has been approved by GOI vide MOP notification No. 1/11/95-PG dt 17th August, 1995.
5. Share Capital Deposit of Rs. 162.89 crores (Previous year Rs. 222.38 crores) includes equity shares to be allotted against purchase consideration and other sums payable to Government of India.
6. In the year 1993-94 the company had forfeited the bonds of Rs. 124.20 crores (CANFINA Rs. 103.20 crores, ABFSL Rs. 21.00 crores) and had setoff the deposits with those companies of Rs. 112.06 crores and front-end fee of Rs. 12.14 crores. However, in the year year 1994-95 the company has restored the said deposits by crediting Capital Reserve account.

Pending settlement of the issue with CANFINA and ABFSL relating to 1st series, 1992 Bonds:

- (a) Rs. 50 lakhs paid by ABFSL during the year 1993-94 has been accounted by the company as interest income due on deposits in that year.
- (b) As in previous year:
  - (i) The company has not accounted for interest payable income on deposits, amounting to Rs. 14.24 crores (previous year Rs. 14.24 crores) (cumulative interest Rs. 57.80 crores).
  - (ii) The company has also not accounted for interest payable of Rs. 3.04 crores (cumulative Rs. 12.34 crores) on bonds of Rs. 19.77 crores.
7. a) Pending notification of GOI, the transmission charges recoverable on account of foreign exchange fluctuations amounting to Rs. 42.97 crores for financial year 1995-96 (previous year 23.73 crores) have been accounted for on provisional basis as per previous practice.
- b) Pending finalisation of tariff by CEA/MOP the transmission charges for Salal-II (Excluding SADA) amounting to Rs. 15.45 crores (Previous Year Rs. 2.71 crores) has been accounted for based on tariff principles decided by Ministry of Power vide letter reference DO No. 213/POWERGRID/Tariff/95 dated 19.12.95.
- c) Transmission charges for Jeypor-Talcheor Transmission system for the financial year 1995-96 have increased to Rs. 26.86 crores as compared to Rs. 4.80 crores in financial year 1994-95 after giving effect to GOI/MOP Notification No. 2/3/PTB/POWERGRID/96 dated 14.06.1996.
- d) Pending settlement of dispute with WBSEB, the transmission charges amounting to Rs. 47.19 lakh for AutoTransformer at Malda w.e.f. 01.09.1995 are not accounted for during the year 1995-96.
- e) As per decision taken at 7th Commercial Committee Meeting 220KV Dimapur-Misa transmission line started commercial operation w.e.f. 01.07.1995. Later on it was decided at the 11th Commercial Committee Meeting that though the commercial operation of the said line will remain effective from 01.07.1995, cost of the line would not be considered for the computation of Unified Common Pool Transmission Tariff (UCPTT) till a decision taken in the next meeting of the Technical Co-ordination Committee (TCC)/NEREB on this issue.



In view of the above the company has not recognized the income of Rs. 8.34 crores (Approx.) for the period from 01.07.1995 to 31.03.1996. This would be considerable with retrospective effect on final decision of NEREB.

However, in addition to directly identifiable revenue expenditure, the common expenditure of Rs. 1.34 crores not directly identifiable/allocable has been fully charged of to profit & Loss Accounts.

8. During the year certain equipments in circuit breakers of 400KVA were damaged due to blast at four locations of Southern Region. The circuit breakers have been put to use by utilizing the mandatory spares, while the failed/damaged equipments were sent to manufactures (BHEL) for carrying out the repairs. The loss/damage on account of blasts has not been accounted for as the repairs estimate is yet to be received from BHEL.
9. Certain assets like furniture, fixtures, etc., retained by the transferor organizations, which are included in the assets of the company and depreciation charged thereon will be settled/adjusted in subsequent years.
10. Fixed assets include company's share of Rs. 5.62 crores (previous year 5.62 crores) in common services and facilities of 400 KV substation of Uttar Pradesh State Electricity Board (UPSEB) and Rajasthan State Electricity Board (RSEB) pending execution of formal agreements for joint ownership.
11. Balances shown under advances, sundry debtors and creditors are subjected to confirmation. In the opinion of the management, the value on realisations 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.
12. Materials in transit/under inspection /with contractors are subject to confirmation /reconciliation and consequent adjustments.
13. Provision has not been made for entry tax and sales tax on works contracts and materials issued to contractors for which appeals are pending and /or the amounts are not ascertainable.
14. No payment is overdue for the purchase made from small scale/ancillary industries. Hence no provision of interest is made in the accounts.
15. Consultancy, Project Manager and Supervision fees include Rs. 43.56 lakhs (previous year Rs. 43.56 lakhs) for management fee for Mandola Sub-station for which the agreement is yet to be finalized with DESU.
16. Pending finalisation of pay scales of Executives and Supervisions in respect of pay revision effective from 01.01.1992 provision of Rs. 11.39 crores (upto previous year Rs. 7.79 crores) has been made on estimated basis.
17. In the absence of taxable income for the year, no provision for income tax is considered necessary.
18. Surcharge on outstanding dues from State Electricity Boards amounting to Rs. 119.97 crores (Previous year Rs. 60.62 crores) has not been accounted for as per Accounting policy No. 12.3.
19. Depreciation charged in the Accounts as Per Accounting Policy No. 1.1.a is higher by Rs. 31.64 crores (Previous year higher by Rs. 32.18 crores) if calculated as per section 205 (2) (b) of Companies Act 1956. The cumulative effect of the same upto 31<sup>st</sup> March 1996 is lower by Rs. 59.54 crores (upto previous year Rs. 91.18 crores)
20. Estimated amount of capital commitments is Rs. 1842.43 crores (previous year Rs. 1771.83 crores).
21. The company has made certain adjustments, in respect of mandatory spares, in the current year to have uniformity at all the accounting centers. Consequently Rs. 13.67 crores have been decapitalised, and necessary adjustments have been made increasing the profit by Rs. 1.51 Crores.
22. The company does not consider encashment of leave of employees as retirement benefit in preference to AS-15 of ICAI. The encashment of leave by retiring employees is accounted for on cash basis.
23. Liability for gratuity upto 31.03.96 has been provided as per Actuarial Valuation vide certified dated 14.03.96.
24. During the year:
  - (i) Amount of Rs. 31.5 crores being exchange difference is adjusted in the carrying amount of Fixed Assets and Capital Work in Progress.
  - (ii) An amount of Rs. 0.01 crores being exchange difference on current assets is charged to Profit and Loss Account.



25. Previous year's figure have been regrouped/rearranged wherever necessary.

26. Employees remuneration and benefits include the following for the Directors including Chariman & Managing Director:

	Current Year	Previous Year
		(Rs. / lakhs)
Salaries & Allowances	7.46	9.53
Contribution to Provident Fund & other Funds including Gratuity & Group Insurance	0.44	0.66
Other Benefits	1.64	2.35

b) In additions to the above remuneration, the Whole Time Directors have been allowed to use the staff car (including private journey) on payment of Rs. 250/ Rs. 400 per month, as contained in the Ministry of Finance (BPE) Circular No. 2,(18)/pc/ 64 dt. 29.11.64 as amended.

27. Quantitative information in respect of Purchase & sale of Power

	Current Year	Previous Year
a) Purchase of Power (Million Units)	1510	1361
b) Sale of Power (Million Units)	1510	1361

28. a) Value of imports calculated on CIF basis:

	Current Year	Previous Year
		(Rs. / lakhs)
i) Capital goods	37610.80	24959.58
ii) Spare Parts	-	-

b) Expenditure if foreign currency

	Current Year	Previous Year
		(Rs. / lakhs)
i) Professional and Consultancy fees	1349.87	382.79
ii) Interest	5532.30	5177.59
iii) Others	15451.35	16978.37

c) Value of Components, Stores & Spare parts consumed:

	%age	Current Year		Previous Year
				(Rs. / lakhs)
i) Imported	-	-		-
ii) Indigenoues (including fuel)	100%	167.07	100%	70.63

d) Earnings in foreign exchange

	Current Year	Previous Year
		(Rs. / lakhs)
i) Interest	172.08	305.97
ii) Grant-in-aid (HVDC Chandrapur)	13723.10	6725.09
iii) Others	-	4.35



29. Additional information as required under part IV of the schedule VI of the Companies Act, 1956, as certified by the management.

<b>i) Registration Details</b>	
Registration No.	55-38121
State Code	56
Balance Sheet Date	31st March' 1996
<b>ii) Capital raised during the year</b>	
Public Issue	-
Right Issue	-
Bonds Issue	-
Private Placement (Issued to Govt. of India)	2000
<b>iii) Position of mobilisation and deployment of funds</b>	
Total liabilities	817687
Total Assets	817687
<b>Sources of Funds</b>	
Paid up capital	299224
Reserves & Surplus	128501
Secured & Loans	106797
Unsecured Loans	283165
<b>Application of Funds</b>	
Net Fixed Assets	454092
Capital work in Progress including construction stores & advances	308152
Investments	-
Net Current Assets	54805
Misscellaneous Expenditure	638
<b>iv) Performance of Company</b>	
Turnover/Income	98358
Total Expenditure	70763
Profit before Tax	27595
Profit after Tax	27558
Earning per Share (Rs.)	92.10
Dividend Amount	1000
<b>v) Generic Names of Principal product / service of Company</b>	
Item Code No.	
Product Discription : Transmission and Sale of Power	

**P.D.TUTEJA**  
Secretary

**K.L.SHARMA**  
E.D. (Finance)

**S. C. PARAKH**  
Director (Projects)

**ARUN GUPTA**  
Chairman & Managing Director

For RASOOL SINGHAL & CO.  
Chartered Accountants

As per our report of even date  
For UMAMAHESWARA RAO & Co.  
Chartered Accountants

For B.M. CHATRATH & CO.  
Chartered Accountants

M.H. SINGHAL  
Partner

G.SIVA RAMA KRISHNA PRASAD  
Partner

P.R.PAUL  
Partner

Place : New Delhi  
Date : 29 June, 1996



# AUDITORS' REPORT

The Member of  
Power Grid Corporation of India Ltd.  
New Delhi.

We have audited the attached Balance Sheet of Power Grid Corporation of India Ltd. as at 31st March, 1996 and annexed Profit & Loss Account for the year ended on that date together with the Schedules, Notes forming part of the Accounts and Accounting Policies referred to therein :

## We report that:

1. The Company is governed by the Electricity (Supply) Act 1948, the provisions of the said Act read the rules thereunder, have prevailed wherever the same have been inconsistent with the provisions of the Companies Act, 1956.
2. As required by the Manufacturing and the Other Companies (Auditors' Report) Order, 1998 issued by the Company Law Board in terms of Section 227(4A) of the Companies Act, 1956, we given in the Annexure a statement on the matters specified in paragraphs 4 and 5 of the said Order.
3. Further to our comments in the annexure referred to in paragraph 2 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 & Loss Account dealt with by this report are in agreement with the books of account
  - (d) (i) "RENOVATION AND MODERNISATION" as per Accounting policy No.3.0 adopted from 1993-94 the company has capitalised replacement of an old part with an expenditure of Rs. 10 lakhs and above.

In our opinion, replacement of an old part does not increase the life of completes asset. Hence capitalisation of a part does not give the fair value of assets.By this policy, the company has valued its fixed assets more and revenue expenditure is lower. Quantam of the above impact on fixed assets and Profit and loss account has not been ascertained.

- (ii) During the year, there has been a change in the treatment of "MANDATORY SPARES" vide Accounting Policy No. 11, which is not in consonance with the opinion sought from the Expert Advisory Committee of the Institute of Chartered Accountants of India.

Change in treatment of Mandatory Spares has resulted in de-capitalisation of Fixed Assets to the extent of Rs. 13.67 Crores and increase of Profit by Rs. 1.51 Crores.

- (iii) Depreciation on fixed assets has been charged, as per Accounting Policy No. 1.1, in preference to Accounting standard 6 of the Institute of Chartered Accountants of India.

## e) Schedule- 18 Notes on Accounts :

- i) Note No. 2 dealing with the takeover of transmission systems of Neyveli Lignite Corporation Ltd. (NLC), pending completion of legal formalities and settlement of claims, the final impact on total value of assests/liabilities and profit/loss is not ascertainable.
- ii) Note No. 6 dealing with the for feiture of 1st issue of Bonds, 1992 in 1993-94 and exhibiting the same with adjustment of deposits kept with Canbank Financial Services Ltd. (CANFINA) and Andhra Bank Financial



Services Ltd. (ABFSL) and treatment of front-end fee and deferred revenue expenditure and restoration of the said deposits of Rs. 112.06 crores by crediting capital reserve in the year 1994-95.

In our opinion, there is an over statement of capital reserve to the extent of 112.06 crores. Liability under "Loan Funds" of principle amount of Rs. 124.20 crores and cumulative interest of Rs. 78.26 crores have not been accounted for. However, the same have been shown as contingent liability.

Provision for interest payable of Rs. 19.27 crores on bonds has not been made and interest income of Rs. 14.24 crores on the deposits made with CANFINA & ABFSL has not been accounted for, resulting in higher profit by Rs. 5.03 crores.

iii)

1. Note No. 7(a), regarding transmission charges recoverable on account of Foreign Exchange fluctuation.
2. Note No.7(b), regarding transmission charges for Salal-II;
3. Note Nos.7(d) & 7(e), regarding not recognizing the income in respect of Auto-Transformer at Malda and Dimapur-Misa Transmission line respectively and charging of common expenses to Profit & Loss Account;
4. Note No.9, regarding withholding of certain assets by transferor organisations pending settlement/adjustment and charging of depreciation thereon;
5. Note No.10, regarding inclusion of Rs. 5.62 crores of common services in fixed assets;
6. Note No.13, regarding no provision for entry tax and sales tax on works contracts and materials issued to contractors, the impact of which on liabilities and profit not ascertainable;
7. Note No.15, regarding inclusion of Rs. 0.44 crores for consultancy, project and management and supervision fees;
8. Note No. 16, regarding provision for pay of executives and supervisors on estimated basis and pending final legal formalities, Govt. Notification and signing of MOUs etc., the final impact on total value of assets/liabilities and profit not ascertainable;
9. Note No. 22 regarding encashment of leave of employees as retirement benefit, in preference to Accounting Standard 15 of The Institute of Chartered Accountant of India.

iv) The confirmation of balances shown under advances, sundry debtors, sundry creditors, material in transit under inspection/with contractors and reconciliation thereof is pending. The impact of the above on assets and liabilities and on the profit cannot be ascertained;

Subject to our comments referred to in para 3(d) and (e) above, and their consequential effect on Balance Sheet and Profit & Loss Account, in our opinion and to the best of our information and according to the explanations given to us, the said accounts read with the Notes on Accounts given in Schedule-18 and Accounting Policies, give the information required by the Companies Act, 1956, in the manner so required and as applicable to the Companies governed by Electricity (Supply) Act, 1948 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, 1996; and
- ii) in the case of Profit and Loss Account, of the profit for the year ended on that date.

For RASOOL SINGHAL & CO.  
Chartered Accountants

M H. SINGHAL  
Partner

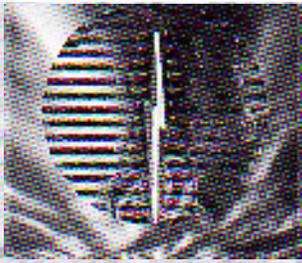
For UMAMAHESWARA RAO & CO.  
Chartered Accountants

G. SIVA RAMA KRISHNA PRASAD  
Partner

For B.M. CHATRATH & CO.  
Chartered Accountants

P.R. PAUL  
Partner

Place : New Delhi  
Date : 29 June, 1996



## **ANNEXURE TO THE AUDITORS' REPORT**

1. The company has generally maintained proper records, except in some cases where it is in the process of updation, showing full particulars including quantitative details and situation/location, as far as practicable, of its fixed assets. Most of the fixed assets have been physically verified by the professional agencies during the year except certain assets held by Transferor Organisations. The materiality in discrepancies, if any, between book records and physical inventory could not be ascertained in the absence of comparison with book records.
2. None of the fixed assets have been revalued during the year.
3. According to the information and explanations given to us, the stocks of stores and spare parts at most of the places have been physically verified during the year by the professional agencies. In our opinion the frequency of verification is reasonable.
4. According to the information and explanations given to us, in our opinion, the procedures of physical verification of stocks followed by the professional agencies are reasonable and adequate in relation to the size of the company and the nature of its business.
5. Material discrepancies, if any, between physical and book balances of stocks could not be ascertained in the absence of comparison between the physical balance and the book balance. Hence the question of properly dealing with the discrepancies in the books of account cannot be commented upon.
6. In our opinion and on the basis of our examination of the stock records, the valuation of stocks is fair and proper in accordance with the normally accepted accounting principles, and is on the same basis as in last year except as commented in para 5 above and identification of the obsolete stock and depreciation in the value if necessary.
7. The company has not taken any loans from the companies, firms or the 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 Section (I-B) of Section 370 of the Companies Act, 1956.
8. The company has not taken 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 said section.
9. The company has given deposits to Canbank Financial Services Ltd., and Andhra Bank Financial Services Ltd., and advances in the nature of loans to employees. The employees are generally repaying the principal amount and interest as per stipulation. The Canbank Financial Services Ltd. and Andhra Bank Financial Services Ltd., have not repaid the principal amount and interest thereon as stipulated. The company has informed that they are taking reasonable steps for recovery of principal and interest.
10. In our opinion and according to the information and explanations given to us, there are adequate internal control procedures commensurate with the size of the company and the nature of its business with regard to purchase of stores, components, plant and machinery, equipment and other assets and for the sale of goods/services.
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 U/S 301 of the Companies Act, 1956 aggregating during the year to Rs. 50000/- (Rupees fifty thousand only) or more in respect of each party.
12. According to the information and explanations given to us, the company does not have unserviceable or damaged stores.
13. The company has not accepted any deposits from the public, under section 58-A of the Companies Act, 1956 and rules made thereunder.
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. The company has a system of Internal Audit. In our opinion, it requires to be further strengthened to commensurate with the size and nature of its business.
16. The Central Govt. has not prescribed maintenance of cost records U/S 209 (1)(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, ESI 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 31<sup>ST</sup> March, 1996 for a period of more than six months from the date they became payable.
19. According to the information and explanations given to 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 company is not a Sick Industrial company as defined in Section 3(1)(0) of the Sick Industrial companies (Special Provisions) Act, 1985.
21. In regard to the company's activities relating to consultancy, project, management, supervision and contracts, we report that :
  - (i) The company has a reasonable system of allocation of man hours consumed on the respective activities.
  - (ii) The company has a reasonable system of internal control of allocation of man hours commensurate with the size of the company and the nature of its business.
  - (iii) The company has a reasonable system of recording receipts, issues and consumption of materials and stores commensurate with the size and the nature of its business.
22. In regard to company's activities relating to the trading : There are no damaged goods to be determined. Hence, the question of providing for loss does not arise.

For RASOOL SINGHAL & CO.  
Chartered Accountants

M H. SINGHAL  
Partner

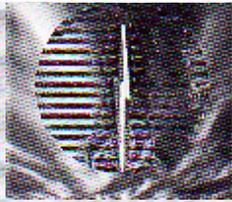
For UMAMAHESWARA RAO & CO.  
Chartered Accountants

G. SIVA RAMA KRISHNA PRASAD  
Partner

For B.M. CHATRATH & CO.  
Chartered Accountants

P.R. PAUL  
Partner

Place : New Delhi  
Date : 29 June, 1996



## **ANNEXURE TO DIRECTORS' REPORT**

Annexure - 1

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

Sl. No.	Name	Designation and Nature of Employment	Remuneration (Rs.)	Qualification	Experience Year	Date of Commencement of Employment	Age (Years)	Last Employment held
<b>Employed for the full year</b>								
1.	Mittal.S.	CDE (Engg.)	508,174	B.Tech.(Civil) M.Tech (Civil)	17 Yrs.	16/08/91	40	N.T.P.C
2.	Vijay Agarwal	Mgr. (Mtls.)	376,714	B.Sc. (Engg.) M.Tech. (Civil) Dip. in Mgmt.	11 Yrs	19/12/91	36	N.H.P.C

- Notes: 1.) Remuneration includes Salary, Allowances, Leave encashment, Leave travel concession, Payment for Subsidised leased accommodation, reimbursement of medical expenses to employees and employer's contribution to Provident funds and other funds. In addition employees are entitled to Gratuity/Group Insurance in accordance with Company's rules
- 2.) None of the Employees listed above is related to any Director of the Company.



## ANNEXURE—II

### PARTICULARS REQUIRED UNDER THE COMPANIES (DISCLOSURE OF PARTICULARS IN THE REPORT OF THE BOARD OF DIRECTORS) RULES, 1988 READ WITH SECTION 217 (I) (e) OF THE COMPANIES ACT, 1956.

#### A. CONSERVATION OF ENERGY

a) **Energy Measures taken and on hand**

The POWERGRID transmission system is designed in an optimal manner such that transmission & transformation losses are minimised without any undue increase in capital cost.

b. **Additional investments and proposals, if any, being implemented for reduction of consumption of Energy.**

There is no firm proposal for direct investment from POWERGRID at present.

c. **Impact of measures at (a) and (b) above for reduction of Energy consumption and consequent impact on the cost of production of goods.**

Overall optimisation is achieved as described above.

d. **Total Energy consumption and energy consumption per unit of production as per form "A" of the Annexure in respect of industries specified thereto.**

This is not applicable for POWERGRID since it does not fall under any of the industries mentioned in the schedule.

#### B. TECHNOLOGY ABSORPTION RESEARCH & DEVELOPMENT (R&D)

i) An R&D project (with funds from MOP through CBIP) using rigid aluminium pipe bus bar placed on bus post insulators for the switchyard of substation. This will reduce land requirement and civil works for switchyard resulting in overall economy.

ii) Real Time Digital Simulator System (RTDS)

This project undertaken jointly by POWERGRID and IIT, Kharagpur, is presently under active phase. The POWERGRID personnel trained during development of software viz. Load Flow, Topology Processes & State Estimation, have loaded them in POWERGRID computers and are using to some extent.

iii) Electrical Field measurement and Magnetic field measurement at sub-stations and transmission lines with the help of CPRI, Bangalore has been completed. The report will be finalised in 1996-97. Second phase of project involving Biological impact of electric and magnetic field on living beings is to be taken up.

#### C. FOREIGN EXCHANGE EARNINGS AND OUTGO

##### FOREIGN EXCHANGE EARNINGS :

		(Rupees in Lacs)
i)	INTEREST	172.08
ii)	GRANT-IN-AID (HVDC CHANDRAPUR)	13,723.10
iii)	OTHERS	-
TOTAL		<u>13,895.18</u>

##### FOREIGN EXCHANGE OUTGO :

i)	CAPITAL GOODS	37,610.80
ii)	PROFESSIONAL & CONSULTANCY FEES	1,349.87
iii)	INTEREST	5,532.30
iv)	OTHERS	15,451.35
TOTAL		<u>59,944.32</u>



## ANNEXURE—III

### COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 619(4) OF THE COMPANIES, ACT, 1956 AND MANAGEMENT REPLIES THEREON FOR THE YEAR ENDED 31st MARCH 1996.

#### COMMENTS OF CAG

#### MANAGEMENT REPLY

##### A. BALANCE SHEET

i) Reserve and Surplus (Schedule-2)  
Capital Reserve: Rs. 11205.85

A reference is invited to para 3(e) (ii) of the Statutory Auditors' report read with item 6 of Notes on Account(Schedule-18)

While on the one hand, there has been an overstatement of capital reserve by Rs.112.06 crores, on the other hand a liability under loan funds amounting to Rs. 124.20 Crores of principal and Rs. 78.26 crores of cumulative interest has been kept out of accounts. Showing an external liability as capital reserve is a distortion of accounts as also pointed out in the comment of the Comptroller and Auditor General of India on the accounts of the company for the year ended 31st March 1995.

ii) Fixed Assets (Schedule-4)  
Depreciation Rs. 95076.09 lakhs

The depreciation for the current year for each class of assets has not been disclosed as per the requirement of the Accounting Standard 6 which has become mandatory w.e.f. 1.4.95.

iii) Capital Work-in-Progress (Schedule-5):  
Rs. 246760.11 lakhs  
A reference is invited to the Accounting Policy number 2.1 regarding account of supplies received at site under capital work-in-progress in respect of supply cum erection contracts.

The company had booked all the material received from the supplier under capital work-in-progress even though the contracts for supply and erection have been awarded to different contractors and the material worth Rs.161.73 lakhs was lying unutilised

i) Audit has disputed the entry regarding 1st issue of Bonds. Deposits were restored by crediting Capital Reserve Account during 1994-95 as per the legal advice obtained and subsequently agreed by the Board to protect the financial interest of the Corporation in case any civil suit arises in future.

The matter has been commented upon by CAG during 1994-95 also and the fact already been disclosed in the Accounts and Statutory Auditors have also qualified vide para 3e(ii) of their report for the year 1995-96.

ii) This is an additional information to be given w.e.f. 1.4.95 and have escaped our attention being new requirement. However, it would not change the overall position in fixed assets schedule. The observation of the audit is noted and necessary depiction shall be made from 1996-97 onwards.

iii) The material was given to the contractor for erection of the line and the final bills and material reconciliation is still pending, the balance material could not be adjusted. However, necessary reconciliation and adjustment shall be carried out during 1996-97.



## COMMENTS OF CAG

## MANAGEMENT REPLY

at the close of the year. This has resulted in overstatement of Construction stores and advances by Rs.161.73 lakhs.

iv) Construction stores and advances (Schedule-6) :  
Rs. 613,92.35 lakhs

The work of (a) construction bay at Mairani (ASEB) and (b) Kathalguri-Marini transmission lines (by M/s KEC(I)Ltd.) have been capitalised by affording credits of Rs. 119.41 lakhs deposited with ASEB and Rs. 51.21 lakhs representing the cost of materials issued to M/s KEC (I) Ltd. to current liabilities and provisions instead of adjusting the amount of the deposit/cost of materials issued. This has resulted in overstatement of current liabilities and provisions(schedule 9) as well as the construction stores and advances by Rs. 170.62 lakhs.

v) Current Assets, loans and advances (Schedule 8)  
Cash and bank balances : Rs. 15449.64 lakhs

These balances have been arrived at after reducing from the actual Cash and bank balances the amount of Rs. 413.73 lakhs available with the Company on Customers' account, which should have been included in Current liabilities and provisions (schedule 9) by under the head "Deposits retention money from contractors and others". This has resulted in under statement of current assets, loans and advances (Schedule-8) as well as current liabilities and provisions (schedule-9) by Rs. 413.73 lakhs.

vi) Incidental Expenditure during construction (Sch. 16) Rs. 226,49.56 lakhs.

A sum of Rs. 132.26 lakhs has been wrongly added to Export Credit Guarantee Dept. premium totalling to Rs. 1421.24 lakhs, which do not correspond with the figure of Rs. 1288.98 lakhs indicated in Schedule 15. In fact Rs. 132.26 lakhs should have been added under the "head Other expenses on foreign loans".

iv) As the bay was commissioned during 1995-96, it was necessary to capitalise the bay. Since the statement of accounts from ASEB was not received, to have a proper control over the deposits, the amount was not adjusted. Hence separate liability was created

The deposit will be set off against the liability during 1996-97 on receipt of statement of accounts.

Pending reconciliation of, the "Free issue" account the amount had been capitalised by creating liability without disturbing "Free issue" account as otherwise it will be difficult to keep track and reconcile at a later date in case the "free issue" account is closed. Necessary adjustment shall be carried out during 1996-97.

v) The practice of depicting funds held on customers' account is being followed consistently since inception. However, the same shall be reviewed during 1996-97.

vi) This is only an inter change of figures under different heads under the same schedule, which don't affect the overall position.

## COMMENTS OF CAG

## MANAGEMENT REPLY

### B. PROFIT AND LOSS ACCOUNT

Profit for the year of Rs. 27595.47 lakhs has to be viewed in the light of the following:

In terms of Ministry of Finance OM of 4.6.1993, the company is liable to pay guarantee fee @ 1.2 percent per annum on the outstanding amounts of principal plus interest on external borrowings guaranteed by the Government of India. Further, the company is liable to pay the guarantee fee at double the normal rate for the period of default where the guarantee fees is not paid on due dates. The company has neither paid nor provided for the guarantee fees of Rs. 3323.58 lakhs even at the normal rate of 1.2 percent per annum. Consequently, there is understatement of current liabilities and provisions (schedule 8) by Rs. 3323.58 lakhs and the overstatement of profit for the year by Rs. 1230.93 lakhs and profit of previous years by Rs. 2092.65 lakhs. The company has also since become liable for payment of guarantee fee at double the normal rate i.e. @ 2.4 percent per annum.

### C. NOTES ON ACCOUNTS (SCHEDULE-18)

i) Note No.3: This does not include the factual position of Regional load despatch Centres as regards possession of the company and that legal formalities for transfer of ownership and the cost of RLDCs are pending finalisation. During the year, a sum of Rs. 18.28 Crores has been added to C.W.I.P. in five RLDCs.

ii) Notes no. 16. The lumpsum payments have been made in May1996 to executives and supervisors pending revision of pay scales w.e.f.. 1.1.92 against the liability of Rs. 11.39 Crores. This has not been disclosed in the note.

iii) Note 29 Item IV performance of the company :

(1) Turnover/Income Rs. 98358.13 lakhs.

It includes a sum of Rs. 1362.29 lakhs on account of other income which is non trading activity. Turnover is overstated by Rs. 1362.29 lakhs.

The guarantee fee is being regularly paid on the loans directly taken by POWERGRID. The guarantee fee on the loans, which have been transferred from NTPC/ NHPC, is not being paid, as these loans were sanctioned prior to the issue of the circular by Government of India and there was no clause of guarantee fee on the original guarantee agreements. The matter has already been taken up with Government of India for non payment of the gurantee fees on loans which are still under back to back agreement will be paid on receipt of demand from the transferor organisations.

i) The Regional Load Despatch Centres have been transferred to POWERGRID by MINISTRY OF POWER.

ii) As this is only an advance payment after the Balance Sheet date, for which necessary provision was already made which has been disclosed vide note no. 16, no further disclosure is considered necessary.

(1) In Note no.29, the amount was shown as turnover/ income, which indicates inclusion of other income. However, from 1996-97 onwards only turnover will be shown.



## COMMENTS OF CAG

## MANAGEMENT REPLY

### (2) Profit after tax

The note is incorrect to the extent that profit after tax has been shown as Rs. 27558 lakhs instead of Rs. 27595 lakhs as indicated in the P&L Account.

iv) The lease hold land includes land valuing Rs. 618.49 lakhs allotted by Delhi Development Authority at Katwaria Sarai, Delhi on perpetual lease, the title deed of which has not been executed. This should have been suitably disclosed in the notes on accounts.

v) The Company has transferred Rs. 301.33 lakhs in the current year from capital in progress to claims recoverable. The claims relating to thefts of materials from the Dimapur-Imphal Transmission line is, however, yet to be finally accepted by the insurance company. This should have been suitably disclosed in the notes on account (schedule-18).

vi) The present accounting policy no.1 (d) is in replacement of earlier accounting policy no.2.3, which has resulted in decrease in profit for the year by Rs. 8.5 lakhs. The impact has not been disclosed in the notes on account.

### **D. ACCOUNTING POLICY. 3(1):**

A sum of Rs. 527.10 lakhs has been incurred on renovation and modernization of existing assets by replacements with new assets. The impacts of replacement on fixed assets and profit and loss account have not been ascertained.

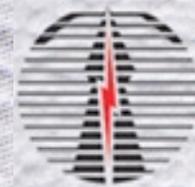
(2) It is a typographical error, and regretted.

iv) The observation of the auditor has been noted and necessary disclosure shall be made from 1996-97 onwards.

v) There was a theft in Dimapur—Imphal Transmission line during 1995-96. The claim of Rs. 301.33 lakhs was made on the Insurance Company. The necessary accounting entry showing this amount as recoverable from insurance company was made in books of accounts. It was not considered necessary to further disclose the same in Notes on Accounts, since at this moment no loss is anticipated. The Board of Directors have been apprised of the matter vide agenda item no.55.1.4 dated 29.6.96.

vi) As per requirement of Accounting Standard 5, the impact of change of accounting policy is to be disclosed, if the impact is of material in nature. The management considered the amount of Rs. 8.50 lakhs is not material considering the total profit of Rs. 27595 lakhs.

The Expenditure on Renovation and Modernisation has been accounted for on the basis of Accounting Policy No.3(i) which is being followed consistently from 1993-94 onwards. Auditors have qualified the policy but the impact of the same has not been quantified, as the amount is not ascertainable.



## COMMENTS OF CAG

## MANAGEMENT REPLY

### **E. GENERAL:**

#### Statutory Auditors' Report

A reference is invited to paragraph 3d(ii) of Auditors' report regarding Accounting policy no.(11). The qualification given by Auditors to the extent that the change in the treatment of mandatory spares of consumable nature is not in consonance with the opinion given by the Expert Advisory Committee of The Institute of Chartered Accountants of India is not correct because the opinion in question is not applicable to the company, as also pointed out in the comments of the Comptroller and Auditor General of India on the Accounts of the Company for the year ended 31<sup>st</sup> March, 1995, since (a) while giving its opinion the Expert Advisory Committee has declined to go into the matter of applicability of Electricity (Supply) Annual Accounts Rules, 1985, and has instead relied on the assertion of the company that the aforesaid rules are applicable to it, and (b) the specific rules relied upon relate to accounting treatment of capital spares at Generating Stations which are not attracted in the case of the company since its transmission lines and sub-stations to which this spares relate are not Generating Stations.

Sd/  
(SURINDER PAL)  
PRINCIPAL DIRECTOR OF COMMERCIAL AUDIT  
AND EX-OFFICIO MEMBER AUDIT BOARD-III  
NEWDELHI

Place: New Delhi  
Dated: 20th September, 1996

The Auditors have qualified their report on the basis of the opinion given by Expert Advisory Committee of the Institute of Chartered Accountants of India.

The matter regarding Applicability of opinion was discussed with Govt. Auditors during 1994-95. The Govt. auditors felt that since the company is not a generating station, hence, said opinion is not applicable to POWERGRID. Nec essary adjustments were carried out during 1995-96.

As desired by MAB, a meeting was arranged with Statutory Auditors. The matter was discussed between Statutory Auditors. The matter was discussed between Statutory Auditors and MAB.

FOR AND ON BEHALF OF  
BOARD OF DIRECTORS

Sd/-  
(ARUN GUPTA)  
CHAIRMAN AND MANAGING DIRECTOR

Place: New Delhi  
Dated: 24th September, 1996



**REVIEW OF ACCOUNTS OF POWER GRID CORPORATION OF INDIA LIMITED, NEW DELHI  
FOR THE YEAR ENDED 31ST MARCH 1996 BY THE COMPTROLLER & AUDITOR GENERAL OF INDIA**

Note : This Review of accounts has been prepared without taking into account Comments under Section 619(4) of the Companies Act, 1956, and qualifications contained in the Statutory Auditor's Report.

**1. Financial Position**

The table below summarises the financial position of the Company under broad headings for the last three years :

		1993-94	1994-95	1995-96
<b>Liabilities</b>		(Rs. in crores)		
a)	Paid-up-capital			
	Government (including shares application money pending allotment)	2889.12	2972.24	2992.24
b)	i) Reserves and Surplus	417.67	620.26	886.21
	ii) Shares Premium Account	-	-	-
	iii) Capital Reserves	80.26	261.57	398.80
c)	Borrowings From :			
	i) Government of India	354.05	577.03	885.17
	ii) Financial Institutions	195.13	171.46	183.57
	iii) Foreign Currency Loans	1069.79	1238.87	1409.35
	iv) Cash Credit	0.04	-	-
	v) Others	1054.06	1131.51	1421.53
d)	i) Current Liabilities and Provision	470.30	413.83	557.27
	ii) Provision for Gratuity	-	-	-
	<b>Total</b>	<b>6530.42</b>	<b>7386.77</b>	<b>8734.14</b>
<b>Assets</b>				
e)	Gross Block	4228.65	5066.54	5491.68
f)	Less : Depreciation	321.47	630.02	950.76
g)	Net Block	3907.18	4436.52	4540.92
h)	Capital Work-in-Progress & Construction Stores & Advances	1701.60	1979.06	3081.52
i)	Investments	-	-	-
j)	Current Assets, Loans and Advances	913.36	964.06	1105.32
k)	Misc. Expenditure not written off	8.28	7.13	6.38
l)	Accumulated loss	-	-	-
	<b>Total</b>	<b>6530.42</b>	<b>7386.77</b>	<b>8734.14</b>
m)	Working Capital [j-d(i)]	443.06	550.23	548.05
n)	Capital Employed (g+m)	4350.24	4986.75	5088.97
o)	Net Worth (a+b(i)+b(ii)-k)	3298.51	3585.37	3872.07
p)	Net worth per rupee of Paid-up Capital (In Rupees)	1.14	1.21	1.29



## 2. Sources and Utilisation of Funds

Funds amounting to Rs. 1536.17 crores from internal and external sources were realised and utilised during the year as detailed below:

<b>Sources of Funds</b>		(Rs. in Crores)
a) Funds from operations :		
Profits after tax	275.95	
Add: Depreciation	320.74	
Add: Misc. expenditure written off	1.50	
		598.19
b) Increase in paid-up capital		20.00
c) Increase in Borrowed funds		780.75
d) Grants received		137.23
Total		1536.17
 <b>Utilisation of Funds</b>		
a) Increase in Fixed assets		425.14
b) Increase in working Capital (excluding proposed dividend)		2.82
c) Increase in Capital-work-in progress & Construction Stores & Advances		1102.46
d) Dividend Paid		5.00
e) Increase in Misc. expenditure		0.75
Total		1536.17

## 3. Working Results

The working results of the Company for the last three years ending 31st March 1996 are given below :

	<u>1993-94</u>	<u>1994-95</u>	<u>1995-96</u>
	(Rs. in crores)		
i) Sales	645.14	799.38	969.96
ii) Profit before tax	187.88	207.60	275.95
iii) Provision for tax	-	-	-
iv) Profit after tax	187.88	207.60	275.95

## 4. Ratio Analysis

Some important ratios on the financial health and working of the Company at the end of last three years ending 31st March 1996 are as under :

	<u>1993-94</u>	<u>1994-95</u>	<u>1995-96</u>
A) Liquidity Ratio [J/d (i) ]	194%	233%	198%
B) Debt Equity Ration long term debt to Net Worth [c(i to v but excluding short term loans/o]	0.81:1	0.87:1	1.01:1
C) Profitability ratios			
a) Profit after tax to			
i) Capital Employed	4.32%	4.16%	5.42%
ii) Net Worth	5.70%	5.79%	7.13%
iii) Sales (including Excise duty)	29.12%	25.97%	28.45%
b) Profit after tax to Equity	6.50%	6.98%	9.22%
c) Earning per Share (In Rupees)	65.03	69.85	92.22



## 5. Inventory Levels

The Inventory level at the close of the last three years ending 31st March 1996 are as under :

	<u>1993-94</u>	<u>1994-95</u>	<u>1995-96</u>
			(Rs. in crores)
Stores and Spares and Loose tools	60.94	71.75	107.43

## 6. Sundry Debtors

The Sundry Debtors and Sales during the last three years ending 31 st March 1996 are as follows :

(Rs. in Crores)

<u>Sundry Debtors</u>						
As on 31st March	Considered Good	Considered doubtful	Total	Sales (including Excise duty)	Percentage of Sundry Debtors to Sales	
1994	119.06	-	119.06	645.14	18.45	
1995	297.68	-	297.68	799.38	37.24	
1996	407.46	-	407.46	969.96	42.01	

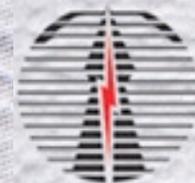
The agewise break up of Sundry Debtors at the end of 1995-96 is as under :

Debtors outstanding for	Amount (Rs. in crores)
Less than 6 Months	190.09
6 Months to 1 year	74.33
1 year to 3 year	143.04
More than 3 years	Nil
Total	<u>407.46</u>

Sd/-

Place : New Delhi  
Dated : 20th September, 1996

**SURINDER PAL**  
Principal Director of Commercial Audit and  
Ex-Officio Member, Audit Board-III  
New Delhi



## **CURRENT COST ACCOUNTS**

In the context of persistent inflation in the Indian economy, the Corporation has attempted to perceive the impact of price changes on its financial position and working results. The current cost accounts shown hereunder reflect the current values of assets of the Corporation which mainly comprise fixed assets. We believe that current cost accounting assumes special importance in the case of a public utility like the Corporation the prices of whose service are determined by reference to the related costs rather than by the market forces of demand and supply as in the case of other business enterprises. If the prices of the services rendered by a public utility are determined on the basis of costs as indicated by the historical cost-based accounts, they would not cover the current costs depreciation and other current costs being incurred. Over a period of time, the enterprise will not be able to maintain its operating capability even though it may show profits as per conventional historical cost based accounts. It is perhaps for this reason that internationally, many public utilities prepare even their main accounts on the basis of current cost accounting.

### **BASIS OF ACCOUNTING UNDER CURRENT COST ACCOUNTING FOR THE CORPORATION.**

1. The exercise has been conducted on the basis of the principles enunciated in the Guidance Note on Accounting for Changing Prices issued by the Institute of Chartered Accountants of India.
2. The current cost adjustments have generally been made on the basis of specific indices for various items. These indices have been computed by the Corporation as below :
  - a) Plant and machinery constitutes about 95% of the total fixed assets of the Corporation. Further, out of the various items of plant and machinery, ten specific items constitute about 95% of the total value of plant and machinery. Accordingly, an exercise has been carried out to work out the specific indices reflecting the changes in prices of these items. The indices for various items of plant and machinery have been worked out on the basis of an appropriate combination of --
    - i) detailed indices comprising the wholesale price index published by the Office of the Economic Association, Ministry of Industry, Government of India, and
    - ii) indices of specific items as circulated by the Indian Electrical and Electronics Manufacturers Association.

### **Fixed Assets**

Fixed Assets are stated at their gross current replacement cost by applying the relevant specific indices to the gross book value of each category of fixed assets. The net current replacement cost has been arrived at by charging depreciation on the gross current replacement cost at the rates specified under the Electricity (Supply) Act, 1948. The lives of fixed assets acquired from other enterprises have been worked out on the basis of the original cost, rate of depreciation and the written down value.

### **Capital Work in progress**

Since the gestation period is 3-5 years for each project, capital work-in-progress has also been stated at its current replacement cost.

### **Inventories**

Since inventories comprise mainly machinery spares, they have been restated on the basis of the indices used for the relevant items of plant and machinery.

### **Other Assets and Liabilities.**

Cash, sundry, debtors, loans and other liabilities have not been revalued since these are already expressed in current monetary terms.

### **Depreciation Adjustment**

The depreciation adjustment represents the difference between the amount of depreciation computed on the current cost of fixed assets and the amount of depreciation charged in the historical cost accounts.

### **Gearing Adjustment**

As a part of the operating assets of the Corporation is financed through borrowings which are to be repaid in the same monetary amount irrespective of changes in price, the full impact of price changes as reflected by the depreciation adjustment has been reduced by adding back a proportionate amount while determining the current cost profit attributable to shareholders .

The current cost reserve represents unrealized revaluation surplus on fixed assets, adjustment in respect of depreciation and gearing adjustment.



## CURRENT COST BALANCE SHEET

As at 31 st March, 1996

(Rupees in Thousands)

	As at 31st March, 1996	As at 31st March, 1995
<b>NET ASSETS EMPLOYED</b>		
Gross Block	106058711	96623856
Less : Accumulated Depreciation	21228471	14618908
Net Block	84830240	82004948
Capital Work-in-progress	27998333	15145467
Construction Stores and Advances	6425488	6807337
Investments	25	25
<b>NET CURRENT ASSETS</b>		
Inventories	1101235	755915
Other Current Assets	9978950	8928712
	11080185	9684627
Less : Current Liabilities and Provisions	5572745	4143928
	5507440	5540699
Miscellaneous Expenditure (to the extent not written off or adjusted)	63777	71278
	124825303	109569754
<b>FINANCED BY</b>		
Shareholders Funds		
Share Capital	2992407	29722407
Current Cost Reserve	45263950	41670121
Others reserves and surplus	10642781	6988537
	85829138	78381065
Loan Funds	10679721	7362625
Secured Loans	28316444	23826064
Unsecured Loans	38996165	31188689
	124825303	109569754

## CURRENT COST PROFIT AND LOSS ACCOUNT

for the year ended 31st March, 1996

(Rupees in Thousands)

	For the year ended 31st March, 1996	For the year ended 31st March, 1995
Profit Before Interest and Finance		
Charges and Taxation (on Historical Cost basis)	4741671	3738785
Less : Depreciation Adjustment	2981823	2434485
	1759848	1304300
Current Cost Operating Profit	1759848	1304300
Add : Gearing Adjustment	774462	604689
	2534310	1908989
Less : Interest and Finance Charges	1982124	1662824
Provision for Taxation	-	-
	1982124	1662824
Current Cost Profit Attributable to Shareholders	552186	246165