C. P. U. NO. 219

COMMITTEE ON PUBLIC UNDERTAKINGS

(2000 – 2001)

(THIRTEENTH LOK SABHA)

STUDY TOUR REPORT

ON

POWER GRID CORPORATION OF INDIA LIMITED

Laid on the Table of Lok Sabha 19.12.2000

Laid on the Table of Rajya Sabha 19.12.2000

LOK SABHA SECRETARIAT

NEW DELHI

December, 2000/Agrahayana, 1922 (S)

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(2000 – 2001)

CHAIRMAN

Prof. Vijay Kumar Malhotra

MEMBERS LOK SABHA

2. Shri Prasanna Acharya
3. Shri Sudip Bandyopadhyay
4. Shri Surinder Singh Barwala
5. Shri R L Bhatia
6. Shri Shiv Raj Singh Chauhan
7. Shrimati Sangeeta Kumari Singh Deo
8. Shri C K Jaffer Sharief
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11. Shri Vilas Muttemwar
12. Shri Dharam Raj Singh Patel
13. Shri R P Rudy
14. Shri Tarit Baran Topdar
15. Shri Devendra Prasad Yadav

MEMBERS RAJYA SABHA

16. Shri Jibon Roy
17. Smt Ambika Soni
18. Shri Suresh Kalmadi
19. Shri Ranjan Prasad Yadav
20. Shri K Kalavenkata Rao
21. Shri B P Singhal
22. Shri Satishchandra Sitaram Pradhan

SECRETARIAT

1. Shri Rajagopalan Nair, Joint Secretary
2. Shri S Bal Shekar, Director
3. Shri Raj Kumar, Under Secretary

* Elected w.e.f. 29th November, 2000 vice Maj.Gen. (Retd.) B.C. Khanduri ceased to be member of the Committee consequent upon his appointment as a Minister w.e.f. 7th November, 2000.

INTRODUCTION

In pursuance of the procedure adopted under Rule 281 of the Rules of Procedure and Conduct of Business for laying the Study Tour Reports on the Tables of both the House of Parliament, I, Chairman, Committee on Public Undertakings having been authorised by the Committee to lay the Study Tour Report on their behalf, lay the Study Tour Report of the Committee on their discussions with the officials of Power Grid Corporation of India Limited.

2. The Committee held discussions with the officials at Guwahati on 6.6.2000. . A copy of the tour programme is annexed (Annexure-I).

3. The Committee considered and approved the Report at their sitting held on 17th November, 2000.

4. The Committee wish to express their thanks to Power Grid Corporation of India Limited for providing facilities during the visit of the Committee and for supplying necessary material and information required in connection with the Study Tour.

5. They would also like to place on record their sense of appreciation for the invaluable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

PROF. VIJAY KUMAR MALHOTRA
CHAIRMAN
COMMITTEE ON PUBLIC UNDERTAKINGS

NEW DELHI
December 12, 2000
Agrahayana 21, 1922(S)

"STUDY TOUR NOTES" OF THE COMMITTEE ON PUBLIC UNDERTAKINGS

DISCUSSION WITH THE REPRESENTATIVES OF POWER GRID CORPORATION AT GUWAHATI ON 6TH JUNE, 2000

At the outset, the Chairman, COPU made opening remarks and requested the Chairman, Power Grid Corporation to introduce himself and his colleagues to the Committee. The Chairman, COPU also requested him to give a brief resume of the working of the Corporation.

2. The Chairman, Power Grid Corporation informed the Committee that the Corporation was incorporated in October, 1989 for establishment and operation of regional and national power grid. The Corporation started its operation from 1992 onwards and within a span of 8 years, it has established itself as one of the best performing undertakings in the power sector in the country. The Corporation ranks amongst top six Transmission Utilities in the world. About 30% of the total power is being transferred across the country over POWER GRID transmission network. The Corporation has made elaborate plans for inter-connecting all the regions of the country towards establishment of National Power Grid. The inter-regional power transfer capacity today has been raised to 4350 MW from 500 MW in 1992-93. The power transfer capacity is also planned to be enhanced in a progressive manner upto 14,000 MW by the year 2004-05 and upto 30,000 MW by the year 2012 through establishment of various inter-regional AC and HVDC links along with transmission highways planned for future.

3. The Chairman, POWER GRID informed the Committee that the following major projects are under implementation:

(i) 2000 MW HVDC link (1500 Km. Long) between Talcher – Kolar.

(ii) 500 MW Sasaram HDVC back –to-back project.

(iii) 800 KV Kishenpur – Mega Transmission line.

(iv) 800 KV Tehri Transmission system

(v) 400 KV Nathpa Jhakri transmission system.

4. The Chairman, POWER GRID also informed the Committee that as on date, the Corporation is operating 39,000 CKms of transmission lines and 65 sub-stations with a transformation capacity of 31,655 MVA. Over 17,000 CKms and 17 new sub-stations with about 8000 MVA are under implementation in the next five years. The transmission system availability is being maintained consistently over 98%, a standard not only best in the country but also recognised as one of the best in the world.

Chairman, POWER GRID also informed the Committee that many hydro-power projects are behind schedule due to which the transmission system already built could not be put to use leading to blockage of investment and also idle circuits.

5. Chairman, POWER GRID also stated that transmission and distribution systems are as much important as Generation. Accordingly, the transmission and distribution system should be modernised. He also stated that at present 72% investment is made on Generation, 10% investment in distribution while on transmission, the investment is 18%.

6. The Committee were also informed that the Corporation has invested Rs. 9500 crores in its various transmission schemes. About 30,000 crores would be invested on the on-going and new transmission projects which are likely to be completed by the end of 10th Five Year Plan. The Corporation has earned a profit of Rs. 610 crores during 1999-2000. The Corporation has also raised loans worth Rs. 10,000 crores through multilateral/bilateral and domestic sources.

7. The Chairman, POWER GRID also informed the Committee that the Corporation has diversified its Power Transmission network to Telecom Super Highways with a view to provide telecommunication services at highly competitive prices to the public at large. The Corporation has embarked upon building a telecom network in a phased manner. Implementation of Phase-I of the network by 2001 would pave the way for establishing Telecom network covering all the metro cities and Phase-II of the Telecom Network would be extended to all the State capitals, important towns and cities by 2007.

8. With regard to Power Grid Transmission system in the North-Eastern Region, the Chairman, POWER GRID stated that the Corporation took over the central sector transmission system from NEEPCO in 1992. At that point of time the transmission system consisted primarily of 745 Ckt kms of 132 KV lines and 223 Ckt kms of 220 KV lines. The Corporation has taken up massive investment in transmission since its take over in 1992 and Rs. 1476 crore have already been invested. About 4100 Ckt kms of transmission lines consisting of 2732 Ckt Kms of 400 KV, 344 Ckt km of 220 KV and 1025 Ckt kms of 132 KV lines have since been

commissioned. The Corporation has introduced 400 KV transmission voltage in N.E. region for the first time. The Corporation has completed transmission projects namely Kathalguri, Dayang, Ranganadi, Kopili and Augmentation of NER and part of Agartala Transmission system. The progress of Agartala Transmission system was slow due to law and order problem.

8. The Chairman, POWER GRID also informed that in view of the poor financial health of NER states, the transmission tariff has been pegged to 34 paise per unit. As a result of it, the Corporation has so-far capitalised the transmission assets worth Rs. 460 crore against the total expenditure of Rs. 1478 crore. This is causing serious hardships to POWER GRID and on account of pegging the transmission charges at 34 paise per unit, the Corporation is losing annual tariff to the tune of Rs. 200 crore per year. The outstanding dues against the N.E. States as a 1st April, 2000 was Rs. 117.01 crore.

10. The Chairman, POWER GRID also stated that the operations of the Corporation are being hampered due to acute law and order problem in the region. On a number of occasions, the employees of the Corporation as well as those of the contractors have been kidnapped. The transmission towers have been blasted by the militant groups in Imphal, Dimapur and Loklak areas. This has created panic amongst the employees posted in the region.

It has also been informed that the Corporation is not able to go ahead with the new investments in the N.E. region as the beneficiary States are not agreeable for payment of tariff.

11. The Chairman, POWERGRID also informed the Committee that the Corporation has been continuously achieving Excellent rating for the MOUs since the signing of its first MOU in the year 1993-94. The Corporation has been recognised as a 'Miniratna' PSU by the Government. The Chairman mentioned that taking into account the performance of the Corporation, 'Navratna' status should be conferred on it.

12. When asked about the impact of Private sector participation in Generation on the transmission sector, the Chairman, POWER GRID informed the Committee that Private sector participation in Generation has started and several IPPs/Mega IPPs are coming up to facilitate reducing the gap between supply and demand of power. The Transmission schemes associated with small IPP projects where power transfer is restricted within the State are being executed by the States concerned. For large size IPPs with capacities 1000 MW and above (Mega IPPs) involving inter-state exchange of power, transmission network shall be identified and implemented by POWERGRID either as its own project or through inviting the private sector participation. Towards facilitating private sector investment in transmission, the Corporation has already made detailed plan and initiated necessary activities by way of identification of projects, preparation of bidding documents, for selection of private promotees, undertaking necessary survey/soil investigation for preparation of project Feasibility Reports etc. Private investments in transmission schemes shall be sought through Joint Venture of IPTC routes. Transmission facilities established through such private

investment would be made available to the Corporation for its operation as per requirement aimed at integrated operation of regional grids in the country. Power Trading Corporation (PTC)/POWERGRID would pay the necessary transmission charges to these private entries as allowed by the Central Electricity Regulatory Commission (CERC).

13. When asked to state what mechanism is available to reduce the T&D losses, the Chairman, POWERGRID has stated that India has a vast Transmission & Distribution network catering to more than one billion people. The distribution network in existence is inadequate and needs to be upgraded. T&D losses in India also include theft, pilferage and unmetered power. These losses can be reduced by a) improvement in distribution system; b) Metering of power of all consumers; and c) Development of mechanism to stop theft and unauthorised connection.

14. When asked whether distribution of power at a higher voltage can reduce T & D losses, the Chairman, POWERGRID informed the Committee that distribution losses can certainly be contained by adopting higher voltages for distribution such as 6.6 or 11 KV. However, the cost of such a distribution system shall be relatively high. The losses in high voltage transmission system maintained by POWERGRID is only at the level of 3 to 4% which is well within international standards. High value of T&D losses is primarily arising out of higher level of distribution losses which falls under the domain of State Electricity Boards.

15. On the question of hydro-thermal mix ratio, the Chairman, POWERGRID stated that the Corporation is not involved in generation of electricity. However, the present hydro-thermal mix is of the order of

25:75, against a desirable ratio of the order of 40:60. The issue of ever deteriorating Hydro-Thermal mix has been brought to the notice of concerned authorities on several occasions in the past. However, the overall responsibility of power system planning at national level rests with Central Electricity Authority (CEA).

16. It was pointed out that India is having various voltage levels in transmission and distribution systems. When asked whether it can be standardised, the Chairman, POWERGRID informed the Committee that the selection of voltage levels for transmission & distribution is carried out by detailed techno-economic studies which analyses the quantum of power vis-à-vis the distance over which it is to be transmitted. It is economical to transfer bulk power to long distances at EHV levels. However, in order to restrict the number of voltages levels each country has adopted certain standard voltage levels. One of these standard voltage levels is selected for a particular application based on the techno-economics of specific projects. India is also having standardised voltage levels for transmission and distribution. The present voltage level for transmission of AC power are 765kV, 400kV, 220kV, 132kV and 66kV., whereas the distribution voltages are 33kV, 11kV and 400/220 KV.

17. When asked about the plan for establishing a National Power Grid, the Chairman, POWERGRID informed that the Corporation has made elaborate plans for its development in a phased manner. Initially keeping in view the wide variation in operational parameters of the regional grids, the following arrangements have been planned :

(i) Northern Regional Grid will be inter-connected with Western and Eastern Region by HVDC links,

(ii) Southern Region will be inter-connected with Western and Eastern Region by HVDC links,

(iii) North Eastern, Eastern and Western shall operate in synchronous mode.

The basic framework of the National Power Grid shall be in place after completion of on going East-North interconnection (Sasaram HVDC) scheduled for completion by 2002.

18. With regard to Tehri Transmission System, the Committee have been informed that the Corporation is constructing two 800 kV S/c transmission lines between Tehri and Meerut. The construction activity for these lines are in full swing alongwith 800/400 kV substation at Meerut. The revised schedule of completion date of the Tehri transmission project is Oct'2001and the transmission system is being programmed to match the schedule in such a manner that there will be no bottleneck in evacuation of power from Tehri Project.

19. Considering the problem associated with laying of transmission line and cost of transportation of fuel, whether the installation of a Thermal power Plant at Pit head is economical or at load centre, the Chairman, POWERGRID informed the Committee that the cost of transmission of energy from pit head power stations to load centres is significantly less than the cost of transportation of coal from pit-head to plant set up at load centre itself. As per analysis carried out by the Corporation for Talcher Thermal Project, if 2000 MW of power is transmitted from Talcher (pit

head station) to Bangalore, the transmission charges come to about 45 paise per unit for 75% plant load factor (PLF), while the cost of transportation of coal from Talcher to Bangalore for feeding a 2000 MW power plant a Bangalore comes to about 120 paise per unit (assuming 5% escalation in freight changes). Other important factors which go against setting up of load centre based power stations are environmental concerns of the city and inadequate availability of infrastructure (Rail etc.).

20. When asked what role POWERGRID played in restoration of power supply in Orissa when the State was hit by super cyclone last year, the Chairman, POWERGRID informed the Chairman that as soon as the forecast of the super cyclone heading towards Orissa was received, POWERGRID's Emergency Restoration System (ERS), which has been used very successfully in restoration of transmission lines affected due to natural calamities on other occasions were alerted. An action plan for restoration of power in Orissa was chalked out in consultation with senior officials of MOP/GRIDCO after the damage. POWERGRID's advance team consisting of skilled manpower with material were dispatched from Southern region as soon as the road communication to Bhubaneshwar was restored. The major high voltage transmission network within the state were restored by POWERGRID within 10 days. However, the restoration work on the low voltage level distribution network carried out by Orissa state authorities might have taken time resulting in delay in supply of power to the ultimate consumer in some parts of the state.

21. When asked to state whether the existing transmission infrastructure will help POWERGRID in diversifying into the telecom

business, the Chairman, POWERGRID informed the Committee that the liberalization of the Indian Telecom Sector together with POWERGRID's inherent advantage of ready "Right of Way" throughout the country and its ability to construct telecom infrastructure positions POWERGRID well to diversifying into the telecom business. The convergence of power sector with telecommunication will enable POWERGRID to make available low cost and high quality telecom infrastructure to the benefit of the national economy and telecommunication users of all types.

22. When asked what support POWERGRID required from Central government towards execution of transmission projects in disturbed areas of North Eastern region, the Chairman, POWERGRID informed the Committee that the Corporation's operations in the region are extended in the vast unprotected area passing through dense forests, river basins and hilly terrains. These operations are seriously affected due to acute law and order problems persisting in the North Eastern Region. The issue of law & order/insurgency problem has been taken up by the Corporation with the State Authorities/Central Para Military forces at all levels.

23. When asked about the Tariff sharing arrangement in NER, the Committee have been informed that the transmission charges to POWERGRID are decided based on GOI Notification of December, 1997. However, the transmission charges in the North-Eastern Region are paid based on the principles of Unified Common Pool Transmission Tariff (UCPTT) system. This is derived by pooling together the annual transmission charges of all transmission lines of POWERGRID and certain lines of the states and then dividing the pooled charges by energy

generated from central sector stations. The annual pooled charges are derived as per agreed norms, such as return on investment @ 13.0%, O&M @ 2% of Capital Cost and depreciation as applicable from time to time. The transmission charges calculated by the above methodology comes out to be about Rs.1.0 per unit. However, in view of the poor financial strength of NER states, they have decided to peg the transmission charges to 35 paise/unit by limiting the number of POWERGRID lines to be included in the UCPTT. Even this pegged transmission tariff is not being paid by SEB's to POWERGRID, resulting in revenue loss of Rs. 329.13 crores for the last three years.

24. When asked whether the Corporation has submitted any proposal to Government to compensate the losses in NER, the Committee have been informed that POWERGRID has incurred a revenue loss of Rs.329.13 crores due to non-realisation of tariff from NER for last three years (1997-2000). The Corporation has been raising this issue with MOP repeatedly. Proposal to suitably compensate POWERGRID for its loss of revenue is under consideration.

25. When asked about the strength of manpower per km. length of transmission line in POWERGRID, the Chairman, informed the Committee that POWERGRID was formed by transfer of transmission assets alongwith manpower from different central power utilities like NTPC, NHPC, NEEPCO etc. Till now, the Corporation have added about 20,000 Ckms of transmission line without much addition of manpower, resulting in decrease in manpower per hundred km. from 25.70 in the year 1993 to 17.38 as on date.

20. When asked to state why some of the areas in Eastern region still remain in darkness when the region has surplus power, the Chairman, POWERGRID informed the Committee that Eastern region, presently, has substantial surplus power to the tune of 1500 MW even during peak hours. This is because, the pace of load growth has not been commensurate with the generation capacity addition, leading to non utilisation of capacities and posing problems in day to day grid operations. In spite of this fact, some of the areas of the region are experiencing non availability of power due to weak and inadequate sub-transmission and distribution network, causing overloading of lines and transformers which lead to frequent system outages.

OBSERVATIONS ON POWER GRID CORPORATION

NAVRATNA STATUS FOR POWER GRID CORPORATION

The Committee note that at present Mini-ratna category dispensation has been conferred upon the Board of Directors of the Power Grid Corporation. In view of the need for providing sovereign guarantee in respect of Projects funded through Multi-lateral International Agencies like World Bank, Asian Development Bank, the Mini-ratna dispensation conferred on the Corporation is unable to provide any tangeable benefits as most of the Projects dealt with by the Corporation are multi-laterally funded and, therefore, had to be cleared by the Government which naturally takes a very long time, rendering the conferment of Mini-ratna status nugatory. Besides this, the Power Grid Corporation working in coordination with Navratna companies like NTPC which have a quicker decision making power and due to the delay in taking decisions through Government approval by Power Grid Corporation, there is a mismatch between the creation of a general system and the creation of a transmission system for it. Therefore, in view of the need for quicker decision making ability to achieve allround development of the power sector, the Committee recommend that the Government should immediately grant Navratna status to the Power Grid Corporation.

(Action : Ministry of Power and Department of Public Enterprises)

NEED FOR HIGHER INVESTMENT ON TRANSMISSION SYSTEMS

The Committee note that at present 72% of the total investment in the power sector is on generation Projects while only 18% of the total investment is on creation of transmission system, while the investment on distribution is 10% of the total investment. The Committee feel that creation of adequate transmission and distribution systems are as much important as the activity of generation itself. In view of the need for having an effective transmission system through proper modernisation, the Committee recommend that there should be more investment in creation and modernisation of the transmission systems and at least 25% of the total investment should be made on this aspect. The Committee, therefore, recommend that the Ministry of Power should revise their policy accordingly.

(Action : Ministry of Power)

OUTSTANDING DUES FROM THE STATES

The Committee note that State Electricity Boards of various States all over the country owe a sum of Rs.1594.48 crores towards payment of transmission charges to the Power Grid Corporation. The Committee find that such huge unrealised dues affect the financial viability and the profitability of the Corporation. The Committee, therefore, recommend that a suitable procedure may be devised to deduct all such dues from various financial allocations and payments made to the States from the Centre so that the Central Public Undertakings do not turn sick. There is an urgent need for taking expeditious action in this matter.

(Action : Ministry of Power and Ministry of Finance)

SECURITY OF PROJECTS IN THE NORTH EAST

The Committee note that due to the problem of insurgency, execution of transmission projects in the disturbed areas has been affected as the operations of the Corporation are mainly done in the vast unprotected areas which are situated in dense forests, river basins and hilly terrains in the North East. There have been occasions when the employees of the Corporation and also the man engaged by the contractors have been kidnapped for ransom. Although the Committee have been informed that all possible support from the authorites concerned has been received, the Committee are of the view that the project implementation has been affected on account of non-availability of security personnel due to diversion of these personnel frequently to serve other critical assignments in various other places. The Committee, therefore, recommend that no diversion of the security personnel posted in the project implementation areas should be done and there should be arrangement for providing continuous and adequate security to help the execution of transmission projects in the disturbed areas of North Eastern Region.

(Action : Ministry of Power and Ministry of Home Affairs)

POLICY OF SETTING UP GENERATION PLANTS AT PIT-HEADS

The Committee note that the cost of transmission of energy from pit-head power stations to load centre is significantly less than the cost of transportation of coal from pit-head to the generation plants which are set up at the load centres. The cost of transmission goes up with the mounting cost of transportation of coal every year. Besides, the power plants set up at or near the load centres are a source of pollution and cause environmental damage in and around the load centres. Therefore, the Committee recommend that the Government should reorient its policy of locating the power plants in a manner that it is environmentally beneficial and economically sound.

(Action : Ministry of Power)

IDEAL HYDRO-THERMOL MIX IN GENERATION OF POWER

The Committee note that the present Hydro-thermol Mix in power generation is of the order of 25:75 against the desirable ratio of 40:60. The deteriorating hydro-thermol mix over the years is a matter of concern in the management of power supply and also in the maintenance of generation and transmission systems all over the country and, therefore, the Committee recommend that the Central Electricity Authority should do power system planning at the national level to achieve the desired ratio in the interest of the nation.

(Action : Ministry of Power)

ANNEXURE-I

COMMITTEE ON PUBLIC UNDERTAKINGS

Tour programme of Committee on Public Undertakings to Guwahati, Shillong, Calcutta and Darjeeling from 5th June, 2000 to 12th June, 2000

(Members assembled at Guwahati)

Date & Day	Time	Visit & Discussion
5.6.2000 (Monday)	1730 hrs.	Discussion with the officers of Indian Oil Corporation
	1900 hrs.	Discussion with the officers of Industrial Development Bank of India
	(Night halt at Guwahati)	
6.6.2000 (Tuesday)	0900 hrs.	Discussion with the officers of Power Grid Corporation
	1430 hrs.	Departure for Shillong by road
	1800 hrs.	Arrival Shillong
	(Night halt at Shillong)	
7.6.2000 (Wednesday)	0900 hrs.	Discussion with the officers of NEEPCO
	(Night halt at Shillong)	
8.6.2000 (Thursday)	0730 hrs.	Departure for Guwahati by road
	1030 hrs.	Arrival Guwahati
		Departure for Calcutta by IC-230
	1400 hrs.	Arrival Calcutta.
	1600 hrs.	Discussion with the officers of Garden Reach Shipbuilders and Engineers Ltd.
	(Night halt at Calcutta)	

9.6.2000 (Friday)	0900 hrs.	Departure for Bagdogra by IC-721.
	1400 hrs.	Arrival Bagdogra.
	1430 hrs.	Departure for Darjeeling by road (Approx. 75 km.)
	1800 hrs.	Arrival Darjeeling
	(Night halt at Darjeeling)	
10.6.2000 (Saturday)	1600 hrs.	Discussion with the officers of Andrew Yule & Company Ltd.
	(Night halt at Darjeeling)	
11.6.2000 (Sunday)	0900 hrs.	Discussion with the officers of National Hydroelectric Power Corporation
	(Night halt at Darjeeling)	
12.6.2000 (Monday)	0800 hrs.	Departure for Bagdogra by road
	1130 hrs.	Arrival Bagdogra
		Departure for Calcutta by IC-722
	1410 hrs.	Arrival Calcutta
	3600 hrs.	Discussion with the officers of IBP Co. Ltd.

DISPERSAL

2/RK/TP-2

ANNEXURE II

COMPOSITION OF THE COMMITTEE ON PUBLIC UNDERTAKINGS WHICH VISITED GUWAHATI, SHILLONG, CALCUTTA AND DARJEELING FROM 5TH JUNE, 2000 to 12th JUNE, 2000

S.NO.	NAME	Date of Joining	Date of leaving
1.	Prof. Vijay Kumar Malhotra, Chairman	5.6.2000 Guwahati	13.6.2000 Calcutta
2.	Shri Prasanna Acharya	5.6.2000 Guwahati	12.6.2000 Calcutta
3.	Shri Sudip Bandyopadhyay	06.6.2000 Guwahati 12.06.2000 Calcutta	08.6.2000 Calcutta 12.06.2000 Calcutta
4.	ShriSurinder Shigh Barwala	5.6.2000 Guwahati	13.6.2000 Calcutta
5.	Shri R L Bhatia	5.6.2000 Guwahati	8.6.2000 Calcutta
6.	Shri Shivraj Singh Chauhan	5.6.2000 Guwahati	13.6.2000 Calcutta
7.	Maj.Gen.(Retd)BC Khanduri	5.6.2000 Guwahati	9.6.2000 Calcutta
8.	Shri K E Krishnamurthy	8.6.2000 Calcutta	12.6.2000 Calcutta
9.	Shri Dharam Raj Singh Patel	5.6.2000 Guwahati	12.6.2000 Calcutta
10.	Shri R P Rudy	5.6.2000 Guwahati 9.6.2000 Darjeeling	7.6.2000 Shillong 11.6.2000 Darjeeling
11.	Shri Tarit Baran Topdar	5.6.2000 Guwahati 12.6.2000 Calcutta	8.6.2000 Calcutta 13.6.2000 Calcutta
12.	Shri Devendra Prasad Yadav	8.6.2000 Calcutta	13.6.2000 Calcutta
13.	Shri Jibon Roy	5.6.2000 Guwahati 9.6.2000 Darjeeling	7.6.2000 Guwahati 11.6.2000 Darjeeling

14.	Smt. Ambika Soni	6.6.2000 Guwahati	8.6.2000 Calcutta
15.	Shri Ranjan Prasad Yadav	6.6.2000 Guwahati	12.6.2000 Calcutta
16.	Shri K Kalavenkata Rao	8.6.2000 Calcutta	12.6.2000 Calcutta
17.	Shri B P Singhal	8.6.2000 Calcutta	13.6.2000 Calcutta
18.	Shri Satish Chandra Sitaram Pradhan	8.6.2000 Calcutta	11.6.2000 Darjeeling

SECRETARIAT

1. Shri S Bal Shekar, Director

2. Shri Raj Kumar, Under Secy

ANNEXURE - III

LIST OF OFFICIALS OF POWER GRID CORPORATION OF INDIA LTD. WHO WERE PRESENT DURING DISCUSSIONS WITH THE COMMITTEE ON PUBLIC UNDERTAKINGS AT GUWAHATI ON 06-06-2000

1	SH. R. P. SINGH	CHAIRMAN CUM MANAGING DIRECTOR
2.	SH. V K GARG	DIRECTOR (F)
3.	SH. A.R. AGARWAL	EXECUTIVE DIRECTOR
4.	SH S. MAJUMDAR	EXECUTIVE DIRECTOR
5.	SH M. G. DWIVEDI	GENERAL MANAGER
6.	SH. S. K. BANERJEE	AGM
7.	SH. K. K. CHAUDHARY	AGM