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TENTH REPORT

COMMITTEE ON PUBLIC UNDERTAKINGS

(2010-2011)

(FIFTEENTH LOK SABHA)

POWER GRID CORPORATION OF INDIA LIMITED

MINISTRY OF POWER

Presented to Lok Sabha on 7th December, 2010

Laid in Rajya Sabha on 7th December, 2010

LOK SABHA SECRETARIAT
NEW DELHI

December, 2010 / Agrahayana 1932(S)

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COMMITTEE ON PUBLIC UNDERTAKINGS (2010 - 2011)

Shri V. Kishore Chandra S. Deo - Chairman

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2. Shri K.C. Singh 'Baba'
3. Shri Ramesh Bais
4. Shri Ambica Banerjee
5. Shri Hemanand Biswal
6. Shri Anant Kumar Hegde
7. Shri Shailendra Kumar
8. Shri Baijayant Panda
9. Shri L. Rajagopal
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12. Shri Ganesh Singh
13. Shri N. Dharam Singh
14. Shri Rajiv Ranjan Singh alias Lalan Singh
15. Shri Bhisma Shankar alias Kushal Tiwari

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17. Shri Naresh Gujral
18. Shri Prakash Javadekar
19. Shri Bharatkumar Raut
20. Ms. Mabel Rebello
21. Dr. T. Subbarami Reddy
22. Shri Tapan Kumar Sen

Secretariat

1.	Shri J.P. Sharma	-	Joint Secretary
2.	Shri Rajeev Sharma	-	Director
3.	Shri Girdhari Lal	-	Executive Officer

INTRODUCTION

I, the Chairman, Committee on Public Undertakings having been authorized by the Committee to submit the Report on their behalf, present this Tenth Report on the Power Grid Corporation of India Limited (POWERGRID).

2. The Committee took oral evidence of the representatives of POWERGRID on 1st July, 2010 and further, took oral evidence of the representatives of Ministry of Power on 11th August, 2010.

3. The Committee on Public Undertakings (2010-11) considered and adopted this Report at their sitting held on 6th December, 2010.

4. The Committee wish to express their thanks to the representatives of the Power Grid Corporation of India Limited and the Ministry of Power for placing before them the desired material and information in connection with the examination of the subject. The Committee would also like to place on record their appreciation for the invaluable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

5. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in Part-II of the Report.

New Delhi:
6th December, 2010
15 Agrahayana, 1932 (Saka)

SHRI V. KISHORE CHANDRA S. DEO
Chairman
Committee on Public Undertakings

PART-I

CHAPTER-I

OBJECTIVES AND FUNCTIONS

A. INTRODUCTORY

1.1 Power Grid Corporation of India Limited (POWERGRID) was incorporated on October 23, 1989 under the Companies Act, 1956 with an authorized share capital of Rs. 5,000 Crore (subsequently enhanced to Rs. 10,000 Crore in FY 2007-08) as a public limited company, wholly owned by the Government of India. Company was established for the purpose of transmitting bulk power from Central Generating Stations to load centers within and across the five main electricity regions of the country. Subsequently, transmission assets from central generating companies and other Central/ Joint Sector Organizations such as NTPC, NHPC, NEEPCO, NLC, NPC, THDC, SJVNL (formerly NJPC) etc. were transferred to POWERGRID in a phased manner and it commenced commercial operation in 1992-93. In addition, Regional Load Despatch Centers from Central Electricity Authority were transferred in a phased manner from 1994 to 1996. POWERGRID was notified as Central Transmission Utility (CTU) in 1998 with the mandate for planning, co-ordination, supervision and control over complete Inter-State transmission system.

POWERGRID – a Navratna Enterprise

1.2 POWERGRID has been contributing significantly towards development of Indian power sector by undertaking coordinated development of power transmission network along with effective and transparent operation of regional grids and through continuous innovations in technical & managerial fields. POWERGRID, since its commercial operation, has achieved manifold growth. Recognizing the contribution of POWERGRID for overall development of power sector, it has been conferred upon **'**Navratna' status by Government of India in May'2008. This reflects Government of India's confidence in POWERGRID's capability and the ability to discharge enhanced responsibilities.

ACTIVITIES OF POWERGRID

1.3 In the preliminary information made available, POWERGRID has stated that the Company undertakes planning, implementation, operation & maintenance of regional and national power grids and operation of all the Regional/ National Load Despatch Centres with state-of-the-art communication facilities. Further, in order to increase its revenues, POWERGRID diversified into Telecommunication Business leveraging upon the right of way of its networks. POWERGRID is also undertaking various consultancy projects within India and abroad, with the expertise and varied experience in all areas of its business such as Transmission Lines, Sub- stations, Load Despatch Centres, Telecom, Distribution, Rural Electrification and Sub-transmission. Various activities of POWERGRID are briefly described below:

i) Project Implementation: The projects undertaken by POWERGRID can be broadly classified as: (i) Generation Linked Projects, (ii) Grid Strengthening Projects, (iii) Inter-Regional links and (iv) Unified Load Despatch & Communication Schemes. POWERGRID, the Central Transmission Utility, endeavors to implement its projects with optimal cost and within stipulated time frame to derive maximum economic benefits. POWERGRID has so far implemented a number of transmission schemes which enhanced the transmission network from 22,200 ckt. km. in 1992-93 to about 77,000 ckt.km. by the end of FY 2009-10.

ii) Grid Management: POWERGRID modernized all the Regional Load Despatch Centres (RLDCs) at a total estimated cost of about Rs.2,000 Crore. For overall co-ordination, National Load Despatch Centre at Delhi, with back up at Kolkata, has also been commissioned in Feb'09.

iii) Telecom Business: In order to increase its revenue, POWERGRID entered into Telecom Business leveraging upon the right of way of its networks. POWERGRID has already established more than 21,000 km. of telecom network and provided connectivity to metros, major cities & towns with presence in remote areas of North-Eastern Region, J&K, Himachal Pradesh etc. POWERGRID is a registered Infrastructure Provider-I (IP-I) Service Provider and has acquired Internet Service Provider (ISP) and National Long Distance Operator (NLDO) licenses to provide a variety of services.

iv) Consultancy: POWERGRID has acquired in-house expertise in the field of Planning, Engineering, Load Despatch and Communication, Telecom- munication, Contracting, Financial and Project Management. POWERGRID is offering consultancy not only in India but also at international level leveraging upon its strong in-house technical expertise developed over the years. POWERGRID is assisting various State & Central Power utilities as well as private parties in the country for implementation of transmission/ sub- transmission projects on turnkey basis.

v) Distribution Reforms and Rural Electrification: POWERGRID is also making valuable contribution to Govt. of India's nation building schemes of Accelerated Power Development and Reforms Programme (APDRP) and Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) which are aimed at bringing qualitative improvement in the distribution sector.

B. ROLE AND OBJECTIVES

1.4 As per the information made available by POWERGRID, the Company has the following mission:

> "Establishment and Operation of Regional and National Power Grids to facilitate transfer of electric power within and across the regions with reliability, security and economy, on sound commercial principles".

1.5 With regard to the objectives of the Company, it has been stated that the Corporation has set following objectives in line with its Mission and its status as "Central Transmission Utility":

(a) Undertake transmission of electric power through Inter-State transmission system.
(b) Discharge all functions of planning and coordination relating to Inter-State transmission system with -

(i) State Transmission Utilities;
(ii) Central Government;
(iii) State Governments;
(iv) Generating companies;
(v) Regional Power Committees;
(vi) Authority;
(vii) Licensees;
(viii) Any other person notified by the Central Government in this behalf.

(b) Exercise supervision and control over the Inter-State transmission system.
d) Efficient Operation and Maintenance of Transmission systems.
e) Establish/ augment and operate all Regional Load Despatch Centres and Communication facilities.
f) Restoring power in quickest possible time in the event of any natural disasters like super cyclone, flood etc. through deployment of Emergency Restoration Systems.
g) Provide consultancy services at national and international level in transmission sector based on the in-house expertise developed by the organization.
h) Participate in long distance telecommunication business ventures.
i) Ensure principles of Reliability, Security and Economy matched with the rising/ desirable expectation of a cleaner, safer, healthier Environment of people, both affected and benefited by its activities.

1.6 When asked about the specific objectives sought to be achieved by the Government by notifying POWERGRID as Central Transmission Utility in 1998 and the extent of achievement by the Company, the Ministry in their written note states as follows:

"In accordance with The Electricity Laws (Amendment) Act 1998, Government of India notified POWERGRID as Central Transmission Utility. The following responsibilities were entrusted to POWERGRID, as the Central Transmission Utility -

(a) to undertake transmission of electricity through inter-State transmission system;
(b) to discharge all functions of planning and co-ordination relating to inter-State transmission system with -
    (i) State Transmission Utilities;
    (ii) Central Government;
    (iii) State Governments;
    (iv) Generating companies;
    (v) Regional Power Committees;
    (vi) Authority;
    (vii) licensees;
    (viii) any other person notified by the Central Government in this behalf;

(c) to ensure development of an efficient, co-ordinated and economical system of inter-State transmission lines for smooth flow of electricity from generating stations to the load centres;

The PGCIL is fully discharging the above functions to the fullest extent."

1.7 On being asked about that responsibilities devolved on POWERGRID as Central Transmission Utility, the Ministry in the written note stated as under:

> "POWERGRID as CTU is entrusted to establish the inter-state transmission system for evacuation of power from Central Generating System, UMPPs (as per the directions of the Ministry of Power), IPPs (which have been granted long term open access) and providing non-discriminatory open access to transmission by any licensee or generating company on payment of transmission charges. PGCIL is also providing non-discriminatory open access to its system to any consumer who is provided open access by a State Regulatory Commission."

1.8 As regards the extent to which objectives have been achieved by the Company, the Committee have been informed that POWERGRID is meeting its objectives and ensuring that there are no transmission constraints in evacuation of Power from Central Generating Stations. Further, over a period of past seven years, there has been no major grid disturbance in the country.

1.9 To a query as to how does POWERGRID differentiate between major and minor grid disturbance/breakdown, the Company in a written note stated as under:

> "A major grid failure is one when complete region gets affected and minor is one when the local area gets affected."

1.10 When further asked whether loss of power happens due to lack of Grid, Chairman, PGCIL stated as follows:

> "The loss of power transfer does not happen due to lack of Inter State Transmission system (ISTS) of POWERGRID. The availability of POWERGRID transmission network is above 99.5 % which ensures that the Inter-state Transmission network of POWERGRID is generally available Further, the inter-state EHV transmission network of POWERGRID is designed with certain redundancy in accordance with the planning criteria of Central Electricity Authority. Generally, most of the power failure cases are local in nature due to problems in distribution system of State Utilities/Discoms. Power failures are mainly due to overloading of distribution network/transformer or Low Tension (LT) line/cable faults apart from planned power cuts imposed by the states to match the demand with the availability of power.

1.11 Replying to a specific question whether the Ministry is satisfied with the performance of POWERGRID, the Ministry submitted the following:-

> "Ministry of Power reviews the performance of PGCIL and monitors the progress of various projects which are being implemented by it. POWERGRID is responsible for establishment of inter-state transmission system for evacuation of power from Central Generating Stations and transmission system for evacuation of power from State generating stations is responsibility of respective state transmission utilities. During the year 2009-10, total energy generated in the country was approx. 724 Billion Units (BU), of which, Central Sector generation was approx. 304BUs. The total energy wheeled through POWERGRID transmission system was approx. 344BUs including Short Term Open Access transactions. This constituted total evacuation of 100% of the power generated by Central Sector and 50% of the total power generated in the country during FY 2009-10. The present inter regional transmission system meets the actual requirements. Ministry of Power is satisfied with the performance of PGCIL in ensuring that no transmission constraints were encountered for evacuation of Power from Central Generating Stations. To cater to the future inter state transmission requirement of the country, the PGCIL has planned implementation of 9 high capacity transmission corridors to evacuate the power from various Independent Power Projects (IPPs)."

CHAPTER-II

ORGANIZATIONAL STRUCTURE/ AUTONOMY

A. ORGANIZATIONAL STRUCTURE

2.1 As regards the organizational set up of the Company, POWERGRID in a written note stated as follows:

> "POWERGRID has a three tier structure: Corporate level, Regional level and Group/ Sub-station level. Chairman and Managing Director is the Head of the Company supported by four Functional Directors viz. Director (Personnel), Director (Finance), Director (Operations) and Director (Projects) to oversee the activities of various divisions of the company. There are nine regions each headed by an Executive Director who reports to CMD. Group/ Sub-station is headed by AGM/ DGM who report to concerned Head of the Region."

2.2 When asked whether any reviews have been carried out to revamp the Corporation's organizational structure to meet the demands of future**,** POWERGRID in a written note stated as follows:

> "As per operational and administrative requirements the organization structure is reviewed and modified accordingly. In this context a few of recent decisions are being highlighted below:-
>
> i) **Creation of Regions-**
> In order to have better control and monitoring of various activities i.e. Construction, Operation and Maintenance of Transmission System and also considering the geographical spread Eastern Region and Western Region were bifurcated into two regions viz. Eastern Region Transmission System-I (ERTS-I) and Eastern Region Transmission System-II (ERTS-II) w.e.f. 02.01.2006 and Western Region Transmission System-I (WRTS-I) and Western Region Transmission System-II (WRTS-II)-II w.e.f. 01.06.2007. With this POWERGRID is presently operating its transmission network with 9 regions i.e. ER-I&II , WR-I&II, SR-I&II, NR-I&II & NER with its Corporate Centre (CC) at Gurgaon.
>
> ii) **Opening of International Business Division** –
> To explore the opportunities of new International Business assignments, an International Business Division has also been formed.
>
> iii) **Creation of Multi-disciplinary Regulatory Cell -**
> In order to scan the regulatory scenario on day to day basis which impinges on the activities of the Company a multi-disciplinary regulatory cell has been formed in June 2009."

B. BOARD OF DIRECTORS

2.3 When asked about the precise guidelines of DPE for constituting Board of Directors in PSUs and whether the present composition of Board of Directors in

POWERGRID is in accordance with the stipulated guidelines, the Ministry of Power in a written reply submitted as under: -

"The DPE Guidelines on constitution of Board of Directors in PSUs is as under:

(i) The Board of Directors of the company shall have an optimum combination of functional, Nominee and Independent Directors.
(ii) The number of Functional Directors (including CMD/MD) should not exceed 50% of the actual strength of the Board.
(iii) The number of Nominee Directors appointed by Government/other CPSEs shall be restricted to a maximum of two.
(iv) In case of a CPSE listed on the Stock Exchanges and whose Board of Directors is headed by an Executive Chairman, the number of Independent Directors shall be at least 50% of Board Members; and in case of all other CPSEs (i.e. listed on Stock Exchange but without an Executive Chairman, or not listed CPSEs), at least one-third of the Board members should be Independent Directors.

Status of present composition of POWERGRID's Board with respect to the stipulated guidelines is as follows:

(i) The number of Nominee Directors appointed by Government is two.
(ii) There are five whole time Directors – four functional Directors and the Chairman and Managing Director.
(iii) Accordingly, as against these Seven Directors, Seven Independent Directors are required to comply with DPE guidelines, as POWERGRID is a listed company. However, presently, POWERGRID has three Independent Directors, as the tenure of four Independent Directors, who were appointed for a period of three years w.e.f. 10.07.2007 has completed on 09.07.2010. The appointment of four Independent Directors in POWERGRID is under process."

2.4 In reply to a question about the role of Independent Directors and contribution in the working of the POWERGRID, the Ministry of Power in a written note submitted as under: -

"As on 1.07.2010, POWERGRID board have 50% independent directors in line with the guidelines on Corporate Governance issued by DPE. Further, Audit committee meeting takes place regularly. In the Annual report, there is a separate chapter on Corporate Governance which describes the various activities in corporate governance. Quarterly compliance report on Corporate Governance is submitted as per statutory provisions to SEBI and stock exchanges. Further the shareholders Grievance committee is also in place.

I. The Independent Directors, through their vast experience and knowledge have provided guidance and support on various issues concerning the

company. Based on the suggestion of Independent Directors the following activities were taken up in the company:

II. A consultant was engaged for examining optimization of Return on Equity issues of the Company.

III. Another reputed International firm has been engaged for providing advice on diversification, vision, finalization of parameters on evaluation of Board performance as a whole by the Board, etc.

IV. A Regulatory Cell was formed to scan the Regulatory environment in India and contemporary situation in other countries and prepare proactively for Regulatory initiatives.

V. Updation of Internal Audit Manual was taken up.

VI. While the Independent Directors do not have a direct say in running the company on a day to day basis; however, these Directors do have a positive role through giving observation, direction through Board decisions, discussion on presentations made before it and in the general discussion which takes place at the Board level on contemporary issues which decides the direction in which the company has to function. This leads to fruitful contribution at the Board level and is helpful in handing issues before the company.

VII. The main advantage of Independent Directors is that different /outside view is put before the Board while analyzing the issues. Also, the points which need advocacy are deliberated.

VIII. Further, the various investment proposals and procurement cases and other commercial and financial issues are well deliberated in the Board.

IX. There is focus on various listing and other compliances and Corporate Governance related issues.

X. Action Taken Report on Board decisions is regularly put up to the Board on its decisions for information and is deliberated.

As stated above, the contribution of Independent Directors is helpful in giving direction to policy decisions and to the overall running of the company. To bring best results from their appointment, it is felt that talent from active people in the industry, academics and professional bodies, who do not have any conflict of Interest, should be brought in a balanced manner such that expertise in different spheres is on the Board.

C. PERFORMANCE APPRAISAL

2.5 On being asked about the role being played by the Ministry of Power in monitoring the working and performance of POWERGRID, the Ministry in a written note stated as under:-

> "The working and performance of POWERGRID is being regularly monitored by the Ministry through the Quarterly Performance Review (QPR) and the targets set for the company under the MoU are monitored. In the performance review meetings, suitable advice is issued to POWERGRID to improve the performance/ functioning in the company. Besides this Joint Secretary (Transmission) and Joint Secretary & Financial Advisor of the Ministry of Power and both on the Board of the POWERGRID.".

2.6 When asked to furnish the details of formal directions if any, issued by the Ministry, POWERGRID furnished the following information:

"The formal directions are also issued by Ministry of Power from time to time. The details of such directions recently issued are as below:

- Ministry of Power (MoP) vide ref. no. 11/20/2005- PG dated 4th July 2008 advised POWERGRID to set up its wholly owned subsidiary company, which shall be responsible for independent system operation with separate accounting and Board structure. In line with the same Power System Operation Corporation Limited was incorporated on 20-03-2009.

- Ministry of Power (MoP) vide letter dated 17-10-2006 from JS, MoP, Transmission system directed POWERGRID as the Central Transmission Utility, to implement the transmission system of all the Ultra Mega Power Projects (UMPPs). Accordingly Transmission system for Sasan and Mundra UMPPs are under execution and POWERGRID has readied itself for Krishnapatnam and Tiliaya UMPPs and execution of these will be taken up matching with commissioning of Generating units.

- Ministry of Power (MoP), vide OM dated 06-03-2007 and dated 04-12-2006 has conveyed the approval of Government of India for disinvestment of its share holding in the company along-with the public issue of fresh equity of shares by POWERGRID."

CHAPTER-III

GENERATION AND TRANSMISSION PROJECTS

A. TRANSMISSION SYSTEM

3.1 The Committee observed that a number of power projects with large generation capacities are coming up at diverse places and the electricity so generated will have to be transmitting to far flung load centres situated across the States and the regions.

3.2 In light of the above, when asked whether POWERGRID would be able to supply power being generated during 2015, 2020 and 2025 or does it feel any mismatch between its capability and strength, the Company in post-evidence written replies stated as follows:-

> "POWERGRID is responsible to develop inter-state transmission system and National Grid to facilitate inter-state transfer of power from various central sector generation projects and IPP projects (under Long-term Open Access). POWERGRID has already undertaken implementation of Inter State Transmission system (ISTS) and strengthening of National Grid as part of already identified generation projects under central sector in the 11th plan. In addition, POWERGRID is implementing nine nos, high capacity transmission corridors across the country to facilitate power transfer from various IPP generation projects as part of long-term open access. These transmission corridors shall be commissioned progressively by 2014-15 matching with commissioning of IPP generation projects. POWERGRID shall be able to take up commensurate transmission system for generation schemes coming up in future, for evacuation of power matching with commissioning of these projects."

3.3 When asked whether the Ministry feels that the Company has the capability to create the matching transmission infrastructure to meet the requirements of the country both in short and long term planning for power generation, the Ministry in written replies stated as follows:-

> "PGCIL is a Navratna Company which has functional autonomy to make decisions as the need arises and with a manpower of about 9000 executives and employees. The PGCIL has technical and financial capabilities to meet the future challenges in the inter state transmission.POWERGRID has already undertaken implementation of Inter-State transmission system and strengthening of National Grid as part of already identified generation projects under central sector in the 11^{th} plan. In addition, POWERGRID is implementing nine high capacity transmission corridors across the country to facilitate power transfer from various IPP generation projects as part of long-term open access. These transmission corridors shall be commissioned progressively by 2014-15 matching with commissioning of IPP generation projects. In respect of short term planning, POWERGRID successfully implemented Short-Term Open Access in Inter-State transmission (ISTS) for

development of a vibrant short-term electricity market, which is now overseen by its wholly owned subsidiary, POSOCO. Short-Term Open Access provides for the gainful utilization of the surplus capacity available on the ISTS after use by long-term and medium Term customers by virtue of inherent design margins, margin available due to variation in power flow and margins available due to in-built spare transmission capacity created to cater to future load growth or generation addition. RLDCs and NLDC are the nodal agency for facilitating the short-term Open Access Bilateral Transactions and collective transactions through Power Exchanges respectively. In 2009-10 POWERGRID has facilitated 8154 transactions and 40 BUs of energy through short term open access. Thus the POWERGRID has been successfully ensuring that there is no transmission constraints in the inter state transmission and have granted open access on the surplus transmission capacity."

B. PRIVATE SECTOR PARTICIPATION

3.4 When asked about the initiatives being taken by the Ministry to introduce private sector participation in transmission; the project identified for the purpose; the methodology adopted for implementation of such projects and the nodal and executing agencies selected for these projects, the Ministry in written replies stated as follows:-

1. "Government of India issued guidelines for encouraging competition in the development of transmission projects and guidelines for tariff based competitive bidding for transmission services. Both these guidelines aim at laying down a transparent policy for facilitating competition in the sector through wide participation in providing transmission services and tariff determination through a process of tariff based competitive bidding. An Empowered Committee, constituted by the GOI identified inter-state transmission projects for private participation. Two nos. of Special Purpose Vehicles (SPV) were set up under Power Finance Corporation (PFC) and Rural Electrification Corporation (REC), for steering the identified transmission schemes for implementation by Private Sector

2. The methodology adopted for implementation of projects through competitive bidding in two stages is as under:

   a. The Bid Process Coordinator invites interested bidders for the project through issue of Request for Qualification document (RfQ). The bidders are short listed based on the qualifying requirements indicated in the RfQ.

   b. After this short listing of the bidders request for Proposal (RfP) is issued by the BPC to the short listed bidders for selection of Transmission Service Providers. The interested short listed bidders have to submit non-financial bids and financial bids in response to the RfP. Through financial bids the bidders quote their transmission charges.

   c. The BPC selects the successful bidder based on the bids submitted

3. The following three schemes are in the process of implementation by the Transmission service Providers selected through the bidding process. Details indicating nodal agency and implementing agency is as under:

Sl.No	Name of the Project	Nodal Agency for the bidding process	Implementing agency/ Transmission Service Provider
1.	Scheme for enabling import of NER/ER surplus by NR	PFC	Sterlite Technologies
2.	System Strengthening in NR for import of power from North Karanpura and other projects outside NR and System Strengthening in WR for import of power from North Karanpura and other projects outside Western Region and also for projects within Western Region.	REC	Reliance Power Transmission Company Ltd
3.	Talcher-II Augmentation System	REC	Reliance Power Transmission Company Ltd

4. The following three schemes are under bidding process. The RfQ has been issued. The RfP is in the process of being issued

S.no	Name of the Project	Nodal Agency for the bidding process	Implementing agency/ Transmission Service Provider
1.	System strengthening common for WR and NR	PFC	Bidding in process Implementing agency yet to be finalized
2.	Synchronous interconnection between Southern Region and Western Region (Part-B)	REC	Bidding in process Implementing agency yet to be finalized
3.	System strengthening for WR	PFC	Bidding in process Implementing agency yet to be finalized

C. ALLOCATION OF POWER

3.5 When asked how power is allocated to States and what parameters and yardstick are taken into account while making such allocations, POWERGRID in a written reply stated as under: -

> "Power allocation to States is being done by Govt. of India. POWERGRID along with CEA plans the Transmission system and the same is finalized in the Regional Power Committee forum where the Central sector generators; State Electricity Boards (SEBs) are also members. Once constituents agree for payment of Transmission charges for the planned transmission system, POWERGRID takes up the investment programme in the project."

3.6 Regarding the policy of the Government for allocation of power, Ministry of Power in a written note stated as under: -

"The allocation of power from Central Generating Stations (CGSs) in the country is made as per a formula, which is being treated as 'guidelines' with effect from April, 2000. As per this guidelines, power from CGSs is allocated to the beneficiary States / UTs in two parts, namely firm and unallocated, as per details given below:

- 12% free power to home state in case of hydro stations and 10% share (not free) to home State in case of thermal/nuclear stations.
- The 73%/75% power is distributed amongst various constituent States / UTs in the region giving equal weightage to central plan assistance and total energy consumption during the previous five years.
- 15% unallocated power kept at the disposal of Central Government to meet the urgent / overall requirements of States from time to time."

CHAPTER - IV

FORMATION OF POSOCO

4.1 The Committee have been informed that Ministry of Power on 4th July, 2008 advised POWERGRID to set up wholly owned subsidiary company for independent system operation with separate accounting and Board structure. In line with the same, Power System Operation Corporation Limited was incorporated on 20.03.2009.

4.2 Explaining the reasons and logic of formation of POSOCO, POWERGRID in its note stated as under,

> "The Electricity Act 2003 provides for establishment of National Load despatch Centre (NDLCs), Regional Load Despatch Centre's (RLDCs) and State Load Despatch Centre's (SLDCs). Each of these load dispatch centers is mandated to be an apex body having jurisdiction over all the players in the electric supply industry i.e. generation, transmission, distribution and trading activities. The system operation function is primarily a neutral function being performed by the Regional Load Despatch Centre's (RLDCs) and National Load despatch Centre (NLDC) at the Regional & National levels respectively. Considering the fact that the System Operation is a distinct function, the same has been ring fenced in accordance with Govt. of India directives after formation of POSOCO. In the Electricity Act 2003, suitable provisions were made and as per advice of Ministry of Power, Power System Operation Company (POSOCO) was formed in March 2009 as 100% subsidiary of POWERGRID. The certificate of commencement of business has been granted by the registrar of companies on 23rd March 2010. As per the directions of Govt. of India, POSOCO shall be subsidiary of POWERGRID for five years.

4.3 On being asked what necessitated the Government to form Power System Operation Corporation Limited as a wholly owned subsidiary of POWERGRID when it has to perform the same function of power transmission work and how this step would prove beneficial to be commercial and national interests, the Ministry in a written note stated as under:

> "The Electricity Act 2003, in Section 26 subsection 3 provides as under:-
> The National Load Despatch Centre shall be operated by a Government company or any authority or corporation established or constituted by or under any Central Act, as may be notified by the Central Government."
> Section 27 subsection 3 provides that
> "The Regional Load Despatch Centre shall be operated by a Government Company or any authority or corporation established or constituted by or under any Central Act, as may be notified by the Central Government".
> The National Electricity Policy has a provision regarding operation of NLDC and RLDCs, that is produced below
> "5.3.7 The spirit of the provisions of the Act is to ensure independent system operation through NLDC, RLDCs and SLDCs. These dispatch centers, as per the provisions of the Act, are to be operated by a Government company or

authority as notified by the appropriate Government. However, till such time these agencies/authorities are established the Act mandates that the CTU or STU, as the case may be, shall operate the RLDCs or SLDC. The arrangement of CTU operating the RLDCs would be reviewed by the Central Government based on experience of working with the existing arrangement. A view on this aspect would be taken by the Central Government by December 2005".

In accordance with the above provision of the Electricity Act, 2003 and the National Electricity Policy, the Government of India had reviewed the arrangement of RLDCs and the National Load Despatch Centre, which was under implementation, being part of PGCIL. After enactment of Electricity Act, 2003 it was envisaged that there would be competition in generation, transmission and distribution activities and private investment would be an important component for future development. The Ministry of Power has notified guidelines for "Tariff based Competitive-bidding Guidelines for Transmission Services" and Guidelines for "Encouraging Competition in Development of Transmission Projects". In this background it was considered desirable to have an independent system operation to ensure more transparency. After considering various options it was decided as under:

i) To set up a wholly owned subsidiary company of PGCIL responsible for independent system operation with separate accounting and Board structure. Stake holders will be appropriately represented on the Board of the subsidiary company and eventually may have shareholding in the ISO Company. The formal procedure for doing so including man-power requirements will be transparently laid down. The revenue streams for PGCIL and the subsidiary will be clearly earmarked without any additional burden on the States.

ii) This subsidiary company will be gradually made independent from the Power Grid Corporation of India Ltd., at the appropriate time, say, after five years.

iii) Clear Rules and Guidelines shall be prepared immediately for the consultative and decision making process as being followed by TRAI

iv) The proposed structure and functions of the wholly owned subsidiary company of the PGCIL will be on the lines as indicated in the Annex.

CMD, PGCIL was requested vide letter No.11/20/2005 dated 4th July, 2008 to take further necessary action keeping in view the guidelines for creation of subsidiaries by the Navratna and Miniratna companies have laid down vide Department of Public Enterprises Office Memorandum No.18(16)/2005-GM-GL-82 dated 23rd May, 2007.

4.4 On being further asked about the achievements of POSOCO since its inception, the Ministry furnished the following:-

"In pursuance to the advice of the Ministry of Power for setting up POSOCO, the Board of Directors of PGCIL has given in principal approval for the incorporation of POSOCO on 12.07.2008. POSOCO was incorporated as a wholly owned subsidiary company of PGCIL on 20.03.2009. POSOCO will be responsible for independent system operation. POSOCO has recently obtained the certificate of commencement of business on 23rd March, 2010.

Ministry of Power has taken action for transfer of operation National Load Despatch Centre (NLDC) and Regional Load Despatch Centres (RLDCs) by POSOCO. Once the transfer takes place the POSOCO would be in a position to perform the following functions:

- Provides open access to the transmission system,
- Monitors and controls system operations to ensure a moment-to-moment energy balance,
- Manages congestion,
- Schedules generation (or reviews the technical feasibility of schedules submitted by others),
- Acquires ancillary services such as operating reserves and voltage support,
- Plans or approves requests for maintenance of transmission and generation facilities.
- Many system operators also administer spot and real-time balancing energy markets. These operators generally perform metering, accounting, settlement, and billing for the markets."

CHAPTER-V

FINANCIAL MATERS

A. FINANCIAL PERFORMANCE

5.1 As per the information furnished by POWERGRID, the comparative statement of financial performance for the past years (FY 2007-08 to FY 2009-10) showing the details of targets fixed, achievements made, growth/ decline, profit/ loss is as under:

Sl. No.	MOU Parameters	2007-08		2008-09		2009-10	
		MOU	Actuals	MOU	Actuals	MOU	Actuals
A	B	C	D	E	F	G	H
1	Gross Sales	4557	5082	5400	7029	6975	7504
2	Gross Margin	3909	4217	4500	5927	5795	6247
3	Net Profit/Net worth (%)	11.69%	10.73%	10.50%	11.57%	11.34%	12.83%
4	Gross profit/capital employed (%)	11.07%	12.03%	12.00%	16.75%	11.75%	14.54%
5	PBDIT/total employment (Rs. in lakhs)	49.19	55.16	53.57	72.16	59.13	68.19
6	Inventory/gross block (%)	1%	0.70%	1%	0.74%	1%	0.80%
7	Added value/ Gross sales (%)	28.90%	32.78%	31.82%	43.88%	34.37%	45.04%

Sl. No.	Financial Year	Profit Before Tax	Net Profit After Tax
1	2007-08	1730.53	1448.47
2	2008-09	2228.57	1690.61
3	2009-10	2626.32	2040.94

B. CAPITAL STRUCTURE

5.2 As per the information made available, the total investment in the Company (paid up Capital and loans separately) as on 31-03-2010 was Rs. 4208.84 Crore and the Shareholding pattern is given below:

Sl.No	Category	Total Shares	% to Equity
1.	President of India (Promoter)	3634907735	86.36
2.	Promoters (Individual Nominees)	600	0.00
3.	Indian Public	177796904	4.22
4.	FIIs	64455175	1.53
5.	Bodies Corporate	77345395	1.84
6.	Mutual Funds	23200905	0.55

7.	Banks &FI	48000966	1.14
8.	NRI/OCBs	4095341	0.10
9.	Others	179038209	4.25
	Total	**4208841230**	**100.00**

The total Loan Funds as on 31-03-2010 was Rs. 34,416.79 Crore as per the details below:

Sl.No.	**Category**	**Type of Loan**	**Amount**
1a	Bonds	Secured Loan	21,171.83
1b	Term Loan from Banks/ Financial Institutions (including Loans in Foreign Currency)	Secured Loan	10,173.95
	Sub-Total (i)		**31,345.78**
2 a	Short Term Loans	Unsecured Loans	1250.00
2 b	Term Loan from Banks/Financial Institutions (including Loans in Foreign Currency)	Unsecured Loans	1821.01
	Sub-Total (ii)		**3,071.01**
	Total Loan = (i+ii)		**34,416.79**

5.3 When asked about foreign loans received and sources from which such loans obtained, POWERGRID in a written note stated as follows:

> "The external funding is generally through Long Term Foreign Currency Loans from Multilateral Agencies such as the World Bank (WB) and Asian Development Bank (ADB). These loans are being provided under sovereign guarantee by the Government of India."

5.4 In reply to a question as to how POWERGRID calculates Debt: Equity Ratio, POWERGRID in a post-evidence written reply stated as under:-

> "The Debt-equity ratio as of 2009-10 is 68:32. That means debt is 68 % and net worth is 32%. It is calculated on the basis of equity capital plus reserves and surplus which is net worth, that is around Rs. 15,900 crores roughly. The total longterm loans are around Rs. 34,400 crore. So the ratio is calculated on the basis of these two parameters.

5.5 When asked about the reasons which inspired POWERGRID to go for an IPO, Power Grid in a post-evidence written reply stated as under:-

> "The loan is 2.03 times of equity. Our normal tariff is regulated by the CERC, the regulatory commission. They gave a cap that only 30% of the project cost funded out of equity can earn returns @ 15.5% with provision of additional 0.5% if project commissioned ahead of schedule. All other tariff components like depreciation, Interest on Working Capital, Interest on Long term Loan, O&M expenditure are in form of reimbursement. Therefore what is really

available for the purpose of internal resources for plough back for capital investment is the profit available through this equity deployment. We can deploy up to the extent of 30% to maximize our profit and also take up multi-project in future because our total requirement is around Rs. 55,000 Crores. CERC does not bother whether we put 10% or 30% as equity.If the internal resources, whatever is generated out of the operation are not able to meet that 30% requirement, then we are going to the public for getting more money. That is why we have to get the extra equity contribution from Public. With the present scenario of 68:32 Debt: Equity, we are nearing 70: 30 threshold as per CERC norms. Now what is left over is that we have to go for more equity contribution in future. If you see overall eleventh five year plan period from 2007-08, 2008-09 and 2009-10 we have achieved around Rs. 25,400 crore worth of Capital expenditure out of Rs. 55,000 crores. Again, we have to take up Capital Expenditure of Rs. 30,000 Crores during balance period of XI plan. As going by the overall requirements for the next two years i.e. remaining period (2010-11 and 2011-12) of XI five year plan, we need around Rs. 9000 crore worth of equity which is not available by means of internal resources generation, we have found that we may fall short of around Rs. 4000-4500 crores worth of equity. So we need to compensate that extra amount needed for equity contribution. We are going for FPO's i.e. Follow on Public Offer for which we have requested Ministry of Power."

5.6 Replying to a question about the terms on which POWERGRID would like to have this FPO not the way directed by the Government, Power Grid in a post-evidence written replies stated as under:-

"POWERGRID is operating under administrative tariff regime where the Return on quity is a primary source of equity contribution. The CERC in its tariff norms has prescribed the debt: equity ratio of 70:30 for determination of capital cost of projects and computation of transmission tariff. Further, the multi-lateral lending agencies i.e. World Bank and Asian Development Bank have prescribed a covenant of minimum debt equity ratio of 80: 20. The internal resources generated and available for deployment of equity during FY 2010- 11 is 16.45% and during FY 2011-12 is 15.22% of capital expenditure which is not even meeting the loan covenant requirement of lending agencies. Accordingly, POWERGRID proposes to raise funds through Issue of Fresh Equity shares of 10% of paid up capital to fund its investments for the balance period of XI Plan. POWERGRID has proposed to build up transmission network for the IPPs coming up in the areas of Orissa, Chattisgarh, Jharkhand, coastal areas of Tamil Nadu and Andhra Pradesh for which an estimated investment of Rs.58000 crore is expected in the next plan period. Further, a massive investment towards Central Sector transmission projects is also expected in the XII plan period considering the generation capacity addition in central sector. It is further mentioned that in the absence of any budgetary support for equity from Government of India, the only source available for equity deployment is internal resources for supporting huge expansion programme for transmission sector. POWERGRID's internal resource generation, through profits is not sufficient to support this huge expansion requirement. Hence raising of funds through public issue of equity shares is a necessity. Department of Disinvestment Ministry of Finance has

asked Ministry of Power on dated 4/2/10 to consider divesting 10% Government of India shareholding in POWERGRID along with further public offer in FY 2010-11 and has requested to move the Cabinet Note for CCEA consideration. Accordingly, the proposal for Follow on Public Offer of POWERGRID comprising fresh issue of equity shares of 10% of paid up capital and disinvestment by Government of India of 10% of paid-up capital out of its shareholding is in process of consideration of CCEA."

C. SUNDRY DEBTORS

5.7 When asked to furnish details on sundry debtors, giving inter-alia the total amount outstanding as on 31.3.2010, percentage to total sales, bad and doubtful debt efforts made to recover the dues, the POWERGRID furnished the following information: -

- Sundry Debtors as on 31.03.2010 = Rs. 2214.86 Crore (*)
- Total Sales(Income) for the year 2009-10 = Rs. 7503.58 Crore
- Sundry debtors as a percentage of Total Sales = 29.52 %
- Provision for bad & doubtful debts as on 31.03.10= Rs. 113.89 Crore.

(*) As prescribed by CERC Tariff Regulations, 2009, pending final determination of tariff by CERC as per the Tariff norms, 2009, billing has been made provisionally on the basis of tariff as approved by CERC and applicable as on 31.03.2009. The difference between recognition of income for the year 2009-10 and provisional billing has resulted in an increase in Sundry Debtors by an amount of Rs.883.48 crore.

5.8 When asked as what is the total outstanding dues of PGCIL from PSUs/ Govt./ Private bodies and steps taken to recover the outstanding due, the POWERGRID in a written note stated as under: -

"Dues of POWERGRID are mostly recoverable from Govt. agencies like State Electricity Boards, Discoms and Transcos formed out of unbundling of SEBs. Monthly dues are recoverable through Letters of Credit (LCs) established by such organizations upto 105% of the average monthly billing as per BPTA signed with them. As on 31st March, 2010, LC of Rs. 502.63 Crore has been opened in favour of POWERGRID by such organizations to discharge monthly transmission dues. There are accumulated outstanding dues pertaining to erstwhile Delhi Electric Supply Undertaking (DESU) period amounting to Rs. 57.79 Cr. which was not taken over by Delhi Govt. at the time of unbundling of Delhi Vidyut Board (DVB)/ DESU. After considering overdue interest, the amount recoverable works out to Rs.96.40 Cr. as on 31.03.2010. Other organizations like NTPC, NHPC etc. also have outstanding dues against DESU period. The matter was referred by the Ministry of Power in the Cabinet Meeting held on 02.01.2009 and it was decided to refer the matter to the Group of Ministers (GoM). Efforts are going on at the Ministry of Power (MOP) level for direct realization of this due from the Govt. of India. MOP, vide their letter ref. no. 6/1/2007-Fin. dated 06.05.2009, has confirmed that the matter is already under active consideration of MOP for settlement of outstanding dues of DESU period payable to CPSUs concerned."

5.9 The Committee noted that there are accumulated outstanding dues pertaining to erstwhile Delhi Electric Supply Undertaking (DESU) period amounting to Rs.57.79 crore which was not taken over by Delhi Government at the time of unbundling of Delhi Vidyut Board/DESU. In this regard, when asked about the specific reasons for referring this matter to the Group of Ministers and what is the outcome of such a reference, the Ministry of Power in a written note stated as under: -

> "The Competent Authority has directed that the matter may be considered by Group of Ministers, comprising the Minister of Power, The Minister of Home Affairs, The Minister of Science & Technology and Earth Sciences, in consultation with the Chief Minister of Delhi. The matter is before the Group of Ministers."

CHAPTER-VI

TRANSFER OF SURPLUS POWER

A. TRANSMISSION OF SURPLUS POWER

6.1 When enquired about the short term and long term steps being taken to ensure rational utilization/ distribution of power available in various regions, the Company in a written note stated as under: -

- **Development of National Grid**

  India is endowed with rich and abundant natural resources. However, these energy resources are unevenly distributed such as, coal resources are abundant in Bihar/ Jharkhand, Orissa, West Bengal, hydro resources are mainly concentrated in Northern and North-Eastern Region etc. In order to meet the growing power demand in various parts of the country and for optimum utilisation of generation resources, development of a strong National Grid has been taken up by POWERGRID in a phased manner matching with generation capacity addition programme. Presently, National Grid with inter-regional power transfer capacity of about 20,800 MW has already been established and this capacity is planned to be enhanced to more than 32,650 MW by 2012 (including 1600 MW through Private Participation).

- **Effective Grid Management**

  Planned rapid expansion of regional grids and their integration to form National Grid poses great challenges in Grid Operation & Management. For addressing these challenges, POWERGRID had taken a proactive initiative for modernization of all the five Regional Load Despatch Centres (RLDCs) at a total cost of about Rs.2,000 Crore. This has resulted in real time monitoring and control of the grid to enhance safety, security, reliability and stability in all regions of the country. These facilities minimize grid disturbance/ failure and facilitate quick grid restoration, in case of failure. Occurrence of any major grid disturbance in the country has been arrested during last more than seven years. For overall co-ordination at national level, National Load Despatch Centre. (NLDC) at Delhi with back up at Kolkata, has also been commissioned in Feb.'09 and put into commercial operation since 1st April 2009. NLDC is the apex body to ensure integrated operation of the national power system. Utilizing various Inter-Regional transmission links established by POWERGRID, inter-regional power transfer of about 52,000 MU of energy was facilitated during the year 2009-10, an increase of about 13% compared to previous year (i.e. 46,000 MU during 2008-09). Growth of inter-regional power exchange has helped in meeting more demand in energy deficit regions besides achieving overall economy."

- **Implementation of Short-Term Open Access in Inter-State Transmission System (ISTS)**

  Short-Term Open Access in Inter-State transmission (ISTS) has been successfully implemented and facilitated for development of a vibrant short-term electricity market. Short-Term Open Access provides for the gainful utilization of the surplus capacity available on the ISTS after use by long-

term and medium term customers by virtue of inherent design margins, margins available due to variation in power flow and margins available due to in-built spare transmission capacity created to cater to future load growth or generation addition. RLDCs and NLDC are the nodal agency for facilitating the Short-Term Open Access Bilateral Transactions and Collective Transactions through Power Exchanges respectively. The regional grids are spread over large geographical areas with diversity in time, weather, crop pattern, industrialization, population density, economic growth etc. This leads to diversity in the power requirements. Because of robust transmission system along with strong inter-regional capacity corridors, all the utilities are able to exploit the benefits of this diversity through open access. There has been a continuous growth in the volume of trade and number of participants. Transactions ranging from few MW to Hundreds of MW are taking place. Short-Term Open Access in Inter-State Transmission has facilitated the optimum utilization of resources by gainful utilization of geographical and time diversity, improved performance of generating plants, utilization of surplus available during holidays/ weekend, harnessing of latent generation in Captive power Plants etc.

The details of approved quantum of energy facilitated through Short-Term Open Access in ISTS (since implementation from May'2004) is as mentioned below:

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Short-Term Open Access Bilateral Transactions						
No. of Transactions	778	3938	5933	9560	11781	8154
Energy Approved (MU)	16441	22526	23598	29830	27756	32371
Collective Transaction Through Power Exchange						
Energy Approved (MU)	-------	---------	----------	----------	2765	7086
Total (though Open Access in Inter-State Transmission System)						
Energy Approved (MU)	16441	22526	23598	29830	30521	39457

- **<u>Implementation of Long Term Open Access in Inter-State Transmission System (ISTS)</u>**

  POWERGRID, being the nodal agency for Long Term Open Access, has received number of applications from various generation projects seeking grant of Long term access in ISTS to different regions across the country. The majority of the generation projects are located in various pockets like Orissa, Jharkhand, Sikkim, Chhattisgarh, Andhra Pradesh, Tamil Nadu etc. To evacuate power from the generation projects, high capacity 765kV AC and HVDC transmission systems have evolved and finalized in consultation with CEA, generation developers and state utilities.

B. NATIONAL GRID

6.2 It has been stated in preliminary material furnished by POWERGRID that in order to meet the growing power demands in various parts of the country and for optimum utilization of generation resources, development of a strong national grid has been taken up by POWERGRID in a phased manner matching with generation capacity of about 20800 MW has already been established and this capacity is planned to be enhanced to more than 32850 MW by 2012.

6.3 On being asked as to how the present inter-regional power transfer capacity of the National Grid compares with the actual requirement of the same in the country and what steps are being contemplated by Government for development of a strong and requisite National Grid matching with generation capacity addition programmes contemplated to be undertaken in future, Ministry in a written note stated as under:-

> "A national grid in the country is being developed in phased manner and matching with generation capacity additions. Total inter-regional transmission capacity of the national grid by the end of 10th Plan was 14050 MW. During 11th Plan i.e. 2007-12, inter-regional transmission systems of 18600 MW capacity were planned to be added so that inter regional transfer capacity becomes 32650 MW to meet the inter regional power requirement.. Out of this programme for 11th Plan, 2400 MW capacity was added during 2007-08, 3300 MW during 2008-09 and 1000 MW during 2009-10. Thus a capacity addition of 6700 MW has already been added in 11th Plan up to 30-06-2010. The present inter regional transmission system fully meet the actual requirements. Balance capacity addition in inter state transmission is under various stages of implementation/ finalization. In order to meet the transmission requirement of the Independent Power Producers the PGCIL has planned 9 high capacity transmission corridors with an investment of Rs.58000 crores."

6.4 According to Economic Survey, 2008-09, an integrated Power Transmission Grid helps to even out supply-demand mismatches. The existing inter-regional transmission capacity of about 20750 MW connects northern, western, eastern and operating at the same frequency and the southern region asynchronously. Further, proposals are underway to have synchronous integration of southern region with the rest.

6.5 When asked to specify whether the Ministry has drawn any road map to ensure a country-wide synchronized grid, Power Grid in a post-evidence reply stated as under:-

> "Synchronous inter-connection of Southern Region with rest of the all-India Grid is planned to be achieved through following 765 kV lines, interconnecting Southern Region and Western Region :
>
> (i) Raichur (in Karnataka, SR) – Sholapur (in Maharashtra, WR) 765 kV S/C line # 1. This line is covered under the scheme "Synchronous interconnection between Southern Region and Western Region" which is proposed to be implemented through tariff based competitive bidding route. Special Purpose Vehicle (SPV) of Rural Electrification Corporation (REC) is coordinating the bidding process of the scheme.

It is expected that this link would be completed by 2014-15.

(ii) Raichur – Sholapur 765 kV S/C line # 2. This line is part of the scheme "Transmission System Associated with Krishnapatnam UMPP" which is being implemented by PGCIL. This link would be implemented matching with commissioning of Krishnapatnam UMPP and is expected to be completed by 2014-15. With these 765 kV links the Southern Region would also be synchronized with rest of all-India Grid, thus making a synchronously integrated all- India Grid operating at same frequency."

6.6 When asked about the POWERGRID's experience and suggestions, in Power Trading, Power Grid in a post-evidence reply stated as under:-

"In line with the mandate provided in Section 66, Electricity Act 2003, Central Electricity Regulatory Commission has provided relevant regulations for open access in Inter-State Transmission and Power Market regulations. These have facilitated the development of Electricity Market and utilities can buy and sell power across the country gainfully utilizing the surplus capacity available on the ISTS. POWERGRID and RLDCs are barred from power trading as per Act. RLDCs facilitate Open Access as per the provisions of the relevant CERC regulations. At present, power trading is also taking place through two power exchanges namely, India Energy Exchange (IEX) and Power Exchange of India (PXI) which is being implemented through NLDC. The following two steps are suggested by POWERGRID for further development of the Electricity Market:

a) Implementation of Intra-State Availability Based Tariff (ABT)

b) Institutional Capacity Building"

CHAPTER-VII

PROJECT PLANNING

A. TRANSMISSION PROJECTS

7.1 The details of projects commissioned during the last three years (FY 2006-07 to FY 2009-10), its actual capital expenditure vis-à-vis the original and revised estimates, its original schedule, revised schedule, actual/ expected date of commissioning with reasons for time and cost overrun in respect of each of the projects is provided at **Annexure-I.**

The details of ongoing projects currently under execution along with reasons of its anticipated time or cost overrun is provided at **Annexure-II.**

B. RIGHT OF WAY FOR TRANSMISSION SYSTEM

7.2 In the Annual Report 2009-10, it has been stated that acquiring Right-of-way for constructing system is getting increasingly difficult necessitating operation of high capacity "Transmission Highways" so that in future, constraints in ROW do not become bottleneck in harnessing natural resources.

7.3 When asked as to how POWERGRID is being affected by Land Acquisition for Sub-station and what are Land acquisition policies of POWERGRID, the Company in a post-evidence reply stated as under:-

> "Since land being state subject, respective State governments are the acquiring authorities for land coming under their jurisdiction and Central government authorities for land falling under Union Territories (UT). For all acquisition of private land/assets the provisions of Land Acquisition Act, 1894 as amended in 1984 are followed. In addition to that POWERGRID has adopted most comprehensive and progressive "Social Entitlement Framework" based on National Resettlement and Rehabilitation (R&R) policies of 2003 and 2007. This framework allows Rehabilitation Assistance to all affected families based on loss / left over land in addition to land compensation as fixed by revenue authorities. Generally the problem related to land acquisition, apart from general resistance is on rate of compensation, as the land losers always complain about the base rate and the lack of transparency. This result in reference to court invariably in all cases which is a time consuming process and delay the entire process."

7.4 The Committee observed that POWERGRID is constructing High towers without felling of trees. In this regard, when asked about the reasons for delay in obtaining clearances from Forest department, Power Grid in a post-evidence reply stated as under:-

> "Since implementation of Forest (Conservation) Act, 1980 (w.e.f. 25.10.1980) all forest clearance proposal for diversion of forest land for non-forest

purpose, are approved/issued by Central government and States have only recommendatory authority. Forest clearance is issued in following two stages from November,1998:

Stage-I (In-principle) approval is based on recommendation of Forest Advisory Committee (FAC) and subsequent approval by Hon'ble Minister of Environment & Forests. The in-principle approval contains certain conditions/requirement that is to be complied by user agency/State Govt. The normal conditions are:

- Payment of cost of Compensatory Afforestation on degraded forest land twice the area
- Payment of Net Present Value (NPV)
- NOC under Forest Rights Act (FRA), 2006 from concerned gram sabhas

Stage-II (Final) approval is provided after receiving the compliance report on stipulated conditions from concerned State government. Work in forest area can only be undertaken after getting final clearance.

Forest Clearance has always been a lengthy process due to involvement of different position starting from Range Officer to Secretary Forest at State Level and from Asstt. Inspector General (AIG) of Forests to Minister of Environment & Forest s at Govt. of India level. But concerted efforts of POWERGRID's towards various requirements of forest clearance and proper follow up resulted in getting the forest clearance on time for most of the transmission lines. However, with the issue of MoEF Circular dated 30/7/09 & 03/08/09 vide which written consent of concerned Gram Sabha has been made compulsory under the Forest Right Act (FRA), 2006 for the entire proposal involving diversion of forest land under the Forest (Conservation) Act, 1980 has further complicated the process of forest clearance that has resulted in enormous delay even if in-principle clearance has already been issued."

7.5 When about the concrete steps being taken by Ministry to overcome ROW problem in the past, the Ministry of Power in a written note stated as follows:-

"Right-of-Way and clearances from statutory authorities (forest, defence, civil aviation and railways and unwillingness from the land owners is a major constraint being faced by POWERGRID, both on the countryside as well as in urban areas. On countryside, issues like forest clearance, clearances from other authorities, demand for higher compensations and resistance from land owners to allow erection of transmission line towers in their fields has been causing considerable delays in a number of areas and the problem is only increasing day by day as more and more affected parties are now taking recourse to judicial remedy. In urban and semi-urban areas, getting land for sub-stations is also facing problems due to scarcity of land. Even for acquiring private land govt. process is too lengthy & takes between 1- 2 years. Whenever the right of way problems are brought to the notice of Ministry of Power during project implementation by the PGCIL, the matter is pursued with the concerned authorities at the highest level."

7.6 When further asked about the action plan, if any, formulated and action taken to overcome this problem in future, the Ministry in a written note stated as follows:-

> "In order to minimize the Right of Way requirements, Ministry of Power has advised the PGCIL to looks at new technologies like:-
>
> i) Hybrid system comprising of HVDC & EHVAC System
> ii) Compact Towers and Extra High Towers with multi circuits
> iii) Upgrading & Uprating of existing transmission corridors
> iv) Use of fixed & variable Series Compensator (FACTS)
> v) Use of High Temperature Conductors
> vi) Gas Insulated Substation (GIS)
>
> In case of delay in execution, due to ROW problems, matter is taken up by the Ministry of Power with State Administration at the highest level on case to case basis."

C. FOREST CLEARANCE

7.7 The Committee observed that a number of projects of POWERGRID have been delayed due to long time taken by the Ministry of Environment and Forest for grant of forest clearance.

7.8 When asked whether the Ministry of Power has at any stage taken up this matter with the MOEF, the Ministry in a written note stated as follows:-

> "Ministry of Power has taken many initiatives to streamline the process of Forest Clearance from MoEF. Meetings are organized between Secretary (Power) and Secretary (Environment & Forests), on regular basis, to expedite the issues pertaining to Ministry of Power on environment & forests clearances. Apart from this, the issue of forest clearance is also taken up at the Minister level with concerned Chief Minister for expediting the forest clearance."

D. T&D LOSSESS

7.9 As per the information made available by Power Grid, energy losses occur in the process of supplying electricity to consumers due to technical and commercial reasons. The technical losses are due to energy dissipated in the conductors and equipments used for transmission, transformation, sub-transmission and distribution of power. These losses would depend on the pattern of energy use, intensity of load demand, load density, and capability and configuration of the transmission and distribution system that vary for various system elements. These technical losses are inherent in a system and can be reduced to a certain level. The technical losses can be further sub grouped depending upon the stage of power transformation and transmission system as Transmission losses (400 kV/220 kV/132 kV/66 kV), Sub-transmission losses (33 kV/11kV) and Distribution losses (11kV/0.4 kV). Pilferage by hooking and bypassing meters etc., defective meters and errors in meter reading and in estimating un-metered supply of energy cause the commercial losses. As the T&D loss was not able to capture all the losses in the net work, concept of Aggregate Technical and Commercial (AT&C) loss was introduced in 2001-02. AT&C loss captures technical as well as commercial losses in the network and is a

true indicator of total losses in the system. As per the report on performance of the State Power Utilities prepared by Power Finance Corporation Ltd, the AT&C losses during 2008-09 are 28.44% at national level. The State wise AT&C Losses for the last five years are indicated as follows:-

STATE WISE AT&C LOSS (%)

Sl	State	2004-05	2005-06	2006-07	2007-08	2008-09
1	Bihar	82.50	83.75	43.99	47.38	34.37
2	Jharkhand	62.83	52.14	54.41	58.17	59.00
3	Orissa	54.07	44.07	39.90	41.38	39.43
4	Sikkim	38.33	44.87	61.43	51.32	56.86
5	West Bengal	23.91	28.34	30.66	22.70	22.73
6	Arunachal Pr.	25.43	68.99	57.96	61.59	60.15
7	Assam	39.31	35.24	36.64	35.18	20.32
8	Manipur	88.56	77.83	79.69	79.39	81.01
9	Meghalaya	38.12	37.90	39.08	39.45	43.37
10	Mizoram	24.61	21.98	31.71	28.31	41.01
11	Nagaland	43.13	50.41	48.01	44.08	48.69
12	Tripura	20.96	32.36	29.19	30.16	31.98
13	Delhi	43.55	40.32	34.32	37.96	17.97
14	Haryana	43.66	42.83	25.60	33.02	33.29
15	Himachal Pr.	21.71	17.06	13.47	17.15	12.85
16	J &K	68.33	63.25	64.68	71.92	69.05
17	Punjab	24.00	23.31	22.54	19.10	18.96
18	Rajasthan	46.74	42.19	35.74	33.02	29.52
19	Uttar Pradesh	46.81	43.89	44.25	37.10	40.32
20	Uttrakhand	45.62	27.98	35.54	38.32	35.37
21	Andhra Pradesh	21.15	16.68	17.88	16.19	12.99
22	Karnataka	33.67	38.04	32.76	32.13	25.68
23	Kerala	32.12	23.61	23.34	21.52	21.61
24	Puducherry	16.46	17.46	17.46	18.69	18.47
25	Tamilnadu	19.41	17.09	16.21	16.19	15.33
26	Chhattisgarh	32.30	38.76	29.26	30.89	32.45
27	Goa	18.34	12.37	16.89	13.12	17.17
28	Gujarat	35.15	26.72	23.60	22.81	22.05
29	Madhya Pradesh	54.27	44.44	45.67	46.78	61.05
30	Maharashtra	27.98	33.15	34.59	31.32	31.19
	Grand Total	**34.82**	**33.02**	**30.62**	**29.58**	**28.44**

T&D losses of various countries of the world are as follows:-

Name of the country	2004	2005	2006
Korea	3.48	3.53	3.61
Japan	4.52	4.57	4.57
Germany	5.57	4.76	4.65
Italy	5.98	5.85	5.55
Australia	6.10	6.74	6.80
South Africa	6.10	6.30	8.75
France	6.29	6.18	6.22
China	6.33	6.77	6.36
USA	6.34	6.13	6.17
Canada	6.68	7.59	7.84
UK	7.94	7.88	7.64
Russia	12.18	11.97	10.98
Brazil	--	15.13	15.32
India	30.42	28.65	27.20
World	--	8.75	8.58

(Source : DMLF Division, CEA)

The high financial losses incurred by distribution utilities are mainly attributable to high Aggregate Technical & Commercial (AT&C) losses in the system. The prime responsibility for improvement in financial losses of distribution utilities lies with State Government. However, the Central Government has launched the following programme for improving financial health of the State Distribution Utilities.

Restructured Accelerated Power Development and Reforms Programme (R-APDRP)

Government of India has launched Restructured Accelerated Power Development and Reform Programme(R-APDRP) in July 2008 as a central sector scheme for XI Plan aimed at turnaround of power distribution sector with the objective of reducing AT&C losses to 15%. The total outlay of the scheme is Rs.51,577 crores The scheme comprises of two parts-Part-A & Part-B. Part-A of the scheme being dedicated to establishment of IT enabled system for achieving reliable & verifiable baseline data system in all towns with population greater than 30,000 as per 2001 census (10,000 for Special Category States). Installation of SCADA/DMS for towns with population greater than 4 lakhs & annual input energy greater than 350MU is also envisaged under Part-A. 100% loan is provided under R-APDRP for Part-A projects & shall be converted to grant on completion and verification of same by Third Party independent Evaluating agencies (TPIEA) appointed by MOP/PFC. MOP,GOI has earmarked Rs.10,000 Crores for R-APDRP Part-A. Part-B deals with regular Sub Transmission & Distribution system strengthening & upgradation projects. The focus for Part-B shall be loss reduction on sustainable basis. 25% loan is provided under Part-B projects and upto 50% of scheme cost is convertible to grant depending on extent of maintaining AT&C loss level at 15% level for five years. For special category states, 90% loan is provided by GOI for Part-B projects and entire GOI loan shall be converted to grant in five tranches depending on extent of maintaining AT&C loss level at 15% level for five years. It is expected that on

successful completion of the scheme, the AT&C losses will be reduced to the extent of 15% in the project areas. The Utilities are also to achieve the following target of AT&C loss reduction at utility level:

- Utilities having AT&C loss above 30%: Reduction by 3% per year
- Utilities having AT&C loss below 30%: Reduction by 1.5% per year

7.10 When asked how Power Grid compares T&D losses with international standards, Power Grid in a post-evidence reply stated as under:-

> "As the T&D loss was not able to capture all the losses in the net work, concept of Aggregate Technical and Commercial (AT&C) loss was introduced in 2001-02. AT&C loss captures technical as well as commercial losses in the network and is a true indicator of total losses in the system. As per the report on performance of the State Power Utilities prepared by Power Finance Corporation Ltd, the AT&C losses during 2008-09 is 28.44% at national level."

7.11 On being asked to clarify whether quality of equipments is the reason for Transmission losses or there are other causes also, Power Grid in a post-evidence reply stated as under:-

> "The Transmission losses are primarily technical losses due to inherent resistance of the transmission line (conductor)/equipment. Losses in Inter-State transmission system of POWERGRID vary from 4% plus or minus 1% depending on the seasonal variation of generation and load. Losses in Inter-State transmission in our country are calculated for every 15 minutes based on the readings on Special Energy Meters and every week region wise losses are put on the web-site as per regulatory order."

CHAPTER-VIII

DIVERSIFICATION

8.1 The Committee have been informed that POWERGRID is also making valuable contribution to Govt. of India's nation building schemes of Accelerated Power Development and Reforms Programme (APDRP) and Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) which are aimed at bringing qualitative improvement in the distribution sector.

8.2 When asked about the details of states and districts where the works of RGGVY have been taken up by POWERGRID, the Power Grid in a post-evidence reply stated as under:-

> POWERGRID has been assigned Rajeev Gandhi Gramin Vidyutikaran Yojna (RGGVY) works in 9 states, viz. Bihar, Uttar Pradesh, West Bengal, Rajasthan, Gujarat, Orissa, Assam, Tripura and Chhattisgarh covering about 65 districts.

8.3 When asked to specify POWERGRID's suggestion to Govt. of India to increase the pace of RGGVY implementation, the Company in a written note stated as follows:

> The process of implementation of RGGVY can be improved, if following preparatory actions are taken before award of the contracts:
>
> - Identification of land for new 33/11 kV Substations is to be expedited by state
> - governments so as to complete the following tasks by POWERGRID
> - Handing over ready/leveled site to implementing agency.
> - Timely completing works of Power Supply Sub-station (PSS)
> - Charging of created RGGVY assets
> - Prevent thefts and vandalism
> - Details of eligible beneficiaries (i.e. name & address of BPL households) to be identified and provided to implementing agencies at the start of implementation, itself by DISCOM / State Utility
> - The DPR shall be prepared after survey, including preliminary route alignment, location of DTs, etc. Further, the quantities need to be finalized in close association
> - DISCOM / State utility to avoid political and administrative interference during the implementation. Many a times, time and cost overrun occurs due to the same.
> - So far, the coverage of the project covered the transformation capacity of the DTs catering to the requirement of largely BPL households, with a philosophy that the rest of the required capacity catering to various consumers of the village, such as domestic, commercial & industrial etc. will be provided by the Utilities. However, the State Utilities, in some states, did not install required DTs, thus overloading the installed transformers under the RGGVY project. Therefore, for successful completion of the project and for optimum utilization

of the assets created, a mechanism shall be evolved for co-ordinated augmentation by the State utilities.

- RGGVY works related forest and railway line crossing proposals needs to be cleared with top priority.
- DISCOMs / State utilizes needs to energize the created RGGVY assets immediately so as to avoid pilferage.
- Augmentation and assured power supply should be arranged by the State Governments so as to effective utilize the RGGVY infrastructure.
- In absence of any budgetary support to RGGVY, it would be very difficult to fund the programme through alternative means as the project has no revenue earning potential.

8.4 As regards the programme for achievement of balance works of RGGVY by POWERGRID, the company states as follows**:**

All the RGGVY Projects approved under 10th Plan are likely to be completed before current financial year and all the RGGVY projects sanctioned under 11th Plan are expected to be completed by the end of XI plan.

CHAPTER-IX

HUMAN RESOURCE

A. MANPOWER

9.1 As per the information furnished, the sanctioned and actual staff strength of Power Grid both at the Executive and the Non-executive levels is as under:-

Level	**Sanctioned** (Up to 31-03-2010)	**Staff Strength** **(**As on 31-03-2010**)**
Executive	4702	3942
Non-Executives	6051	5220
Total	**10753**	**9162**

9.2 When asked to state whether any study has been conducted to assess the manpower requirement of the Company, POWERGRID in a written reply stated as under:-

> "Many studies have been conducted to assess the manpower requirement of the Company from time to time. In the initial years of operation, manpower norms of NTPC had been adopted. Subsequently "National Productivity Council" carried out detailed study and recommended manning norms. Further, manpower norms were reviewed on the basis of C&L recommendations for 3-tier structure. Later, HR Consultant (Sh.A.I.Bunet) recommendations were implemented in 2003-04. A committee of senior executives also reviewed the manpower for operation and maintenance of transmission systems in the year 2007. The manpower norms are being followed as guidelines to assess manpower requirement in POWERGRID. As per the HR Budget 2009-10, there is no overstaffing in the company."

9.3 As regards the steps taken to ensure optimum manpower deployment in the light of this study, POWERGRID in a written reply stated as under:-

> "Based on the recommended manning norms at different points of time by different committees/ agencies, Annual HR Budgets are made to assess the manpower requirement for various works of operations and maintenance and construction of projects. The manpower deployment is maintained at the optimum level matching with the organization requirements."

9.4 In reply to a question about engagement of contract labour and the type of work assigned to them by the company, POWERGRID in a written reply stated as under:-

Sl. No.	Type of work	Deployment of Manpower			
		2006	2007	2008	2009
1	Asset Management (Corporate Office)	69	69	70	70
2	Horticulture (Corporate Office)	10	11	11	11
3	Cafeteria (Corporate Office)	46	48	48	48
4	Asset Management (Township)	71	87	87	87
5	Horticulture (Township)	5	19	19	19
6	Cafeteria (MP Hall)	-	22	22	22
7	Security	92	91	91	91

B. SAFETY MEASURES

9.5 When asked to furnish a note on the safety measures taken by the company indicating interalia the number of accidents/ casualties occurred during each of the last three years, POWERGRID in a written reply stated as under:-

> "POWERGRID Transmission network traverses through the length and breadth of the country and also encounter hilly and most difficult terrains. Even the Sub-stations are also located at remote places. POWERGRID deploys various contracting agencies for undertaking transmission line/ sub-station construction works. Majority of accidents have occurred during construction of transmission lines and sub station where contractors' personnel are involved**."**
>
> **Status of Accidents in POWERGRID during past years (FY 2006-07 to FY 2009-10) is detailed below:**

Financial Year	Fatal Accidents	Non Fatal Accidents	Persons affected Fatal (death)	Persons affected Non fatal (injured)
2006-07	24	--	29	6
2007-08	18	0	20	12
2008-09	8	1	11	10
2009-10	11	4	16	15
TOTAL	61	5	**76**	**43**

9.6 The Committee observed that fatal accidents from 2006-07 to 2009-10 have come down from 24 numbers to 11 numbers, but fatal deaths in 2009-10 have gone up to 16. In this regard, when asked whether any specific programme for On Job Training for those workers deputed in the field has been formulated, Power Grid in a post-evidence reply stated as under:-

> "Most of the accidents have occurred during construction of transmission lines where workers of the contractors / sub contractor are involved. To take care for this Contractor Safety Plan have been introduced in the Bid document where in special clauses related to training have also been incorporated. The Contractor's Supervisor shall brief the workers daily before start of work about safety requirement and warn about imminent dangers and precautions to be taken against the imminent dangers (Daily Safety Drill). POWERGRID organizes regular safety training programs for POWERGRID personnel's;

apart from above efforts are being made by POWERGRID to impart training to contactor's workmen responsible for execution of POWERGRID works. b) POWERGRID is having its safety manual and it stipulates safety measures to be adopted by Contractors and POWERGRID. POWERGRID also have safety officers who regularly inspect the sites and do safety audits. Further Contractor's Safety Officer visits the sites and conducts Safety audits. These facilitates to improve and enrich the course and training inputs of the ITI students for providing them better insight to POWERGRID tasks."

C. COMPENSATION PROVISIONS

9.7 When asked about the mechanism put in place for payment of compensation to contract labourers and employees of POWERGRID, POWERGRID in a written reply stated as under:-

"Proper safety measures are taken care of at all locations of POWERGRID and provision for payment of compensation to contract labour and employees of POWERGRID exists as below:

Provisions for compensation in the event of an accident

The Contract Labor engaged by the contractor working for POWERGRID is covered under the provisions for Workmen Compensation Act 1923 and the due compensation prescribed under the Act is paid, to the contract labor or his dependent, in the event of an accident. Over and above the statutory requirement mentioned above, POWERGRID has now introduced more stringent stipulations in their contract conditions. In the event of death, contractors are responsible for payment of a sum as indicated below to be deposited with the employer, which will be passed on by the Employer to such person or next to kith and kin of the deceased.

a	Fatal injury or accident causing death	Rs.10,00,000/- per person
b	Major injuries or accident causing 25% or more permanent disablement	Rs.1,00,000/- per person

In case the contractor does not deposit the above mentioned amount with employer, such amount are recovered by employer from the amount due or becoming due to the contractor under the contract or any other on going contract. In case of any mishap as a result of an accident in the course of employment, POWERGRID employee or his family will be extended the benefits admissible under the POWERGRID rules which inter-alia includes special disability leave, benefits under Group Personal Accident Insurance, Additional Group Personal Accident Insurance (Hotline) etc."

9.8 In reply to a specific question about sharing of responsibility between POWERGRID and private players (Contractors) in this regard, POWERGRID in a post-evidence reply stated as under:-

“POWERGRID gets its construction activities done through turnkey contractors and does not recruit manpower for the same. Once work is completed the operation activities are looked after by POWERGRID. The contracts have inbuilt clauses to ensure compliance to safety norms by contractor. But some times unfortunate accidents take place in remote areas due to work exigencies, negligence or unskilled manpower during construction activities by contractor personnel. Compensation is being paid to the deceased family as per Workmen Compensation Act 1923. POWERGRID imposes a penalty of Rs. 10,00,000/- on contractor and the same is deducted from his bill and paid to the family of the deceased apart from the compensation payable as per act. POWERGRID takes stock of such incidents and meeting are held at highest levels with contracting agency executing the work for redressal and strict adherence of safety norms.”

CHAPTER-X

GENERAL

10.1 In a written note furnished to the Committee, POWERGRID has made the following suggestions:

> **"Mega power project status to transmission system associated with mega generation projects-** Deemed Export Benefit under EXIM Policy, Mega and Ultra Mega Power Generation Projects are enjoying deemed export benefit on investment in hydro/thermal generation projects of capacity of more than 700MW/ 1000MW respectively (specified states at 350/700 MW), whereas associated power transmission projects for the said Mega and Ultra Mega Power Generation Projects are not getting such benefits.
> **Suggestion**- In order to reduce the project costs which will ultimately benefit the consumer and therefore the economy, transmission system associated with these types of projects may be treated as Mega Power Projects and at par with Mega Generation Projects for extending Deemed Export Benefits.
>
> **Transmission Lines Connecting SAARC Countries- SEZ status Suggestion-**POWERGRID is laying transmission lines connecting SAARC countries. All investments in such projects may be treated at par with as SEZ for granting of tax benefits.
>
> **Tax Deducted at sources(TDS) under Chapter XVII of the Income Tax Act on Power Transmission:**
>
> Transmission of power is not specifically included for deduction TDS under Chapter XVII of the Income Tax Act 1961. In order to deduct TDS at 10% the Income Tax Authorities are interpreting the power transmission as "Fees for Professional and Technical Service" under Section 194J of the Income Tax Act 1961 with retrospective effect from 2008 onwards and taking coercive action against the SEBs/State Utilities who are not deducting TDS u/s 194J of the Income Tax Act 1961. Further Central Electricity Regulatory Commission (CERC) has appointed POWERGRID as nodal agency for short term and long term open access for using available transmission infrastructure effectively in the country. As per direction, POWERGRID collects Transmission and RLDCs Charges on behalf of SEBs/State Utilities. This unprecedented action has affected the cash flow of the Corporation.
>
> **Suggestion**: Clarification may be issued stating that Power Transmission is not covered under Chapter XVII of the Income Tax Act 1961 and instruction to the Income Tax Authorities may be issued stating that no action be taken against SEBs/State Utilities for not deducting TDS under the Income Tax Act.

10.2 The Committee observed that the Regional Head Quarters at NER/NR-II/WR-II have not been selected on the basis of number of Sub-station/Operating Transmission line in that Region viz. in Assam (NER), Bhopal, MP(WR-II), Chandigarh (NR-II). In this regard, when asked to explain the reasons therefore and

the basis of selection of Regional Headquarter, the POWERGRID in a post evidence reply furnished the following**: -**

> With commencement of commercial operation in 1992-93, POWERGRID adopted Regional Organization Structure in line with the organization of Regional Grid System in power sector and accordingly five Regions were formed initially. When the asset transfer from various central generating stations (CGS) was completed and POWERGRID started functioning as a commercial entity, the erstwhile locations functioning as headquarters within CGS were not disturbed so as to facilitate better coordination. Further during initial period POWERGRID was more focused to build up the company and avoid extra expenditure towards asset formation in terms of office building, furniture and fixtures etc. Accordingly, Regional Headquarters of North Eastern Region was formed at Shillong as the Head quarter of North Eastern Electric Power Corporation (NEEPCO) was at Shillong. Subsequently, keeping in view the size and the geographical spread of Transmission system, Regions were re-organized into separate administrative entities. Regional Headquarters of Northern Region-II was formed at Jammu, since lot of NHPC area was transferred to POWERGRID along with asset transfer including land for office and residential building whereas at Chandigarh a new asset would have to be created whereas the land available at Jammu would have gone waste. Regional Headquarters of Western Region-II was formed at Vadodara, as it was considered as load centre of Western Region-II. A number of Mega power plants were envisaged in state of Gujarat and lot of works for private and government coastal imports works may also come up. The basis of selection during re-organization of Regions and selection of Regional Headquarters is generally based on Transmission Lines, no. of substations under O&M, no. of upcoming projects, expected growth of load, load centres, proximity with the administrative centres, etc. No, POWERGRID is not facing any problems due to locations of its Regional Headquarters.

PART-II

RECOMMENDATIONS AND OBSERVATIONS OF THE COMMITTEE

INTRODUCTORY

Power Grid Corporation of India Limited (POWERGRID) was incorporated on October 23, 1989 under the Companies Act, 1956 by the Government of India for the purpose of transmitting bulk power from Central Generating Stations to load centers within and across the five main electricity regions of the country . The Company was notified as Central Transmission Utility (CTU) in 1998 with the mandate for planning, co-ordination, supervision and control over complete Inter-State transmission system. Subsequently, 'Navratna' status has also been conferred upon the Company by Government of India in May'2008. Although the Memorandum of Understanding (MOU) rating of the company has consistently been in the highest bracket since signing of its first MOU with Ministry of Power, the Committee have undertaken examination of certain aspects relating to working of POWERGRID in view of the role this company is expected to play in providing reliable and coordinated development of power transmission network in the country keeping pace with growing power generation capacities planned for execution both in public and private sector during the 11th and 12th Five Year Plan period. The Committee have dealt with some such aspects in succeeding paragraphs of this Report.

RECOMMENDATION NO. 1

TRANSMISSION PROJECTS

The Committee have been informed that Government has planned power generation to the extent of about 78000 MW and 1, 00,000 MW during the 11th and 12th Five Year Plan respectively and a number of power projects with large generation capacity are to be established at diverse places besides simultaneous capacity generation addition programs. During evidence, the Secretary, Ministry of Power deposed: "Today, the transmission capacity development is taking place faster and better than generation capacity addition." The Committee are not inclined to accept this averment made by the Secretary, Ministry of Power as the scrutiny of the information furnished by the POWERGRID brings out that a number of transmission projects undertaken by the company have been plagued with delays due to one reason or the other with the result that even the implementation schedule of some of the envisaged transmission projects is lagging behind the targeted dates. Although a perspective transmission plan is stated to have been evolved for strengthening the regional grids and enhance the inter regional power transfer capacity of National Grid, the Committee are constrained to observe and assert that the pace of implementation of transmission projects by POWERGRID will have to be accelerated matching with the ambitious power generation programs formulated for execution during the 11th and 12th Five Year Plan period. The Committee, therefore, recommend that the Government should accord high priority to timely execution of transmission projects and take concrete action to remove bottlenecks causing delays in implementation

of such projects by POWERGRID. The Committee would like to be apprised of the precise steps taken by the government in this regard.

RECOMMENDATION NO. 2

PRIVATE SECTOR PARTICIPATION IN TRANSMISSION

According to Ministry of Power, private investors have an important role to play in the power sector growth. Further the stipulations made under section 63 of Electricity Act 2003 provide impetus to the participation of private sector in generation and transmission. The Committee have been informed that pursuant to issuance of guidelines by the Ministry of Power for encouraging competition in development of transmission projects and also guidelines for tariff based competitive bidding for transmission services, an empowered committee constituted by the Government identified certain transmission works for implementation by private sector during 11th and 12th Plan period. Nevertheless the available information before the Committee, does not in the Committee's view bring out a clear picture *vis-a-vis* the criteria adopted by the empowered committee for selection of such projects and lines /sub-stations for execution through private sector participation in transmission of power. The Committee would, therefore, like to be apprised in clear terms the factors taken into account and the methodology adopted by the empowered committee for selection of transmission projects to be taken up through private participation.

The Committee also feel that the role of a public sector enterprise like POWERGRID which has registered consistent growth over the years as largest transmission utility in the country and which has excellent rating, should not in any manner be undermined in the wake of private sector participation in power generation and transmission network. While

emphasizing the need for ensuring transparency and competitiveness in power sector to protect the interests of the consumers, the Committee would like to emphatically hasten to caution the Ministry of Power in the matter of venturing into the domain of private sector participation in a sensitive area. Private Sector Participation in transmission network should be undertaken in a phased manner by executing pilot projects in specific areas. Needless to say that a subsequent review of the performance of such pilot projects will go a long way in determining the efficacy of private sector participation in augmentation of transmission network matching with planned power generation in the country.

RECOMMENDATION NO. 3

POSOCO

The Committee have been informed that in accordance with the provisions of the Electricity Act 2003 and the National Electricity Policy, the Government reviewed the arrangement of Regional Load Dispatch Centres and National Load Dispatch Centre functioning as part of POWERGRID and decided to set up a wholly owned subsidiary company of POWERGRID responsible for independent system operation with separate accounting and board structure. Accordingly, POWERGRID incorporated Power System Operation Company (POSOCO) as its subsidiary on 20th March 2009. Elaborating on the rationale for creation of POSOCO, the Secretary, Ministry of Power deposed during evidence that POWERGRID is largely performing two functions, one being construction of lines/substations etc., and the other being dispatch of electricity. While POWERGRID would carry on with major construction operations, its subsidiary POSOCO would function as an independent authority to oversee the operations of dispatch of electricity. The Secretary, Ministry of Power further clarified that the function of dispatch of electricity was earlier discharged by Central Electricity Authority before the same was assigned to POWERGRID where this function is being performed by an arm of POWERGRID which has now been carved out as a subsidiary company. In the light of the fact that POSOCO would be made functional immediately after National Load Dispatch Centre and Regional Load Dispatch Centres are transferred to it, the Committee strongly recommend that appropriate and timely steps should be taken to lay down clear rules and guidelines for independent system operations before POSOCO starts functioning. The Committee enjoin the Government to take appropriate steps

with a view to ensure that there is no conflict or overlapping of authority between POWERGRID and POSOCO.

Considering the fact that POSOCO will be gradually made independent from POWERGRID and will continue to function as subsidiary of POWERGRID only for five years, the Committee desire the Government to take appropriate measures to ensure that POWERGRID is adequately compensated for the assets base provided by it in formation of POSOCO after the same is made independent.

RECOMMENDATION NO. 4

INTEGRATED POWER TRANSMISSION GRID

The Committee note that the existing inter-regional transmission capacity of about 20800 MW of POWERGRID connects northern, western, eastern and north-eastern regions synchronously operating as a single grid and the southern region is interconnected with a single grid through asynchronous HVDC links. The Committee have been informed that synchronous inter-connection of Southern Region with rest of the all India Grid is planned to be achieved by 2014-15 after commissioning of Krishnapatnam UMPP and 765 kV Raichur - Solapur line. The Committee recommend that the Government should rev up the implementing agencies to execute both the projects within the stipulated timeframe so that a synchronously integrated Grid is available for inter regional power transfer throughout the country.

RECOMMENDATION NO. 5

RIGHT OF WAY PROBLEMS

The Committee note with concern that POWERGRID has not been able to complete and commission some of its power transmission projects as per schedule. The Committee have been informed by POWERGRID that the main reason for delay in completion of these projects is attributable to the constraints being experienced in acquiring right of way which includes getting forest clearances etc., from Statutory Authorities. The process of obtaining such clearances has always involved a tortuous procedure with a number of official channels at state(s) and central government levels in terms of Forest (Conservation) Act 1980 and seeking of no objection certificates from concerned gram sabhas under Forest Rights Act 2006. According to the Ministry of Power, the following initiatives have been taken with a view to minimizing right of way requirements:

- **exploring new technologies like hybrid system comprising of HVDC and EHVAC system,**
- **compact towers and extra high towers with multi circuits,**
- **upgrading and uprating of existing transmission corridors etc.**
- **taking up the matter of delay in execution with state administration at the highest level on case to case basis; and**
- **organizing meetings between Secretary (Power) and Secretary (Environment and Forest) on regular basis to expedite the issues on environment and forest clearances. The Committee feel that the mismatch between demand and supply of power in the country can be narrowed down only when the hindrances coming in the way of power**

projects under implementation are overcome in a timely manner. Now that the Government is encouraging private sector participation in transmission network projects, the Committee can very well forsee that this problem of right of way is likely to aggravate in future. The Committee, accordingly, recommend that an institutionalized mechanism involving all concerned agencies / stakeholders should be evolved with a view to removing the difficulties of recurring nature being encountered in timely execution of power projects so as to ensure that all such projects are implemented in time and in a cost effective manner to the best advantage of the country.

Yet another difficulty stated to be encountered by POWERGRID relates to the process of land acquisition besides general resistance on rate of compensation from the land owners both on the countryside and the urban areas. Although POWERGRID follows provisions of Land Acquisition Act 1894 as amended in 1984 and has also adopted "Social Entitlement Framework" based on National Resettlement and Rehabilitation Policies of 2003 and 2007, the Committee are of considered view that this problem needs to be addressed in a right perspective. They, therefore, recommend that the Government should undertake a review of the relevant provisions of the Land Acquisition Act to facilitate smooth land acquisition for projects of national importance in the light of the present day scenario and bring about suitable amendments giving due consideration to the legitimate expectations of the land owners who are made to part with their land holdings for national cause.

RECOMMENDATION NO. 6

TRANSMISSION AND DISTRIBUTION LOSSES

The Committee's examination has revealed that the transmission and distribution (T&D) loss in the country during the year 2006 were as high as 27.20% of the total power available for sale as against the world's average of 8.58%.Since the T&D loss was not able to reflect all the losses, a concept of Aggregate Technical and Commercial (AT&C) loss was introduced in 2001-02 to assess total losses in the power network. According to the information made available to the Committee, the percentage of AT&C loss stood at 28.44 at the national level. While the states like Manipur, Jammu & Kashmir and Madhya Pradesh reported astronomically high percentage of such losses to the extent of 81.01, 69.05 and 61.05 respectively, the percentage of such losses in the states of Himachal Pradesh, Andhra Pradesh and Tamil Nadu stood as low as 12.85, 12.99 and 15.33 respectively . The Committee have been informed that while the prime responsibility for reigning in financial losses of distribution utilities lies with State Governments, the Central Government has launched Restructured Accelerated Power Development Reform Programme (R-APDRP) in July 2008 with an objective of reducing AT&C losses to 15%. While appreciating the initiative taken by the Ministry in this regard, the Committee require the Ministry of Power to formulate appropriate strategies to make use of experiences of better performing states in those states where the AT&C losses are in the highest brackets. The Committee also recommend that the Ministry of Power should keep a strict vigil over the progress of Restructured Accelerated Power Development Reform Programme.

RECOMMENDATION NO. 7

BOARD OF DIRECTORS

The Committee note that seven Independent Directors are required to be appointed in the Board of POWER GRID in accordance with the guidelines on Corporate Governance issued by the Department of Public Enterprises. However, the company has presently only three Independent Directors as the tenure of four Independent Directors has since expired on 9th July, 2010. Although the appointment of four Independent Directors in POWER GRID is stated to be under process, the Committee are constrained to observe that no timely action was taken by the Government to appoint these Independent Directors. The Committee are of the considered view that the Board of the company will not be able to effectively discharge its functions in the absence of Independent directors whose contribution is stated to be helpful in giving direction to policy decisions as well as to overall functioning of the Company. The Committee, therefore, recommend emphatically that all out efforts should be made by the Government for filling up the vacancies of Independent Directors on the Boards of POWERGRID without any loss of time. The Committee further recommend that an appropriate system should be put in place to ensure timely filling-up of the anticipated vacancies in the Boards of Central Public Sector Enterprises.

RECOMMENDATION NO. 8

DIRECTOR'S SHAREHOLDING

The Committee note that one of the independent directors in the Board of POWERGRID has disclosed holding of 1, 25,000 equity shares of the Company in individual capacity as on 31st March 2009. Since the POWERGRID Board has laid down " Code of Conduct for prevention of Insider Trading" in pursuance of the Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations1992, the Committee would like to be apprised of the manner in which such a large shareholding of the Company was acquired by an Independent Director and the circumstances under which he was permitted for such an acquisition by Compliance Officer. The Committee also desire the management of POWERGRID to examine the ethical and legal implications of such share transactions by an individual while working on the Board of the company as an Independent Director.

RECOMMENDATION NO. 9

OUTSTANDING DUES

The Committee note that the outstanding dues pertaining to erstwhile Delhi Electric Supply Undertaking period amounting to Rs. 57.79 crore are payable to POWERGRID. This amount has swelled to Rs. 96.40 crore as on 31st March, 2010 on account of overdue interest. The Committee have been informed that this matter stands referred to the Group of Ministers comprising the Minister of Power, the Minister of Home Affairs, the Minister of Science and Technology and Earth Sciences in consultation with the Chief Minister of Delhi. The Committee feel that this long impending issue needs a prompt consideration by the Government to the best financial interest of the Company.

RECOMMENDATION NO. 10

SAFETY OF TRANSMISSION LINE WORKERS

The Committee feel that safety of transmission line workers is one of the key and pressing areas of concern. According to POWERGRID, the numbers of fatal and non fatal accidents during the years 2006-07 to 2009-10 are 61 and 5 respectively and the same resulted in 76 casualties besides injury to 43 persons. The majority of these accidents is stated to have occurred during construction of transmission lines and sub-station where contractors' personnel were involved. The Committee have been informed that the causes of accidents in construction and transmission lines are significantly high due to the cumbersome nature of the works executed and that proper safety measures are taken care of at all locations. It has also been stated that besides ensuring payment of compensation under the Workmen Compensation Act 1923, POWERGRID has also taken a number of steps to enhance safety of transmission line workers such as introduction of Contractors' Safety Plan in the Bid document, Daily Safety Drill, organizing regular safety transmission programmes for regular and casual workers, Safety Audit etc. The Committee would like to categorically assert that ensuring safety of workers of any PSU is a sine qua non for its very credibility. While taking due note of the initiatives taken by the Company to ensure safety of transmission line workers, the Committee recommend that in order to minimize occurrence of accidents in transmission network the following measures should also be undertaken by POWERGRID, namely:-

(i) More emphasis be laid on training programmes for workers responsible for execution of Power Grid works.

(ii) Modern technologies in construction and operation of transmission lines be introduced with a view to reducing the manual operations to the barest minimum and effective steps be taken to familiarize the workers with new technologies as and when introduced.

(iii) Systems be put in place to ensure that the recommendations of the safety officers on various safety aspects are implemented within the prescribed time limit in letter and spirit; and

(iv) Stringent punitive action be taken against those who are found responsible for accidents due to negligence on their part.

RECOMMENDATION NO. 11

MEGA POWER PROJECT STATUS TO TRANSMISSION SYSTEM

The Committee have been informed that the Government has been extending Deemed Export Benefit under EXIM Policy to Mega and Ultra Mega Power Generation Projects on investment in hydro and thermal generation projects of capacity of more than 700MW and1000 MW respectively. However, these benefits are not being extended to the power transmission projects associated with such Mega and Ultra Mega Power Generation Projects. Since execution of transmission projects form an integral part of the accelerated development planned in power sector, the Committee are of firm view that Deemed Export Benefits should also be extended to associated power transmission projects so as to reduce the transmission project costs to the ultimate benefit of the consumer. The Committee, therefore, recommend that Ministry of Power should take up this matter with the appropriate authority at the earliest.

RECOMMENDATION NO. 12

TRANSMISSION ASSETS

The Committee's examination of Annual Report 2008-09 of the company brings out that the Regional Load Dispatch Centres (RLDCs) of Central Electricity Authority were transferred to POWERGRID during the years 1994 to 1996 as per orders of the Ministry of Power and these assets of RLDCs are being used by the company pending transfer of ownership and determination of cost of assets so taken over. Meanwhile POWERGRID has also incurred an expenditure of Rs. 2000 crore on modernization of all the RLDCs. While expressing their displeasure over unduly longer time being taken in settling such an important matter having direct bearing on the assets base of the company, the Committee would like to exhort POWERGRID to expeditiously take up this issue with the Ministry of Power particularly when action for transfer of operation of these RLDCs to the newly created subsidiary of POWERGRID has already been initiated giving a new dimension to the structure of the company.

New Delhi:
6th December, 2010
15 Agrahayana, 1932 (Saka)

SHRI V. KISHORE CHANDRA S. DEO
Chairman
Committee on Public Undertakings

Annexure-I

DETAILS OF PROJECTS COMMISSIONED DURING THE LAST THREE YEARS (FY 2006-07 TO FY 2009-10)

NORTHERN REGION SYSTEM STRENGTHENING SCHEME - V

- → Project Cost Rs. 721.25 crore
- → Revised approved Cost Rs. 669.484 Cr.
- → Completion Cost (Ant.) Rs. 669.484 Cr.
- → Commissioning schedule Jun'09
- → Actual Completion Mar.'09 to Mar.'10

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Out of three elements, one commissioned within schedule. Completion of 400 KV BhiwadI - Agra Line affected due to its 03 location were under hold in forest area in Alwar district forest. Soon after getting the clearance Line was commissioned in Aug.'09. Completion of 400 KV D/C Bhiwadi – Moga line affected due to ROW problems & matter was sub-judice. Line was commissioned in Mar.'10.

SYSTEM STRENGTHENING IN SOUTH-WESTERN PART OF NORTHERN GRID (PART-B) SCHEME

- → Project Cost Rs. 150.26 crore
- → Revised approved Cost Under preparation
- → Completion Cost (Ant.) Under Preparation
- → Commissioning schedule Oct.'09
- → Actual Completion Mar.'10

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Completion of this scheme affected due to following reasons:-

- → Delay in forest clearance as line transverse through Kumbhalgarh Wild Life Sanctuary. Final Forest clearance received on 16.03.2010.
- → Line was diverted after the intervention of Indian Army as originally line was passing near their Ammunition depot.

NORTHERN REGION SYSTEM STRENGTHENING SCHEME - VIII

→ Project Cost Rs. 220.69 Crore
→ Revised approved Cost Not Required
→ Completion Cost (Ant.) Under Preparation
→ Commissioning schedule Dec.'09
→ Actual Completion Aug.'09 / Mar.'10

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

All elements commissioned before schedule except one ICT at Bhinmal. Due to delay in supply of ICT, erection got affected. Soon after the receipt of ICT, it was charged in Mar.'10.

NORTHERN REGION SYSTEM STRENGTHENING SCHEME - VI

→ Project Cost Rs. 186.95 crore
→ Revised approved Cost Under Preparation
→ Completion Cost (Ant.) Under Preparation
→ Commissioning schedule July.09
→ Actual Completion Mar.'10*
* Except one ICT.

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Completion of this scheme affected due to delay in forest clearance. Final Forest clearance received on 26.03.2010. Line completed in Mar.'10 but could not commissioned due to non-readiness of 220 KV downstream by HVPNL.

Supply / erection of balance ICT expected by Dec.'10.

SIPAT - II SUPPLEMENTARY TRANS. SYSTEM

→ Project Cost Rs. 813.67 crore
→ Revised approved Cost 1049.10 Crore
→ Completion Cost (Ant.) Under Preparation
→ Commissioning schedule June.'08
→ Actual Completion Mar'09 to Mar.'10

COMPARISON OF REVISED COST ESTIMATE WITH THE APPROVED COST:

Variation on account of:	Variation (Rs. in Crore)	Variation over approved Cost (%)
Price Variation	149.41	18.36 %
Land & Compensation	(-)1.10	(-) 0.13 %
Variation in Quantities of approved Items	(-) 36.05	(-) 4.43 %
a) FERV on revaluation of loan drawn in foreign currency	99.32	
b) FERV of contracts	(-)14.73	
Sub- Total (FERV)	**84.59**	**10.40 %**
Other Reasons (Centages and IDC)	38.58	4.74 %
TOTAL	**235.43**	**28.93 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Out of three two elements (765KV S/C Seoni - Wardha line, 400KV D/C Wardha - Akola line) commissioned in Mar.'09 and balance one element 400 KV D/C Akola - Aurangabad Line test charged in Mar.'10.

Majority of the packages have been covered under the PSDP- III loan of World Bank. POWERGRID had taken advance procurement action for the subject packages covered under the aforesaid loan. The draft bidding documents for the subject packages were furnished to World Bank progressively from April, 05 to Nov, 05. However, for some packages the No Objection' to the bidding documents from the World Bank could be obtained after 14 months Further, after the award of contracts, there has been delay in implementation of substation packages by BHEL leading to delay in completion of Wardha Substation as well as Akola & Aurangabad bay extensions.

It may however be submitted that POWERGRID has already implemented the Transmission Systems for evacuation of Power from Sipat I and Sipat II projects. However, till date none of the three units for Sipat- I Generation projects have been commissioned by NTPC and Sipat II Generation project was commissioned by NTPC in June 2008, with considerable delay. Thus, on account of delay in commissioning of Sipat- I generation project of NTPC, the associated transmission network already fully commissioned by POWERGRID in **March 2008** for evacuation of power from the same is also available to meet the requirement of Sipat- II project.

NEYVELLI TS-II TRANSMISSION SYSTEM

→ Project Cost — Rs. 691.83 crore
→ Revised approved Cost — Rs. 962.39 Cr.
→ Completion Cost (Ant.) — Under Preparation
→ Commissioning schedule — Dec.'07
→ Actual Completion — Partly commissioned in **July 09** & **Aug 09** respectively with the consent of constituents. Balance progressively upto **Aug, 10** (Matching with 1st unit of Generation Project).

COMPARISON OF REVISED COST ESTIMATE WITH THE APPROVED COST:

Sr. No.	Variation on account of:	Variation (Rs. In Crore)	Variation over approved Cost (%)
(i)	Price Variation	193.34	27.95 %
(ii)	Addition/ Deletion	(-) 3.74	(-)0.54 %
(iii)	Land & Compensation	11.34	1.64 %
(iv)	Variation in Quantities of approved Items	(-) 48.20	(-) 6.97 %
(v)	a) FERV due to revaluation of loan drew in foreign currency	37.18	
	b) FERV of contracts	(-) 0.61	
	Sub- Total (FERV)	**36.57**	**5.29 %**
(vi)	Other Reasons (Centages and IDC)	81.25	11.74 %
	TOTAL	**270.56**	**39.11 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Name of Line	Actual Completion	Actual date of Commissioning
Neyveli (Expn.) Sw. Yd.- Neyveli (existing) Sw. Yd. 400 KV 2xS/C line	Mar'09	Line commissioned on 31.08.09.
400 KV D/C Neyveli TS -II - Pugalur line	Mar'09	Line commissioned on 31.08.09.

400KV D/C Pugalur - Madurai line	Mar'09	Line commissioned in Mar'09
400 KV D/C Udhamalpet - Arasur line	Mar'10	Line completed & ready for commissioning.
LILO of 400KV S/C Neyveli - Sriperumbadur line at Pondicherry	Mar'10	Line completed. Commissioning held-up due to non-readiness of down stream 220KV lines of the State Govt.
LILO of 400KV S/C Ramagundam - Khammam line at Warangal	July'09	Commissioned on 28.07.09.

Out of six transmission lines, three lines completed in Mar.'09, one in July.'09 & balance two lines in Mar.'10.

Delay in Commissioning of Generation Project, completion of associated lines / substations slow down to maximum extent possible to match with commissioning of Generation projects. However, part elements commissioned with the consent of constituents

SYSTEM STRENGTHENING- VII OF SOUTHERN REGIONAL GRID

- → Project Cost — Rs.279.30 Crore
- → Revised approved Cost — Rs.325.09 Cr.
- → Completion Cost (Ant.) — July 09 to June 10
- → Commissioning schedule — July, 2009
- → Actual Completion — LILO of one ckt of Madurai - Trichy 400KV D/C Line at Karaikudi along with Karaikudi Substation commissioned in July.'09. LILO of one ckt of Talguppa - Neelmangala 400KV D/C Line at Hassan along with Hassan Substation completed in Mar.10 but commissioned in May.10 due to delay in readiness of downstream line by KPTCL

COMPARISON OF REVISED COST ESTIMATE WITH THE APPROVED COST:

Sr. No.	Variation on account of:	Variation (Rs. In Crore)	Variation over approved Cost (%)
(i)	Price Variation	36.87	13.21 %
(ii)	Variation in Quantities of Approved Items	(-) 4.04	(-) 1.45 %

Sr. No.	Variation on account of:	Variation (Rs. In Crore)	Variation over approved Cost (%)
(iii)	Land & compensation	15.29	5.48 %
(iv)	Other Reasons (IEDC & IDC)	(-)2.33	(-) 0.84 %
	TOTAL	**45.79**	**16.40 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

LILO of one ckt of Madurai - Trichy 400KV D/C Line at Karaikudi along with Karaikudi Substation :- No time over run.

LILO of one ckt of Talguppa - Neelmangala 400KV D/C Line at Hassan along with Hassan Substation :- The approved completion schedule for LILO of one ckt of Talguppa - Neelmangala 400KV D/C Line at Hassan along with Hassan Substation is July, 2009. However, due to delay in readiness of 220kV downstream lines by KPTCL, the said assets could not be commissioned as per the approved schedule. Meanwhile, in view of anticipated commissioning of 220kV downstream network in June 2010, said LILO line along with bays & Bus Reactor have been commissioned in May 10 (DOCO- 01.06.10) while the ICTs along with bays is likely to be commissioned in June 10, matching with the commissioning of 220kV downstream lines by KPTCL

NEELMANGLA – MYSORE LINE

- → Project Cost Rs. 154.93 Crore
- → Completion Cost Rs 147.14 Crore
- → Commissioning schedule July.'06
- → Actual Completion April'06

Reason for Delay

No delay

BHADRAWATI- CHANDRAPUR TRANSMISSION SYSTEM

- → Project Cost Rs.33.38 Crore
- → Revised approved Cost Rs.41.09 Crore
- → Completion Cost Rs.41.09 Crore
- → Commissioning schedule March, 2007
- → Actual Completion April, 2006

COMPARISON OF REVISED COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	% Variation
Price Variation	8.67	25.99 %
Variation in Quantities of Approved Items	2.68	8.02 %
Addition/ Deletion (Compensation)	(-) 0.27	(-) 0.81 %
Taxes & Duties (Service Tax)	0.46	1.38 %
Other Reasons (Centages & IDC)	(-) 3.83	(-) 11.47 %
TOTAL	**7.71**	**23.11 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

There is no time over run in this project.

TEHRI TRANSMISSION SYSTEM

- → Project Cost Rs. 421 crore
- → Revised approved Cost Rs.702.29 crore
  Rs.913.84 Cr.
- → Completion Cost Rs.895.67 Crore
- → Commissioning schedule December 2002 / March 2006
- → Actual Completion May.'06

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

Price Variation	4.36	0.62 %
Variation in Quantities of Approved Items	7.64	1.09 %
Addition/Deletion	82.95	11.81 %
Other Reasons (Centages and IDC)	116.60	16.60 %
TOTAL	**211.55**	**30.12 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

The works of 800 KV S/C Tehri – Meerut Transmission Line Circuit I & II stoppage of work in Rajaji National Park by Forest authorities citing the ruling of Hon'ble Supreme Court regarding removal of dead wood from the National

Park adversely affected the progress of work. *However, line was completed ahead of Generation project.*

TALA- SILIGURI TRANSMISSION SYSTEM

- → Project Cost Rs.231.53 Crore
- → Revised approved Cost Rs.287.79 Crore
- → Completion Cost Rs.283.99 Crore
- → Commissioning schedule commissioned matching the commissioning of the first unit of generation project.
- → Actual Completion **June'2006**

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	27.19	11.74 %
Variation in Quantities of Approved Items	16.95	7.32 %
Change in Taxes & Duties	7.98	3.45 %
Other Reasons (Centages & IDC)	4.14	1.79 %
TOTAL	**56.26**	**24.30 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

There is no time over run in this project.

SYSTEM STRENGTHENING SCHEME FOR NORTHERN REGION

- → Project Cost Rs.143.29 Crore
- → Revised approved Cost Rs.154.08 Crore
- → Completion Cost Rs.153.32 Crore
- → Commissioning schedule **August, 2006**
- → Actual Completion **October, 2006**.

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	25.99	18.14 %
Land & Compensation	(-) 4.61	(-) 3.21 %
Variation in Quantities of Approved Items	2.73	1.91%

Change in Taxes & Duties (Service Tax)	3.09	2.15%
Other Reasons (Centages & IDC)	(-)16.42	(-) 11.46 %
TOTAL	**10.79**	**7.53 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Two elements has been commissioned within the approved schedule, while balance third element commissioned in Oct.'06 (delay of 02 months) due to delay in commissioning of 315 MVA Transformer at Bahadurgarh Substation. the earmarked transformer ready for charging at Bahadurgarh S/S was diverted to Mandola S/S due to urgent system requirement .

DULHASTI COMBINED

- → Project Cost Rs. 567.05 crore
- → Completion Cost Rs 543.39 Crore
- → Commissioning schedule July 2006
- → Actual Completion Oct.'06

Reason for Delay

Progress in Line has been affected due to law & order problems in Kashmir area & limited working period..

SYSTEM STRENGTHENING SCHEME FOR EASTERN REGION

- → Project Cost Rs.247.91 Crore
- → Revised approved Cost Rs.336.18 Crore
- → Completion Cost Rs.323.38 Crore
- → Commissioning schedule May, 2006
- → Actual Completion **February'2007**

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	77.58	31.29 %
Variation in Quantities of Approved Items	(-)2.56	(-)1.03 %
Change in Taxes & Duties	16.73	6.75 %
Other Reasons (Centages & IDC)	(-) 3.48	(-) 1.41 %
TOTAL	**88.27**	**35.60 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

- → The reasons for delay in commissioning of line is also attributed to severe law and order problems near Biharsharif end.
- → Further due to due to high flood in Ganga river since June'06, the erection work at 1 no. river crossing tower erection (out of total 08 nos.) in the mid-stream and associated stringing stretch was held up.
- → Land for Subhashgram Sub-Station falls in low lying area requiring earth filling to the extent of 1.5 mtrs and there was shortage in availability of adequate earth in the vicinity. As per Statutory Govt. rules, extraction of earth from private land were prohibited, which coupled with intervening parliamentary elections & monsoon, affected filling work to a great extent thus delaying readiness of leveled land.
- → The shifting of Reactor installed in Farakkar-Jeerat Line at Jeerat Substation of WBSEB got delayed due to non availability of shut down of the said line due to prevailing Power situation in the state during the Puja festival.

SYSTEM STRENGTHENING-III IN SR

- → Project Cost Rs. 284.79 crore
- → Completion Cost Rs 265.29 Crore
- → Commissioning schedule April'07
- → Actual Completion April'07

Reason for Delay

No delay

SYSTEM STRENGTHENING IN SINGRAULI- VINDHYACHAL CORRIDOR

- → Project Cost Rs.17.26 Crore
- → Revised approved Cost Rs.21.79 Crore
- → Completion Cost Rs.19.85 Crore
- → Commissioning schedule Aug, 2006
- → Actual Completion April, 2007

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Time over- run of 08 months due to monsoon flooding at one location & non-availability of shut down from NTPC/ NRLDC. Here it may be mentioned that the towers of 400kV system were located in paddy fields and did not have proper access roads, hence transportation of material to site took much more time than it would have taken in the normal situation.

VINDHYACHAL- KORBA 400KV S/C LINE

- → Project Cost Rs.164.02 Crore
- → Revised approved Cost Rs.212.53 Crore
- → Completion Cost Rs.189.90 Crore
- → Commissioning schedule **February, 2007**
- → Actual Completion **May'2007**

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	38.53	23.49 %
Variation in Quantities of Approved Items	1.72	1.05 %
Addition/ Deletion/ Land & Compensation	10.95	6.68 %
Other Reasons (Centages & IDC)	(-) 2.69	(-) 1.64 %
TOTAL	**48.51**	**29.57 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Due to delay in cutting of trees by Forest authorities, the completion of the work affected.

TRANSMISSION SYSTEM ASSOCIATED WITH VINDHYACHAL- III

- → Project Cost Rs.596.47 Crore
- → Revised approved Cost Rs.689.56 Crore
- → Completion Cost Rs.660.98 Crore
- → Commissioning schedule **July, 2007**
- → Actual Completion **Dec'2007**

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	129.61	21.73 %
Variation in Quantities of Approved Items	(-)19.73	(-)3.31 %
Addition/ Deletion/ Land & Compensation	0.84	0.14 %
Change in Taxes & Duties (Service Tax)	10.90	1.83 %
Other Reasons (Centages & IDC)	(-) 28.53	(-) 4.78 %

TOTAL	**93.09**	**15.61 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

All elements were commissioned with in schedule except 400/220 kV Raigarh Substation (New) along with LILO of Raipur- Rourkela at Raigarh. All erection works were completed by May.'07 but due to unprecedented rains in Orissa & Chhattisgarh areas, site activities got disrupted and as such Testing & Commissioning activities could not be taken up.

UNCHAHAR-III

- → Project Cost Rs. 73.46 crore
- → Completion Cost Rs 59.02 Crore
- → Commissioning schedule May.'08
- → Actual Completion July.'07.'

Reason for Delay

No delay

UPGRADATION OF TRANSFORMER AT TALCHER – KOLAR HVDC

- → Project Cost Rs. 118.33 crore
- → Completion Cost Rs 113.18 Crore
- → Commissioning schedule April'08
- → Actual Completion July'07

Reason for Delay

No delay

220 KV Inter Connector with JSEB in Ranchi S/S

- → Project Cost Rs. 12.48 crore
- → Completion Cost Rs. 11.03Crore
- → Commissioning schedule Aug'07
- → Actual Completion Aug'07

Reason for Delay

No delay

EAST NORTH INTERCONNECTOR & NORTHERN REGION TRANSMISSION SYSTEM ASSOCIATED WITH TALA HEP

- → Project Cost Rs. 881.06 Cr. (POWERGRID)
- → Revised approved Cost Rs. 872.10 Cr. (POWERGRID)
- → Completion Cost Rs.832.55
- → Commissioning schedule July.'2006
- → Actual Completion Aug.'07

POWERGRID's PORTION

	Rs. in Cr.	**% Variation**
Price Variation	(-) 16.22	(-) 1.84%
Increase/ decrease in quantities of approved items	15.47	1.76%
Addition/Deletion	26.58	3.02%
Change in Taxes & Duties	28.73	3.26%
Exchange Rate Variation	11.88	1.35%
Other Reasons (Centages and IDC)	(-) 75.40	(-) 8.56%
TOTAL	**(-) 8.96**	**(-) 1.02%**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

All major elements were commissioned with in schedule except LILO of 400 KV D/C Dadri – Ballabgarh at Maharanibagh. Completion affected due to sever ROW problems in Noida Area. Work was stopped by Noida Authority . After rigorous persuasion, new line route was planned & work implemented by erecting special type of Pole instead of tower.

BINA- NAGDA 400KV D/C LINE

- → Project Cost Rs.266.93 Crore
- → Revised approved Cost Rs.387.80 Crore
- → Completion Cost Rs.353.45 Crore
- → Commissioning schedule March, 2008
- → Actual Completion October'2007

COMPARISON OF REVISED COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	108.41	40.61 %

Addition/ Deletion/ (Compensation)	(-) 1.21	(-) 0.45 %
Taxes & Duties (Service Tax)	4.861.82 %	
Other Reasons (Centages & IDC)	8.813.30 %	
TOTAL 120.87	**45.28 %**	

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

There is no time over run in this project.

TRANSMISSION SYSTEM ASSOCIATED WITH KAHALGAON STAGE-II, PHASE-I

- → Project Cost Rs.1771.93 Crore
- → Revised approved Cost Rs.2752.23 Crore
- → Completion Cost Rs 2688.42 Crore
- → Commissioning schedule **July 2007**
- → Actual Completion **October'2007**

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	810.30	45.73 %
Variation in Quantities of Approved Items	162.11	9.15%
Addition/ Deletion/ Land & Compensation	(-)5.03	(-)0.28 %
Change in Taxes & Duties (Service Tax)	45.77	2.58 %
Other Reasons (Centages and IDC)	(-) 32.85	(-) 1.85 %
TOTAL	**980.30**	**55.32 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Majority of the elements of the project were commissioned within the approved schedule. However for some of the elements there is a minor time over run from 01 month to 03 months mainly due to delay in acquisition of Land and the same were beyond the control of POWERGRID as explained hereunder-

- → Due to late hand-over of land for Balia & Ranchi Switching Station

→ Delay had been reluctance by the land owners to part with their land. Further the works could not be started as local villagers were demanding higher compensation

SYSTEM STRENGTHENING V IN SR

→ Project Cost Rs.92.12 Crore
→ Revised approved Cost Rs.131.80 Crore
→ Completion Cost Rs.108.98.59 Crore
→ Commissioning schedule June, 2007
→ Actual Completion January, 2008

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	39.42	42.79 %
Change in Taxes & Duties (Service Tax)	6.12	6.64 %
Other Reasons (Centages & IDC)	(-)5.86	(-) 6.36 %
TOTAL	**39.68**	**43.07 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

All the elements of the project have been commissioned with a minor delay of 1 to 7 months due to delay in the supplies of Transformers on account of worldwide shortage in the availability of CRGO due to huge demand viz-a-viz limited supplies

AUGMENTATION OF TRANSFORMATION CAPACITY AT MOGA & AMRITSAR

→ Project Cost Rs. 47.28crore
→ Completion Cost Rs39.20 Crore
→ Commissioning schedule Mar.'08
→ Actual Completion Feb.'08

Reason for Delay

No delay

NORTHERN REGION SYSTEM STRENGTHENING- III

- → Project Cost Rs.230.52 Crore
- → Revised approved Cost Rs.326.90 Crore
- → Completion Cost Rs.299.06 Crore
- → Commissioning schedule **March, 2008**
- → Actual Completion **June, 2008**

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

Price Variation	89.51	38.83 %
Preliminary Works/ Land & Compensation	(-)0.92	(-) 0.40 %
Variation in Quantities of Approved Items	0.91	0.39 %
Change in Taxes & Duties (Service Tax)	2.88	1.25 %
Other Reasons (Centages & IDC)	4.00	1.74 %
TOTAL	**96.38**	**41.81 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

All the elements were test charged / commissioned with in schedule except two now ICT at Ludhiana which got commissioned progressively by Jun.'08. Main reason for the said minor delay is due to late handing over of Ludhiana Substation land by 10-11 months due to reluctance of land owners to part with their land who wanted a higher compensation rate.

NORTHERN REGION SYSTEM STRENGTHENING- I

- → Project Cost Rs.271.80 Crore
- → Revised approved Cost Rs.350.84 Crore
- → Completion Cost Rs.351.54 Crore
- → Commissioning schedule **October, 2007**
- → Actual Completion **April'2008**

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	100.89	37.12 %
(a) Addition/ Deletion	(-) 15.26	(-) 5.62 %
(b) Land & Compensation	2.63	0.97%
Sub- Total	**(-)12.63**	**(-)4.65 %**
Variation in Quantities of Approved Items	8.92	3.28%

Change in Taxes & Duties (Service Tax)	0.44	0.16%
Other Reasons (Centages & IDC)	(-)18.58	(-) 6.84 %
TOTAL	**79.04**	**29.08 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

- → Due to severe ROW problems
- → Delay in getting Aviation clearance from Air HQ, New Delhi
- → Delay in obtaining clearance from Railways authorities for Railway X-ing

SYSTEM STRNGTHENING-VI OF SR

- → Project Cost Rs113.73 Crore
- → Revised approved Cost Rs. 126.84 Crore
- → Completion Cost Rs.125.12 Crore
- → Commissioning schedule **Dec.', 2007**
- → Actual Completion **Mar.'2008**

COMPARISON OF REVISED COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	14.59	12.82 %
Variation in Quantities of Approved Items	1.39	1.22 %
Addition/ Deletion/ Crop & PTCC compensation	3.43	3.02 %
Change in Taxes & Duties	0.16	0.14 %
Other Reasons (Centages & IDC)	(-) 6.46	(-) 5.68 %
TOTAL	**13.11**	**11.53 %**

REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

- → Commissioning of LILO line delayed due to delay in completion of bays at Vemagiri by APTRANSCO.

- → Due to failure of a Transformer at Hyderabad Substation there were system constraints in Southern Region necessitating urgent replacement for the failed Transformer

TRANSMISSION SYSTEM ASSOCIATED WITH SIPAT-I

→ Project Cost **Rs.1672.98 Crore**
→ Revised approved Cost **Rs.2331.14 Crore**
→ Completion Cost **2284.97 Crore**
→ Commissioning schedule **February'2007**
→ Actual Completion **April'08**

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	544.39	32.54 %
Variation in Quantities of Approved Items	(-) 4.66	(-) 0.28 %
Land & Compensation	(-) 3.68	(-) 0.22 %
Addition/ Deletion/	37.62	2.25 %
FERV	(-) 16.70	(-) 1.00%
Change in Taxes & Duties	43.79	2.62 %
Other Reasons (Centages & IDC)	57.40	3.43 %
TOTAL	**658.16**	**39.34 %**

REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

→ As per original Investment approval, 400kV D/C Nagda – Dehgam TL was envisaged to be executed through IPTC route. Later stage the implementation of Nagda – Dehgam portion was taken up for execution by POWERGRID directly.

→ There was delay in acquisition of land for Rajgarh substation due to non co-operation of land owners and Law and Order problems.

→ Initially, 765 KV S/C Sipat - Seoni Ckt- II was envisaged to be funded through ADB Loan. Later on funding was changed to domestic this resulted in delay of about two years in award of package.

TRANSMISSION SYSTEM ASSOCIATED WITH TEESTA- V HEP

→ Project Cost Rs.208.75 Crore
→ Revised approved Cost Rs.315.58 Crore
→ Completion Cost Rs.294.63 Crore
→ Commissioning schedule **May 2008**
→ Actual Completion **May, 2008**

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	89.41	42.83 %

Prel. Works/ (Addition/ Deletion)/ Crop, PTCC & Forest Compensation	11.67	5.59 %
Variation in Quantities of Approved Items	(-) 2.60	(-) 1.25 %
Change in Taxes & Duties (Service Tax)	10.05	4.82 %
Other Reasons (Centages and IDC)	(-) 1.70	(-)0.82 %
TOTAL	**106.83**	**51.17 %**

PROJECT IMPLEMENTATION

No time over run

WESTERN REGION SYSTEM STRENGTHENING SCHEME-III

- → Project Cost Rs. 75.65 Crore
- → Completion Cost Rs. 46.67 Crore
- → Commissioning schedule Aug.'08
- → Actual Completion Jun.'08

Reason for Delay

- → No delay

WESTERN REGION SYSTEM STRENGTHENING SCHEME- I

- → Project Cost Rs.199.21 Crore
- → Revised approved Cost Rs.238.00 Crore
- → Completion Cost Rs.241.25 Crore
- → Commissioning schedule November, 2007
- → Actual Completion July, 2008

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	37.74	18.94 %
Variation in Quantities of Approved Items	5.92	2.97 %
Crop & PTCC Compensation	1.15	0.58 %
Change in Taxes & Duties	3.95	1.98 %
Other Reasons (Centages and IDC)	(-)9.97	(-)5.01 %
TOTAL	**38.79**	**19.47 %**

REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

- → Court Cases filed by Lease Holder of Mining Area

- → Site constraint due to insufficient clearance between the Transmission line and capacitor banks in the FSC area
- → Delay in award to ensure sufficient competition for supply of Transformer

WESTERN REGION SYSTEM STRENGTHENING SCHEME-IV

- → Project Cost Rs. 97.22 Crore
- → Completion Cost Rs. 86.23 Crore
- → Commissioning schedule Aug.'08
- → Actual Completion Aug.'08

Reason for Delay

- → No delay

TRANSMISSION SYSTEM ASSOCIATED WITH RAPP-5 & 6

- → Project Cost **499.45 Crore**
- → Revised approved Cost Rs.626.65 Crore
- → Completion Cost (Ant.) Rs.629.99 **Crore**
- → Commissioning schedule **March, 2008**.
- → Actual Completion : **Dec.'2008.** *(Complete ATS commissioned ahead of Gen., which is now ant. Dec.'09)*

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	(143.70)	28.77 %
Land & Compensation	(-) 35.96	(-) 7.20 %
Variation in Quantities of approved Items	(-) 9.53	(-) 1.91 %
Change in Taxes & Duties	18.53	3.71 %
Other Reasons (Centages and IDC)	10.46	2.09 %
TOTAL	**127.20**	**25.47 %**

REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

- → Delay in grant of Environmental / Forest Clearance
- → Diversion of Transformers to other projects to meet urgent System requirement

KAHALGAON STAGE-II, PHASE-II

- → Project Cost Rs.464.02 Crore
- → Revised approved Cost Rs.572.84 Crore
- → Completion Cost Rs. 558.63 Crore
- → Commissioning schedule October, 2007.
- → Actual Completion Dec.'08.

COMPARISON OF REVISED COST ESTIMATE WITH APPROVED COST

	Rs. in Cr.	**% Variation**
Price Variation	105.31	22.70 %
Variation in Quantities of Approved Items	(-)33.05	(-)7.12 %
Addition/ Deletion	(-)1.07	
Crop, PTCC & Forest Compensation	16.75	
Sub- Total	*15.68*	*3.38 %*
FERV	(-) 0.52	(-) 0.11 %
Change in Taxes & Duties	9.81	2.11%
Other Reasons (Centages and IDC)	11.58	2.49 %
TOTAL	**108.82**	**23.45 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Due to delay in getting forest clearance for WR portion (Sipat- Pilki Section) of the line, the project got delayed.

TRANSMISSION SYSTEM ASSOCIATED WITH SIPAT-II

- → Project Cost Rs.601.90 Crore
- → Revised approved Cost Rs.793.51 Crore
- → Completion Cost (Ant.) Rs. 795.91 Crore
- → Commissioning schedule **Aug'07**
- → Actual Completion **December, 2008**

COMPARISON OF PROJECT COST ESTIMATE WITH THE APPROVED COST:

	Rs. in Cr.	**% Variation**
Price Variation	200.38	33.29 %
Variation in Quantities of Approved Items	3.89	0.65 %
Addition/ Deletion/ Land & Compensation	3.67	0.61 %
FERV	(-) 2.38	(-) 0.40 %
Change in Taxes & Duties	10.60	1.76 %

Other Reasons (Centages & IDC)	(-)24.55	(-) 4.08 %
TOTAL	**191.61**	**31.83 %**

PROJECT IMPLEMENTATION / REASONS FOR DELAY IN COMPLETION OF VARIOUS ELEMENTS

Part elements commissioned with in schedule. Some elements of the project there is a time over run of 3 to 16 months respectively from the approved schedule. The reasons for delay in completion of said elements are brought out hereunder:

- → Due to delay in supply of ICTs by BHEL on account of world wide shortage of CRGO owing to huge demand vis-a- vis limited suppliers.
- → Due to diversion of 2nd ICT meant for Bhatapara & Gwalio S/S to other sites to meet urgent system requirement.
- → Rajgarh substation under Sipat-I Transmission System, there was delay in acquisition of land due to non co-operation of land owners and Law and Order problems created by them

- → Since the technology for 765kV substation has been adopted for the first time in POWERGRID and in the Country

SYSTEM STRENGTHENING IN SOUTH WEST PART OF NORTHERN GRID (Part-A)

- → Project Cost Rs. 381.28 Crore
- → Completion Cost Rs.310.59. Crore
- → Commissioning schedule Apr.'09
- → Actual Completion Jan.'09

Reason for Delay

- → No delay

TRANSMISSION SYSTEM ASSOCIATED WITH NORTH WEST CORRIDOR

- → Project Cost Rs. 483.10 crore
- → Revised approved Cost Under preparation
- → Completion Cost (Ant.) To be freeze
- → Commissioning schedule Jan.'09
- → Actual Completion Mar.'09

Reason for Delay

- → Completion of 400 KV D/C Zerda – Kankoroli Line was delayed due to severe ROW problems in some of the locations & matter was subjudice.
- → Delay in forest clearance.

TRANSMISSION SYSTEM ASSOCIATED WITH SEWA-III

→ Project Cost Rs. 98.47 crore
→ Revised approved Cost Under preparation
→ Completion Cost (Ant.) To be freeze
→ Commissioning schedule May.'08
→ Actual Completion Mar.'09*

* 132KV D/C Sewa-II–Hiranagar & 132KV D/C Sewa-II–Mahanpur Tr. Line completed in Mar'09 ahead of generation project. One circuit of both the lines has been commissioned. Commissioning of Generation Project is now anticipated by Dec'09.

Reason for Delay

→ Work of D/C Sewa-II–Hiranagar & 132KV D/C Sewa-II–Mahanpur Tr. Line was slow down to extent possible to match with commissioning of Generation projects.
→ Only stringing of both Ckts of Mahanpur-Kathua 132KV line was in the scope of POWERGRID. Foundation & tower erection were to be done by PDD, J&K. However PDD, J&K could not complete their scope. MoU for taking over the above line by POWERGRID was signed in Jun.09.

SYSTEM STRENGTHENING IN ROORKEE AREA

→ Project Cost Rs. 109.95crore
→ Revised approved Cost Under preparation
→ Completion Cost (Ant.) To be freeze
→ Commissioning schedule May.'09
→ Actual Completion Mar.'09*
* Except one Transformer at Roorkee

Reason for Delay

→ Due to diversion of 2nd ICT meant for Roorkree S/S to other sites to meet urgent system requirement. Now 2nd ICT at Roorkee is anticipated to be received at site by Dec.'09 & commissioning by Feb.'10.

Annexure-II

LIST OF ON-GOING SCHEMES

Sl. No.	Name of the Trans line	GoI / BoD Appl.	Cost (Appd.	Completion Tgt.		Length (CKM)	Remarks / Constraints & assistance required.
				Sch.	Ant./ Act.		
1	**Trans. System associated with Barh Gen. Proj. (3x660 MW)** ***(Balance portion)***	**Dec'05**	**3779**	**Sep'09**	**Dec.'10**	**488**	**Generation projects delayed and now ant. beyond Oct.'12. All elemnts completed except Pole-II of HVDC Sttation at Barh & Balia and 400 KV D/C Barh - Balia Line.**
2	**East-West Trans. Corridor Strengthening Scheme**	**Jun'06**	**804**	**Jun'09**	**Dec'10**	**1150**	**Completion delayed due to World funding and now due to ROW problem & non-availibility of forest clearance. 400KV D/C Ranchi - Rourkela :-ROW problem being faced due to extremists in Jharkhand. Ist stage forest clearance received in Mar'10. Forest cleara**
3	**Common Scheme for 765KV Pooling Station and Network Associated with DVC & Maithon RB Project etc and Inport by NR & WR via ER**	**Aug'08**	**7075**	**Aug'12**	**Dec.'11 to Aug.'12**	**2057**	**No delay is aniticipated.**
4	**Supplementary Transmission System Associated with DVC & Maithon Right Bank Proejct**	**Aug'08**	**2361**	**Aug'12**	**Sept.'10 to Aug'12**	**2009**	**No delay is aniticipated.**
5	**North East / Northern Western Interconnector -I Project**	**Feb'09**	**11130**	**Aug'13**	**Aug'13**	**3567**	**Generation Projects delayed.**
	Part-A : North East - Northern/ Western Interconnector -I					2187	
	Part-B : Transmission System for immediate evacuation of Power from Kameng HEP					706	***Gen. Project anticipated from Dec'12 to May'13. Efforts shall be made to match the Generation project.***

	Part-C : Transmission System for immediate evacuation of Power from Lower Subhansiri HEP					674	***Gen. Project anticipated from Jan'12 to Mar.'13. Efforts shall be made to match the Generation project.***
6	**Transmission System of Vindhyachal-IV and Rihand -III (1000MW each) Gen. Proj.**	**Mar'10**	**4673**	**Nov'12**	**Nov'12**	**1799**	***Award for lines are being placed progressively from Mar.'10***
7	**Koteswar Trans. System**	**Jun'05**	**260**	**Jun'08**	**Aug'10**	**30**	**Generation project delayed (ant. in Aug'10). Work slowed down to the extent possible to match with Gen. Proj. LILO of 765KV D/C Tehri - Meerut line at Tehri Pooling Point :Part line (L-O portion - 8 ckm) alongwith Koteswar switching station test charged**
8	**Koldam HEP Trans. System**	**Sep'05**	**465**	**Sep'08**	**Dec'12***	**399**	**Generation project delayed and now ant. by :- Koldam - Nalagarh 400KV D/C line (Quad) (Powergrid Portion) :Line completed & test charged in Mar'10 Koldam - Ludhiana 400KV D/C line. (JV Portion) :- Completion delayed due to late finalisation of JV agree**
9	**Trans. System associated with PARBATI-II HEP. (to be executed under JV)**	**Dec'05**	**358**	**Dec'08**	**Dec'12**	**129**	**Gen. project delayed. (ant. by Mar'13)**
10	**Trans. System Associated with PARBATI-III HEP**	**Jul'06**	**557**	**Jan'10**	**Jun'11**	**543**	**Generation ant. in Jun'11. Work re-schedule, completion matching with Gen. Project.**
11	**URI - II HEP Trans. System**	**Oct'06**	**238**	**May'11**	**Feb.'11**	**114**	**Uri Gen. is ant. in Feb.'11. Completion adavnced matching commisioning of Gen. projects.**
12	**Eastablishment of 400/220KV GIS Pooling Station Near Chamera-II HEP**	**Sep'07**	**262**	**Sep'10**	**Sep'10**	**1**	**No delay is aniticipated.**
13	**Transmission System Associated with CHAMERA - III HEP**	**Apr'08**	**297**	**July'11**	**Dec.'10 to Mar'11**	**342**	**220KV Chamera-III - Pooling Station Near Chamera-II HEP :- All efforts being made to complete earlier. Gen. Ant. by :-Dec.'10**
14	**Northern Region System Strengthening Scheme - X**	**Dec'07**	**408**	**Dec'10**	**Dec'10**	**524**	
15	**Northern Region System Strengthening Scheme - XI**	**Dec'07**	**418**	**Dec'10**	**Dec'10**	**320**	
16	**Northern Region System Strengthening Scheme - XII**	**Feb'08**	**262**	**Nov'10**	**Aug'10**	**104**	

17	Northern Region System Strengthening Scheme - IX	July'08	525	July'11	Sept.'10	743	
18	System Strengthening in Northern Region Grid for KARCHAM -WANGTOO HEP	Dec'08	329	Sep'11	Sep'11	732	400KV D/C Abdullapur - Sonepat line :- Efforts being made to complete the line by Sept.'10.
19	Northern Region System Strengthening Scheme - XV	Feb'09	520	Nov'11	Nov'11	315	
20	Northern Region System Strengthening Scheme - XVII	Feb'09	211	Aug'11	Aug'11	320	
21	Northern Region System Strengthening Scheme - XVIII	Feb'09	510	Nov'11	Nov'11	340	
22	Northern Region System Strengthening Scheme - XIX	Feb'09	410	Feb'12	Feb'12	144	
23	Transmission System Associated with RAMPUR HEP.	Feb'09	184	Nov'11	Nov'11	230	Gen. project is now anticipated beyond 11th Plan.
24	765KV System for Central Part of Northern Grid - PART-I	Feb'09	1347	Feb'12	Feb'12	830	
25	Northern Region System Strengthening Scheme - XIII	Feb'09	318	Nov'11	Nov'11	38	
26	Northern Region System Strengthening Scheme - XIV	Feb'09	132	Aug'11	Aug'11	22	
27	765KV System for Central Part of Northern Grid - PART-III	Nov'09	1075	May'12	May'12	411	
28	N R System Strengthening Scheme- VII	Oct.'06	61	May'10	Mar.'10 to Aug.'10		No Trnas. Line involved. One Transfomer commisisoned at Ludhiana & erection & testing of other Transformer (at Wagoora) delayed due time taken in cossing Jawahar tunnel & construction of road in J&K.
29	N R System Strengthening Scheme-XXIII	Dec'09	110	Dec'11	Dec'11		
30	765KV System for Central Part of Northern Grid - PART-II	July'09	1736	Jan.'12	Jan.'12		
31	System Strengthening in Northern Region for SASAN & MUNDRA (UMPP)	Dec'09	1217	Aug'12	Aug'12	1212	

32	**Northern Regional Transmission Strengthening Scheme**	**Mar'10**	**966**	**Nov'12**	**Nov'12**	**2146**	
33	**Western Region Strengthening Scheme - II**	**Jul'06**	**5221**	**July'10**	**Mar'11**	**6963**	**Rs. 5221.23 Cr. (3581.40-PG & 1639.83 JV)**
	SET-A : For absorbing import in eastern and central part of WR				Sept.'10 to Mar.'11	2466	
	SET-B: For Regional Strengthening in Southern Maharashtra (to be implemented through IPTC route)					***1936***	**IPTC Route**
	SET-C : For Regional Strengthening in Gujarat (to be implemented through IPTC route)					***980***	**IPTC Route**
	SET–D: For Regional Strengthening in Northern Madhya Pradesh				Feb.'10 to Dec'10	***1581***	**Bina (PG) – Gwalior(PG) 765kV 2nd S/C line :- Commisisoned in Feb.'10 and 400 KV D/C Damoh - Bhopal - Ready for charging since Mar.'10**
34	**Trans. System associated with Gandhar-II (GBPP)**	**Aug'06**	**653**	*****	*****	**0**	***33 months from Investment approval (accorded in Aug'06) or from date of tying-up of FSA by NTPC (which is awaited) whichever is later**
35	**Western Region Strengthening Scheme - V**	**Dec'07**	**478**	**Sep'10**	**Mar'11**	**324**	**Severe ROW Problems**
36	**Western Region Strengthening Scheme - VI**	**Feb'08**	**341**	**Nov'10**	**Nov'10**	**92**	
37	**Western Region Strengthening Scheme - IX**	**Apr.'08**	**231**	**Jan'11**	**Jan'11**	**45**	
38	**Transmission System Associated with Mundra Ultra Mega Power Project.**	**Oct'08**	**4824**	**Oct'12**	**Oct'12**	**3604**	**No delay is aniticipated.**
	Part-A - Tr. System of Mundra (UMPP)				Dec.'11 to Mar.'12	2056	
	Part-B - Regional System Strengtheing in WR for Mundra (UMPP)				Oct'12	1548	
39	**Transmission System Associated with Sasan Ultra Mega Power Project.**	**Dec'08**	**7032**	**Dec'12**	**Mar.'12 to Dec.12**	**2230**	**No delay is aniticipated.**
	Part-A - Tr. System of Sasan					1790	

	(4000) UMPP						
	Part-B - Regional System Strengtheing in WR for Sasan (UMPP)					440	
40	**Western Region Strengthening Scheme - X**	**Feb'09**	**665**	**Feb'12**	**Feb'12**	**14**	
41	**Western Region Strengthening Scheme - XI**	**Feb'09**	**410**	**Feb'12**	**Feb'12**	**24**	
42	**W R System Strengthening Scheme-VII**		**32**				**No Trnas. Line involved**
43	**Transmission System Associated with KORBA - III**	**Feb'09**	**277**	**Jun'11**	**Mar.'11**	**424**	**400KV D/C Korba STPS - Raipur line**
44	**Mauda Transmission System**	**Feb'10**	**469**	**Oct'12**	**Oct'12**	**370**	
45	**Kaiga 3 & 4 Trans. System**	**Mar'05**	**1007**	**Dec'07**	**Mar.'12**	**759**	*** All elements commissioned except Mysore-Kozhikode line**
46	**Kundankulam - APP Trans. System** ***(Balance lines)***	**May'05**	**1779**	**Nov'08**	**Mar.'12**	**453**	***except Edaman-Muvattupuzha -North Trichur line. Generation Project is now expected in Dec'10 as against earlier programme of May'07/Nov'07/ Dec'08/Jun'09/Dec'09/Jun'10. Work slowed down to the extent possible. Matter already taken up with MOP. All elemn**
47	**Transmission System Assciated with CHENNAI NTPC - TNEB JV TPS.**	**May'08**	**90**	**July'10**	**July'10**	**140**	**Severe ROW problem being faced.**
48	**Transmission System Assciated with TUTICORIN JV TPS.**	**Feb'09**	**354**	**Feb'12**	**Feb'12**	**316**	
49	**System Strengthening - IX of SR**	**Feb'09**	**121**	**Feb'12**	**Feb'12**	**192**	
50	**System Strengthening - XI of SR**	**Mar'09**	**196**	**July'11**	**July'11**	**104**	
51	**Transmission System Associated with KALPAKKAM PFBR (500 MW)**	**Mar'10**	**139**	**Mar'12**	**Mar'12**	**310**	**Compln Sch. : 24 months from Investment approval.**
52	**System Strengthening - X of SR GRID**	**Dec'09**	**277**	**Apr'12**	**Apr'12**	**60**	
53	**Transmission System Associated with SIMHADRI - II Gen. Proj.**	**Jan'10**	**38**	**July'11**	**July'11**	**12**	
54	**System Strengthening - XII of**	**Feb'10**	**232**	**Jun'12**	**Jun'12**	**17**	

	SR						
55	**System Strengthening-VIII of SR**	**Feb'08**	**106**	**Nov'10**	**Nov'10**		**No Trnas. Line involved. Out of 11 extensions, 09 already commissioned.**
56	**Eastern Region Strengthening Scheme - I**	**Oct'06**	**976**	**Oct'09**	**Mar'11**	**1208**	**400KV D/C Durgapur - Jamshedpur :-Completion uncertain Critical. ECL is not allowing construction on the diverted route. Diverted to allow getting up of Andal Airport** **400KV D/C Jamshedpur - Baripada :-Severe ROW problem being faced in Jharkhand. Matter t**
57	**Eastern Region Strengthening Scheme - II**	**Dec'07**	**228**	**Jun'10**	**Sep'10**	**146**	**400KV D/C Durgapur - Maithon line . Work delayed due to ROW Problem & delay in execution of Pile foundation by contractor.**
58	**Transmission System for Start - up Power to DVC and Maithon Right Bank Gen. Project.**	**April'08**	**290**	**Apr'10**	**Jan.'10 to Oct.'10**	**322**	**LILO Mejia commisisoned in Jan.'10 ahead of Gen. 400KV D/C Koderma -Biharshariff (Quad) :-Forest clearance critical. About 40 Kms stretch affected. Case recommended to MOEF for Ist stage clearance in Jan'10. Clearance for Jharkhand portion (110 Ha) is sti**
59	**Transmission System Associated with FARAKKA - III**	**Dec'08**	**204**	**Jun'11**	**Jun'11**	**193**	**Efforts shall be made to match with Gen. Proj. now expected in Feb'11. (400KV D/C Farakka - Kahalgaon line)**
60	**Immediate evacuation system for NABINAGAR TPS**	**Feb'10**	**216**	**Jun'12**	**Jun'12**	**174**	
61	**Transmission System for Development of Pooling Station in Northern region Part of West Bengal and Transfer of Power from BHUTAN to NR/WR.**	**Apr'10**	**4405**	**Jan'15***	**Jan'15**	**454**	
62	**Transmisison System for Transfer of Power from Generation Projects in Sikkim to NR/WR- Part-A**	**May.'10**	**250**	**Jan.'13**	**Jan.'13**	**60**	
63	**NER System Strengthening Scheme - I (Missing link Trans. System in NER)**	**May'06**	**59**	**Sep.'09**	**Dec.'10 to Mar'11**	**14**	**132 KV S/C Kopili - Khandong :- Line completed except 6 locations which are in forest area. Forest proposal submitted in Jan.'09 approval still awaited. LILO of 132KV Dimapur - Kohima at Dimapur -- Severe RO Problams ant. in Mar.'11**

64	**Transmission System associated with Pallatana gas Based Power Project and Bongaigaon Thermal Power Station (BTPS)**	**Feb'10**	**2144**	**Dec'12**	**Nov.'11 to Dec.'12**	**1474**	**Bongaigaon Gen. ant. in July.'11. Palatanna GBPP Gen. ant. in Nov.'11.**

MINUTES OF THE 3rd SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS (2010-11) HELD ON 1st JULY, 2010

The Committee sat from 1100 hrs to 1300 hrs.

PRESENT

Chairman

Shri V. Kishore Chandra S. Deo

Members, Lok Sabha

2	Shri Ambica Banerjee
3	Shri Hemanand Biswal
4	Shri Anant Kumar Hegde
5	Shri Shailendra Kumar

Members, Rajya Sabha

6	Shri Naresh Gujral
7	Shri Prakash Javadekar
8	Shri Bharatkumar Raut
9	Ms. Mabel Rebello
10	Shri Tapan Kumar Sen

Secretariat

1.	Shri J.P. Sharma	Joint Secretary
2.	Shri Rajeev Sharma	Director
3.	Shri Ravindra Garimella	Additional Director
4.	Shri Paolienlal Haokip	Under Secretary

Representatives of Power Grid Corporation of India Limited (PGCIL)

1.	Shri S.K. Chaturvedi	Chairman and Managing Director, PGCIL
2.	Shri J. Sridharan	Director (Finance)
3.	Shri V.M. Kaul	Director (Personnel)
4.	Shri R.N. Nayak	Director (Operations)
5.	Shri I.S. Jha	Director (Projects)

2. At the outset, the Chairman welcomed the representatives of Power Grid Corporation of India Limited (PGCIL) and drew their attention to direction 58 of the Directions by the Speaker relating to evidence before the Parliamentary Committees. The representatives of PGCIL made a brief power point presentation on the subject. The Members raised queries on various aspects pertaining to the subject and the explanations/clarifications on the same were given by the representatives of PGCIL. Information on some of the points raised by the Committee was not readily available with the representatives of PGCIL. They were therefore asked to furnish the same to the Committee Secretariat at the earliest possible.

3. At the end, the Chairman thanked the representatives of PGCIL for providing all the information on the subject matter as desired by the Committee.

4. Verbatim record of evidence was kept.

5. The witnesses then withdrew.

MINUTES OF THE 5th SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS (2010-11) HELD ON 11th AUGUST, 2010

The Committee sat from 1500 hrs to 1600 hrs.

PRESENT

Chairman

Shri V. Kishore Chandra S. Deo

Members, Lok Sabha

2 Shri K.C.Singh 'Baba'
3 Shri Ramesh Bais
4 Shri Shailendra Kumar
5 Shri Baijayant Panda
6 Shri L.Rajagopal
7 Shri Nama Nageshwara Rao
8 Chaudhary Lal Singh
9 Shri Rajiv Ranjan Singh *alias* 'Lalan Singh'
10 Shri Bhishma Shankar Singh alias Kushal Tiwari

Members, Rajya Sabha

11 Shri Birendra Prasad Baishya
12 Shri Naresh Gujral
13 Shri Prakash Javadekar
14 Shri Bharatkumar Raut
15 Ms. Mabel Rebello
16 Shri T.Subbarami Reddy
17 Shri Tapan Kumar Sen

Secretariat

1.	Shri J.P. Sharma	Joint Secretary
2.	Shri Ravindra Garimella	Additional Director
3.	Shri Ajay Kumar Garg	Additional Director

Representatives of Ministry of Power

1.	Shri P. Uma Shankar	Secretary, Power
2.	Shri G.B. Pradhan	Additional Secretary
3.	Shri Sudhir Kumar	Joint Secretary
4.	Dr. M. Ravi Kanth	Joint Secretary
5.	Shri Devender Singh	Joint Secretary
6.	Shri I.C.P. Keshari	Joint Secretary
7.	Shri Rakesh Jain	Joint Secretary & FA

Representatives of Central Electricity Authority

1.	Shri Gurdial Singh	Chairperson, CEA
2.	Shri S.M. Dhiman	Member, CEA
3.	Dr. Jaipal Singh	Member, CEA

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3. The Chairman then welcomed the representatives of Ministry of Power and drew their attention to Direction 58 of issued by the Speaker relating to evidence before Parliamentary Committees. Secretary, Ministry of Power made a brief statement on Power Grid Corporation of India Ltd. after which Members raised queries on various aspects pertaining to the subject and the explanations/clarifications on the same were given by the representatives of Ministry of Power. Information on some of the points raised by the Committee was not readily available with the representatives of the Ministry. They were, therefore, asked to furnish the same to the Committee Secretariat at the earliest possible.

4. At the end, the Chairman thanked the representatives of Ministry of Power for providing all the information on the subject matter as desired by the Committee.

5. The witnesses then withdrew.

6. (Verbatim record of evidence has been kept.)

MINUTES OF THE 15th SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS (2010-11) HELD ON 6th DECEMBER 2010

The Committee sat from 1500 hrs to 1530 hrs.

PRESENT
Chairman

Shri V. Kishore Chandra S. Deo

Members, Lok Sabha

2 Shri Ramesh Bais
3 Shri Hemanand Biswal
4 Shri Shailendra Kumar
5 Shri L. Rajagopal
6 Shri Nama Nageswara Rao
7 Chaudhary Lal Singh
8 Shri Rajiv Ranjan Singh alias Lalan Singh

Members, Rajya Sabha

9 Shri Birendra Prasad Baishya
10 Shri Naresh Gujral
11. Shri Prakash Javadekar

Secretariat

1.	Shri J.P. Sharma	Joint Secretary
2.	Shri Rajeev Sharma	Director
3.	Shri Ravindra Garimella	Director
4.	Shri Ajay Kumar Garg	Additional Director
5.	Shri Paolienlal Haokip	Under Secretary

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3. The Committee then considered the draft Reports on the following subjects and adopted them without any modifications: -

(i). Power Grid Corporation of India Limited, and

(ii). XXX XXX XXX XXX.

4. The Committee then authorized the Chairman to finalize the Reports for presentation.

5. The Committee then adjourned.

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