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C.P.U No. 889

THIRD REPORT

COMMITTEE ON PUBLIC UNDERTAKINGS

(2004-2005)

(FOURTEENTH LOK SABHA)

POWER GRID CORPORATION OF INDIA LTD.- EXTRA EXPENDITURE IN CONSTRUCTION OF KISHENPUR-MOGA TRANSMISSION SYSTEM-ADDITIONAL EXPENDITURE OF RS. 433.81 CRORE.

MINISTRY OF POWER

Presented to Lok Sabha on 24.3.2005
Laid in Rajya Sabha on 24.3.2005_

LOK SABHA SECRETARIAT

NEW DELHI

March 2005 / Chaitra 1927 (S)

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COMPOSITION OF COMMITTEE ON PUBLIC UNDERTAKINGS
(2004 – 2005)

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INTRODUCTION

I, the Chairman, Committee on Public Undertakings having been authorised by the Committee to present the Report on their behalf, present this Third Report on Power Grid Corporation of India Ltd.- Extra expenditure in construction of Kishenpur-Moga Transmission System-Additional Expenditure of Rs.433.81 crore.

2. The Committee's examination of the subject was based on Audit Paragraph 15.3.1 contained in the Report on Union Government (Commercial) of the Comptroller & Auditor Genera (No.3 of 2004) of India.

3. The Committee took evidence of the representatives of Power Grid Corporation of India Ltd. on 1st October, 2004 and 7th February, 2005. The Committee took evidence of the representatives of the Ministry of Power on 18th January, 2005.

4. The Committee on Public Undertakings (2004-05) considered and adopted the Report at their sitting held on 22 March, 2005.

5. The Committee wish to express their thanks to Power Grid Corporation of India Limited and the Ministry of Power for placing before them the material and information they wanted in connection with examination of the subject. They also wish to thank in particular the representatives of the Power Grid Corporation of India Limited and Ministry of Power, who appeared for evidence and assisted the Committee by placing their considered views before the Committee.

6. The Committee also place on record their appreciation for the assistance rendered by the Comptroller & Auditor General of India.

7. They 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.

New Delhi **RUPCHAND PAL**
22 March, 2005 **CHAIRMAN**
1 Chaitra, 1927(S) **COMMITTEE ON PUBLIC UNDERTAKINGS**

PART – I

REPORT

A. BACKGROUND

1. The Audit Report of the Comptroller & Auditor General of India – Union Government (Commercial) – No. 3 of 2004 in Para No. 15.3.1 contained an audit observation highlighting the extra expenditure incurred by Power Grid Corporation of India Limited in construction of Kishenpur-Moga Transmission System. As per Audit, the Company incurred an extra expenditure of Rs.217.22 crore due to an avoidable delay of 30 months attributable to inexperience of a foreign contractor. Further, the excess capacity which has been created at an additional expenditure of Rs. 433.81 crore would remain grossly under-utilized in near future due to non-execution of identified generation projects.

2. The main features of the observations made by Audit in the Para can be delineated as under:

(i) Investment approval for the World Bank funded Kishenpur-Moga Transmission System (KMTS) comprising two single circuit lines was accorded by the Government in May, 1993. The estimated cost for executing the project at the time of approval was Rs. 417.71 crore with the commissioning schedule being 58 months from the date of approval, that is, completion by March, 1998.

(ii) Power Grid in May, 1993 invited global tenders for pre-qualification and issued tender documents in March, 1994 for price bids to six qualified bidders, out of which five bidders submitted price bids, which were opened in May, 1994.

(iii) Based on pre-qualification and evaluation of bidders, the Company had assessed that M/s Cobra which emerged as a lowest bidder for both the lines of KMTS, would not be able to execute both the lines in view of the tower material required for both the lines and 800 KV lines being constructed for the first time in India and recommended World Bank to award only .one line of work to M/s Cobra. However, World Bank did not agree and so contracts for both lines were awarded to M/s Cobra in February, 1995 with the completion schedule of 39 months i.e. by May, 1998.

(iv) Audit observed that M/s Cobra, had no experience of execution of project of 800 KV lines and had passed the pre-qualification and bid evaluation stage as the Company made no technical scrutiny with respect to weight of the tower. Consequently, there were repeated failures in design and testing of towers, resulting in avoidable delay of 23 months. Further, due to increase in weight of the tested towers up to 46 per cent over the estimated weight, M/s Cobra demanded compensation for the increase in cost, which led to delay of 7 months. This resulted in total avoidable delay of 30 months in completion of KMTS, which increased the project cost by Rs.217.22 crore on account of interest on borrowed funds and escalation in price including exchange rate variation.

(v) The Audit also observed that both the lines were commissioned in May, 2000 and January, 2001 respectively. However, as no generation project except Dulhasti and Chamera (Stage II) was taken up for execution, KMTS could not be put to use at its rated capacity and chances for evacuation of power at 800kV level in near future were remote. In fact, the KMTS was initially to be operated at 400 kV and transmission of power at 800kV was required only after commissioning of Sawalkot, Baghlihar, Ratle,Dulhasti and Chamera (Stage II) generation projects.

(vi) According to Audit, a World Bank supervision mission had suggested, (July, 1993) construction of two 400 kV double circuit lines initially instead of two 800kV lines, so as to defer the 800kV conversion investment till 2015-20. Nonetheless, the Company went ahead with the construction of two 800kV transmission lines on the grounds of difficulties in acquiring right of way and prolonged Government clearance procedure. Additional cost of construction of two 800kV lines as compared to two 400kV lines worked out to Rs.433.81 crore.

(vii) In reply to the Audit observation, the Management of the Power Grid stated (May, 2002) that no technical compromise was made in adopting qualifying requirement for selection of M/s Cobra and the delay was not attributable to its inexperience, but to actual failure of towers during testing and limited availability of test beds in India.

(viii) In this connection, the Ministry added that overall cost overrun was contributed to factors like change in debt-equity ratio, escalation in price index etc. Further, while stating that construction of 800kVlines was a prudent decision in view of severe right of way problem and was not linked to commissioning of all the generation projects, they endorsed the Management's reply that KMTS has improved reliability of the Northern region grid and as such should be viewed as a system improvement project.

(ix) The Audit did not find the reply tenable, as the Central Electricity Authority while reviewing the cost and time overrun had, inter-alia observed in July, 2001 that original design of the firm was substantially below the required level and the firm passed the pre-qualification stage because no technical scrutiny regarding design of the towers was undertaken by the Company. Abnormal increase in the weight of the tested towers was considered by the CEA as the main reason for failure in design. As regards considering KMTS as a system improvement project, benefit stream of KMTS has deviated from the originally envisaged benefit for the investment, as observed by Public Investment Board.

(x) The Kishenpur-Moga Transmission System having two lines of 800 KV each was commissioned in January, 2001 at a total cost of Rs.847.91 crore with an overall cost overrun of Rs.430.20 crore and time overrun of 34 months.

A copy of the Audit Para as contained in the C&AG's Report is given at Annexure-I. The various acts of omission and commission revealed by the Audit have been discussed in the succeeding paragraphs.

B. GENESIS OF KISHENPUR-MOGA TRANSMISSION SYSTEM (KMTS)

3. According to Audit, the Government of India sanctioned in May, 1993 the scheme of KMTS at an estimated cost of Rs.417.71 crore with the completion schedule of March, 1998. The scheme was conceived to transfer power from various generation Projects in Jammu & Kashmir to the load centre at Moga in Punjab.

4. About the genesis of the Kishenpur-Moga Transmission System (KMTS), Power Grid informed the Committee as under :-

> "The State of J&K has installed capacity of 1657 MW. The following projects amounting to 5640 MW has been identified for implementation by XI Plan :

PROJECT	CAPACITY	AGENCY	STATUS	EXPECTED SCHEDULE
DULHASTI	390 MW	NHPC	ADVANCED STAGE OF CONST.	DEC'2004
BAGHLIHAR-I	450 MW	J&K	ADVANCED STAGE OF CONST.	2004-05
SEWA-II	120 MW	NHPC	Under Construction	2007
KISHENGANGA	330 MW	NHPC	TEC RECD. AUGUST'03 COMM. 82 MONTHS FROM CCEA	2011-12
BURSUR	1020 MW	NHPC	DPR under preparation	2009-10
PAKULDUL	1000 MW	NHPC	--do--	2008-09
URI-II	280 MW	NHPC	TEC Approved, Pre-PIB held Feb 04	2008-09
SAWALKOT	600 MW	J&K	-	2009-10
BAGHLIHAR-II	450 MW	J&K	-	2011-12
	5640 MW			

> As per 16th EPS the Load vs Demand scenario for J&K by XI Plan is given below:-

Existing Capacity	Estimated capacity addition by XI plan	Estimated Demand in J & K by XI Plan		Estimated Surplus by XI Plan (Summer-Off peak)
		Winter	Summer (Off peak)	
1657MW	5640MW	2560MW	1500MW	5797MW

As per the above load demand scenario, by XI Plan, during summer off peak conditions, power of about 5500 MW from the existing/proposed projects would be required to be transferred to other parts of the Northern region Grid from J&K. Keeping in view the existing transmission system capacity of 1000 MW (excluding KMTS) between J&K and the rest of the region, additional evacuation capacity for about 4797 MW was required to be created from Jammu and Kashmir by XI Plan."

"Considering the power supply scenario and surplus power of J&K, 2 numbers of 800 kV lines (initially charged at 400 kV) were planned by National Hydro-electric Power Corporation and Central Electricity Authority. As there would have been phased development of generation projects in J&K resulting into the phased increment of power flow on the Kishenpur-Moga transmission lines, it was planned that the Kishenpur – Moga line would be initially charged at 400 kV level and subsequently with increase in power flow requirement, these lines were envisaged to be charged at 800 kV level. The transmission scheme was agreed by the constituents of Northern Region in the Standing Committee Meeting of Northern Region Transmission Planning held on 22 and 23 December 1987. Accordingly, NHPC submitted the Feasibility report to CEA for their approval. CEA accorded the Techno-economic Clearance to the Kishenpur-Moga transmission scheme in August 1989. It may be mentioned that that funds for KMTS was envisaged to be funded by World Bank (Loan No. 3237), which was approved by Govt of India in October 1990. Subsequently, after the formation of Power Grid, the project was dejure transferred to Power Grid."

5. Detailing as to how 800 KV transmission system was conceived to be introduced in India, the Secretary, Ministry of Power, informed during the evidence that:-

"………..At that time, the idea was that of these power projects, which were being conceived and for which techno-economic studies were done by the Central Electricity Authority in many cases, techno-economic clearances were given by the Central Electricity Authority – were to be commissioned, then the power would be used not only in Jammu and Kashmir but also in other Northern States of the country like, Rajasthan, Punjab, Haryana, Delhi and UP. These are the States, which were to use this power. Therefore, 800 KV transmission system was conceived to be introduced in the country."

6. When asked the reasons for going ahead with 800 kV instead of 400 kV for evacuation of the power, the Committee were informed that :

> "For evacuation of above power using 400 kV D/C lines, it would have required at least six (6) lines requiring six corridors of width 52 metres each (totaling to 312 metres) and would have posed a serious right of way (ROW) problem besides being uneconomical. Appreciating the ROW problem, two lines of 765 kV S/C lines, initially to be charged at 400 kV level to be upgraded to 765kV S/C to match the phased development of capacity addition, were planned by NHPC in 1989 (approx. length 275 kms each) and obtained techno-economic clearance in March, 1989 from CEA."

7. Elaborating further about the ROW problems, the Chairman PGCIL during briefing stated as under :-

> "As Punjab is a agriculture oriented State, and as forest area was also involved. About 40 KMs of forest was involved with 20,000 trees from the forest area were required to be cut for this purpose. If we had gone for 400 kV lines, then we would have required a corridor of 312 metres, as against 170 metres for 800 kV lines. So, cutting of trees would have been 40,000 trees instead of 20,000 trees if we had gone for 400 kV lines………….
>
> …………In Punjab also we faced some problem, but in J&K we faced the maximum problems. They used to say that we are passing through their land, and the value of their land is coming down. So, the Hon. Committee can imagine that if we had gone for six lines, then nobody would have permitted us the ROW."

8. When asked whether the right of way problem could not be resolved by securing the cooperation of the State Government and other agencies concerned, the Committee were informed that:-

> "Co-operation & support from State Authorities and other concerned Govt. agencies is always taken for obtaining right of way & line access clearances required for construction of transmission lines."

9. On being asked as to how the PGCIL's decision for the construction of 800 kV lines instead of 400 kV lines in view of right of way problem can be

justified, the Ministry in their written reply stated that regarding the justification for implementation of 800 kV transmission lines (instead of 400 kV lines), one of the most important parameters in developing and expanding transmission system is voltage. The basic idea behind going for higher and higher voltage for transmission of AC power is to reduce transmission losses and transmit bulk power over long distances with optimized cost of investment and operation (without jeopardizing the stability of the system). Limitation of length of line in case of AC transmission and Right of Way (ROW) are major constraints which force to go for higher and higher voltage level.

The prime advantage of 800 kV class transmission system over the 400 kV class transmission system is that, it facilitates transmission of power at higher power density for a given evacuation corridor. For bulk power transmission of the order of 2500 MW or more, 800 kV system has merit over 400 kV system in terms of offering optimized solution. Also, 800 kV system has lesser transmission losses as compared with the 400 kV system.

Keeping in view the future requirement, Ministry of Energy (now Ministry of Power), Government of India, in 1987, had constituted a Sub-Group under the chairmanship of Chairman, Central Electricity Authority (CEA) to arrive at the next higher AC transmission voltage. The Committee, after deliberations, had recommended 800 kV (with 765 kV as the nominal voltage) as the next higher AC transmission voltage in the country. Report on “Standard Parameters of 800 kV Transmission System in India” was brought out in 1990 based on 800 kV operating experience of utilities abroad. Two revisions in the report have already been undertaken.

10. When asked to know how much transmission loss after the introduction 800 kV lines is expected to go down, Secretary, Ministry of Power, during the evidence stated as under :-

> "On the 800 kV transmission system, we expect the transmission loss of the order of 2 – 2.5 per cent and on 400 kV system we have the transmission loss of the order of 3 – 3.5 per cent."

11. When enquired how much maximum power (in MW) can be evacuated through these two lines by operating it at 800 kV level and 400 kV level in each year, the Committee were informed that:-

> "The Kishenpur-Moga lines at 800 kV level can carry approx. 2500 MW per circuit depending upon the system conditions. At 400 kV level these can carry approx. 500 to 550 MW per circuit depending upon system conditions. The lines are presently operated at 400 kV as planned. Power to the extent of 500-550 MW has already been transferred over the lines from the generation projects in operation in J&K state (viz. Salal-I&II-690 MW, Uri-I-480MW, Chamera-I&II-840MW)."

12. On being queried about the additional annual tariff being recovered from SEB's on account of creation of this capacity, the Committee were informed that the annual tariff being recovered from the SEBs as notified by CERC for KMTS for the Tariff Block 2001-2004 are :

Year	Rs. (in Crore)
2001-02	176.65
2002-03	143.55
2003-04	156.65

Annual Tariff for the Tariff Block 2004-2009 is under finalisation with CERC.

13. Audit pointed out that the World Bank Supervision Mission in July, 1993 had suggested construction of two 400 kV double circuit lines initially instead of two 800 kV lines so as to defer 800 kV conversion investment till 2015-2020. However, the Company went ahead with the construction of the two 800 kV transmission lines on the grounds of difficulties in acquiring Right –Of-Way and prolonged Government clearance procedure. Additional cost of construction of two 800 kV lines as compared to two 400 kV lines worked out to Rs.433.81 crore.

14. The Committee noted that if PGCIL had accepted this suggestion and reviewed its transmission requirements, the additional investment on which the State Electricity Board (SEBs) had to bear tariff burden without deriving any benefit could have been avoided.

When asked the reasons for not accepting the suggestion of the World Bank Supervision Mission of 1993 by PGCIL and the compelling circumstances which led the Company to go ahead with the construction of the 800 kV lines which was contrary to the suggestion of the World Bank Supervision Mission, the Power Grid in a written reply informed as follows :-

> "It may be mentioned that Kishenpur-Moga Transmission System formulated by NHPC and CEA and approved by GOI was of two single circuit 800 kV Lines. The World Bank supervisory mission in July 1993 suggested that the Power Grid's consultant RSW may examine the feasibility of use of 400 kV D/C lines convertible to 800 kV, however Power Grid should continue with the activities for 800 kV going on at that time.

Based on the studies carried out by the consultant as per the Banks suggestion mentioned above, the overall cost of 400 kV D/C (convertible to 800 kV S/C) line was estimated to be more than that of 800 kV S/C line (though the initial cost was approx. 2 % less, the subsequent conversion cost was estimated to be approx. 20% of the initial cost). Further to convert 400 kV to 800 kV necessitates prolonged shutdown of about 18 months. It was discussed with the Consultant RSW, the World Bank Mission in December 1993, the World Bank Consultant Mr. Elias Ghannoum as well as CEA and it emerged that standard 800 kV as approved by the Government is the best suited solution. Power Grid, therefore has gone ahead with the Government approved transmission system.

Therefore, the conclusion drawn in the background para is not correct that additional cost of construction of two 800 kV lines as compared to two 400 kV lines worked out to be Rs.433.81 crore."

15 According to PGCIL in order to operate these lines at 800 kV level, the related terminal sub-stations would have to be upgraded. Thus, PGCIL planned to use these lines at 400 kV level abinitio.

In reply to the query whether PGCIL has taken up the upgradation work for the terminal sub-stations, the Company informed the Committee as under :-

"Operation of the Kishenpur-Moga lines at 800 kV level and upgrading of the terminal sub stations has not been taken up due to delay in completion of hydro projects (viz Dulhasti, Baglihar etc.) as well as non commencement of implementation of other planned projects (viz. Uri-II, Baglihar, Kishenganga, Swalkote, Rattle, Bursar, Pakul Dul etc.). Operation at 800 kV level is envisaged to be taken up in the XI Plan depending upon the progress of the above projects."

16. When sought to know what efforts have been made by the Ministry to simplify the clearance procedure of the project funded by international funding agencies, the Committee were informed as follows :-

"In accordance with the guidelines of Department of Public Enterprises (DPE), the Board of Directors of Power Grid Corporation of India Ltd. (PGCIL) (being a Category-I Miniratna Corporation) is empowered to approve the investment proposals for projects costing upto Rs.300 crore.

These guidelines, however, provide that the delegation of power would be subject to the condition that no financial support or contingent liability on the part of the Government should be involved and that these Public Sector Enterprises shall not depend upon budgetary support or Government guarantees. Accordingly, all such investment proposals in respect of the projects of PGCIL which are funded by an international funding agency like World Bank, ADB, etc. (involving Government guarantee) require approval of Government irrespective of the fact that their estimated cost is less than Rs. 300 crore.

A proposal was taken up with Ministry of Finance and Department of Public Enterprise for delegating the power to Power Grid's Board of Directors for according investment approval for all projects costing up to Rs. 300 crore notwithstanding the fact that the project involves funding from Multilateral funding Agencies like World Bank, ADB, etc. backed by Government guarantee.

In this connection, DPE has observed that it may not be appropriate for individual administrative Ministries/Department to amend the miniratna scheme in order to give further enhanced power to PSUs under their administrative control. Any amendment to the scheme can be made by DPE only, with the approval of the competent authority. Ministry of Finance have also not agreed to the proposal."

C. FUNDING OF KMTS PROJECT

17. The Kishenpur-Moga Transmission System was stated to be covered for funding under World Bank Loan No.3237-IN and the Agreement for the Loan was signed on October 3, 1990 between Government of India and the World Bank.

When asked to state the sources from where the fund was raised for the project, the Committee were informed that the proportion of the cost of the project funded through World Bank Loan and other sources from where the funds were raised are given hereunder:

		Amount in Indian Rupees (in crore)	Percentage
(a)	World Bank Loan	434.79	50.70%
(b)	Domestic Loan		
	(i) Issue of Bonds by Power Grid	157.71	18.39 %
	(ii) Loan from Domestic Financial Institution/Banks	121.99	14.22 %
(c)	Power Grid Internal Resources	143.14	16.69 %
	Total	857.63	

18 To a question whether the economics of loan provided by the World Bank was ascertained, the Committee have been informed that Kishenpur-Moga Transmission. System (KMTS) was covered under the World Bank loan (Loan No. 3237-IN) routed through Government of India and NHPC had entered into an agreement on 9th November, 1990 in this regard before dejure transfer of the said Project to Power Grid. Regarding the economics of the loan it may be mentioned that during early nineties when this Project was approved for implementation, the funds from the domestic market were not forthcoming and were expensive. It is evident from the fact that Power Grid's bonds issued during

the said period were under-subscribed. Power Grid was unable to raise even the matching funds for the component of the Project not covered under World Bank funding. Further in Domestic Market only short tenure loans of 5 to 7 years, that too at very high premium, were available which were not suitable for infrastructure projects like transmission lines. On the other hand the World Bank loan tenure was for 15 years including moratorium period besides being substantially economical. In the context of the above constraints Power Grid was not left with any other alternatives than to avail the World Bank Loan already signed by the Government of India.

19 When the Committee desired to know about the role played by Ministry of Power in respect of multilateral agencies' funded project, the Ministry in a written reply stated as under :-

> "The loans availed by Public Sector Undertakings from the multi-lateral funding agencies like the World Bank, ADB, etc. require sovereign guarantee by the Government of India. The loan negotiations are carried out under the leadership of Department of Economic Affairs and representatives of Ministry of Power and the organizations concerned are also members in such negotiations.
>
> In accordance with the guidelines of Department of Public Enterprises (DPE), the Board of Directors of Power Grid Corporation of India Ltd. (PGCIL) (being a category-I Miniratna Corporation) is empowered to approve the investment proposals for projects costing upto Rs. 300 crores. These guidelines, however, provide that the delegation of power would be subject to the condition that no financial support or contingent liability on the part of the Government should be involved and that these Public Sector Enterprises shall not depend upon budgetary support or Government guarantees. Accordingly, all such investment proposals in respect of the projects of PGCIL which are funded by an international funding agency like World Bank, ADB, etc. (involving Government guarantee) require approval of Government irrespective of their estimated cost."

20 When asked whether any guidelines have been issued by the Ministry of Power to the Public Sector Undertakings seeking to fund their projects through World Bank, ADB, etc., the Ministry in a written communication informed the Committee as follows :-

> "As funding from the multi-lateral funding agencies like World Bank, ADB, etc. is availed by many Departments/Organizations, no specific guidelines have been issued by Ministry of Power in this regard. The terms and conditions of every loan is negotiated between Department of Economic Affairs, Ministry of Power and the CPSU with the concerned funding agency. Most of the loan conditions, procedure for procurement and environmental guidelines are standard operating procedures of any particular external funding agency."

21 When asked about the procedure followed by PGCIL while seeking loan assistance from World Bank, the CMD, Power Grid during briefing informed the Committee as under :-

> "Whenever we negotiate a loan with ADB or World Bank, the Government of India and the borrower that is the Power Grid or NTPC – sign an agreement. As per that agreement the procurement procedure is to be adhered to therefore, whoever contractor is approved by the Board is forwarded to the World Bank for their concurrence. This is the procedure."

22 When enquired about the norms / regulations followed by the Company in the process of bidding for project execution of KMTS, the Power Grid in its reply informed the Committee that in line with the bidding procedure agreed to with the World Bank two-stage bidding i.e. pre-qualification followed by detailed technical and commercial bid, as briefly mentioned below, was followed by the Company for award of Kishenpur-Moga Transmission Line Contracts:

(i) Pre-qualification applications on global (ICB) basis were invited through Invitation For Pre-qualification (IFP) published in May 1993. A copy of the

IFP was sent to Embassies/High Commissions of Member countries of IBRD and Taiwan, China.

(ii) The pre-qualification documents and the qualification criteria were finalised with concurrence of the World Bank.

(iii) The Pre-qualification Evaluation Report was sent to the World Bank and the Bank conveyed its ‘No Objection’ in January, 1994.

(iv) The Bidding Documents for inviting Bids from pre-qualified applicants were approved by the World Bank in March, 1994 and invitation were issued thereafter to the pre-qualified firms for submission of their detailed technical and commercial bids.

(v) The Bids submitted by pre-qualified firms were opened in May, 1994. The Evaluation of bids was completed in August, 1994 and the Evaluation Report with recommendations to Awards was forwarded to the Bank in August, 1994. Based on the concurrence as conveyed by the World Bank in January 1995, the Contracts were awarded in Feb. 1995.

D. QUALIFICATION OF BIDDERS AND PRE-QUALIFICATION

23 In the Brief submitted to the Committee, the Company has informed that for pre-qualification, Global invitation was issued in May 1993 and Twenty-eight (28) firms/Joint Ventures purchased the pre-qualification documents and only twelve (12) submitted their applications. Six (6) Firms/JVs were pre-qualified (for both the Packages A & B individually as well as combined), with the approval of the World Bank (Jan' 94).

24 When asked about the pre-qualification criteria fixed, both in technical and financial terms for inviting tenders from the bidders, the Committee were informed that the details of Qualification Criteria for Applicants as stipulated in the Pre-qualification document are given hereunder:

Technical

A minimum qualifying requirement for qualification will be to have successfully carried out as a prime contractor the execution of at least two projects of a nature and complexity comparable to the proposed contract(s) within the last five years; this experience should include:

For Package-A and Package-B individually or combined

a) Surveyed, optimized tower locations and tower design (including foundations) and based thereon, erected and strung with Tension Stringing Equipment (TSE) not less than 200kms of D/C Transmission Line involving bundle conductors at 400kV class or higher

b) Designed constructed 400kV River crossing with a minimum towers height of at least 80mtrs and minimum span of 800 mtrs.

Financial

(i) The applicant shall meet the criteria of minimum Average Annual Turnover over the last five years of US$ equivalent as indicated below:

For package A : US$ 15 million or Indian Rs.30 Crores

For Package B : US$ 15 million or Indian Rs.30 Crores

If the applicant proposes to pre-qualify for more than one package, his annual turnover shall be not less than the sum of the Annual Turnover of the packages he proposes to qualify.

(ii) The applicant should demonstrate that he has access to, or has available, Liquid Assets, unencumbered real assets, lines of credit, and other financial means sufficient to meet the construction cash flow for a period of 3 months, estimated as US$ 3 Million equivalent for each of the packages A & B; net of the applicants commitment for other contracts.

If the applicant proposes to qualify for more than one package, his contract and cash flow shall not be less than the sum of the packages he proposes to qualify.

25 It was informed to the Committee that besides Consultant's recommendations, the factors which finally led to adoption of 400 kV for pre-qualification instead of 800KV experience were based on the following:

a) In case of following 800 kV experience criteria, no Indian Firm would have qualified.

b) 800 kV or above voltage level having been adopted in a limited way the World over, this criteria would have limited the competition implying higher costs to Power Grid.

It was also informed that had 800 kV experience been kept as pre-qualification criteria, there would have been only one bidder i.e. M/s Vattenfall, Sweden and no Indian as well as other international firms would have had the opportunity to participate.

26 in this regard, Secretary, Ministry of Power during evidence stated that

"…….. In the whole world, hardly a couple of parties existed with the 800 kV transmission system design experience. As a matter of fact, in this very tender, out of a dozen parties who participated, only one had the design and construction experience in 800 kV transmission system. Therefore, in retrospect, if I try to analyse, 400 kV experience prescribed here gets vindicated, because had we put 800 kV, perhaps we would have no competition or if there was, then one party would have quoted in the manner the party wanted. Secondly, in the country, we had three agencies having experience of transmission system and all of them had experience only up to 400 kV. Such pre-qualification terms for technology introduction was also required because it provided opportunities to Indian agencies in engineering, in construction, in operation and maintenance, in manufacturing so that while we introduce the technology, we do not totally depend on outside agency.

27 Regarding the qualified bidders to whom tender documents were issued and the response alongwith the prices quoted by each of them, Power Grid furnished the following information :-

No.	Name of Bidder	Response	Quoted Prices in Equivalent Indian Rupees	
			Package-A	Package-B
1	M/s. Cobra SA, Spain	Quoted for Pkg-A and Pkg-B	108,87,27,626	104,93,14,364
2	M/s. KEC India Ltd	Quoted for Pkg-A and Pkg-B	108,59,26,934	117,62,05,178
3	JV of M/s. SAE(India) & M/s. ABB, Italy	Quoted for Pkg-A and Pkg-B	118,39,42,224	112,76,93,168
4	M/s. Vattenfall, Sweden	Quoted for Pkg-A and Pkg-B	118,09,79,175	113,92,03,426
5	Hyundai, Korea	Quoted for Pkg-A and Pkg-B	120,27,96,959	115,67,45,564
6	Balfour Beatty, UK	Not Quoted	-	-

28 On the question of experience of each qualified bidder in laying 800 KV lines, it was informed that the experience of each qualified bidder in laying 800 kV Transmission Lines is given below :-

No	Name of the qualified Bidder	Experience in laying 800 kV Line
1.	M/s. Cobra SA, Spain	No
2.	M/s. KEC India Ltd	No
3.	JV of M/s. SAE(India) & M/s. ABB, Italy	No
4.	M/s. Vattenfall, Sweden	Yes (Line for 800 kV Swedish system)
5.	Hyundai, Korea	No
6	Balfour Beatty, UK	No

E. AWARD OF CONTRACT TO M/S COBRA

29 As per the Audit Para, the contracts for construction of both the lines were awarded to M/s Cobra in February, 1995 with the completion schedule of 39 months i.e. by May, 1998.

When asked whether M/s Cobra, which emerged as a lowest bidder for both the lines of KMTS, had any experience of stringing 200 circuit km of 3 phase bundle conductors for 400 kV or a higher voltage, the Company informed the Committee that M/s Cobra had such experience. The details of information / data as furnished by M/s Cobra are as under :

No	Name of the Project	Client	Line Length	Year/Period of execution
1.	GILLENA-DON RODRIGO 400 kV D/C Tr. Line	Sevillana De Electricidad, S.A. Av. De la Borbolla, 5 Sevilla – Spain.	15 km	1989/ 1990
2.	Rodrigo-Pinar Del - Rey (P-II) 400 kV D/C Tr. Line	Sevillana De Electricidad, S.A. Av. De la Borbolla, 5 Sevilla – Spain.	71 km	1990
3.	Aragon-Cazaril 400 kV D/C Tr. Line.	Ree, Red Electrica De Espana, S.A. P^0 Conde de los Gaitanes, 177, La Moraleja, Alcobendas (Madrid) – Spain.	74 km	1990
4.	Meson-Lindoso (P-III) 400 kV D/C Tr. Line.	Union Electrica Fenosa, S.A. C/Capitan Haya, 53,Madrid–Spain.	40 km	1990

30 To a question whether M/s Cobra had the experience of designing and constructing 400 kV river crossings with a minimum tower height of 80 metres and minimum span of 800 metres, the Committee were informed that Cobra had executed River Crossing with a span of 800 M in 400 kV Valdecabcaballeros -

Guadama Transmision Line. The height of river crossing tower was not indicated in their application for Pre-qualification. However, from the details furnished by other applicants as well as from the experience of Power Grid of executing a number of major river crossings for 400 kV lines, it was obvious that tower height for 400 kV river crossing with 800 m span shall be more than 80 m. Therefore, M/s Cobra was considered meeting stipulated qualifying requirement in respect of river crossing.

31 When enquired whether any Indian Company possessed the capabilities as were possessed by M/s Cobra, the Company in a written reply informed that the Indian companies possessed the capabilities. The details of experience of KEC India and SAE (India) with respect to the stringing 200 circuit km of 3 phase bundle conductors for 400 kV are as under:

KEC India

No	Name of the Transmisión Line	Length of Line(Kms)	Year/Period of execution
1.	400 kV D/C Karhal -Agra T/L	106 km	Mar 1990
2.	400 kV D/C Bhagalpur – Biharshariff	165 km	June 1990

	Name of River Crossing	Span (M)	Height (M)	Year
1.	Yamuna River	840 M	95.50 M	1988
2.	Sone River	1070 M	135.06 M	1988

SAE(India)

No	Name of the Transmisión Line	Length of Line(Kms)	Year/Period of execution
1.	400 kV D/C Kahalgaon-Maithon T/L	173 km	Feb 1993
2.	400 kV D/C Moga-Bhiwani T/L	120 km	Mar 1993

No	Name of River Crossing Project	Span (M)	Height (M)	Year
1.	Nagarjunasagar-Gooty 400 kV T/L	800 M	100 M	April 1991
2.	Etah-Ballabgarh 400 kV T/L	1150 M	175 M	June 1988

32 On being inquired the grounds on which the Indian firms M/s KEC India and M/s SAE (India) who pre-qualified in the bidding were not found suitable for award of the work, the Committee were informed that the evaluated prices of KEC and SAE (who had submitted the bid as a JV with ABB, Italy) were higher than the lowest bidder, i.e. M/s Cobra, as indicated hereunder:

No.	Name of Bidder	Evaluated Prices in Equivalent Indian Rupees	
		Package-A	Package-B
1	M/s. Cobra SA, Spain	1,147,986,466	1,113,634,919
2	JV of M/s. SAE(India) & M/s. ABB, Italy	1,223,245,351	1,170,526,463
3	M/s. KEC India Ltd	1,231,140,909	1,359,340,901

Power Grid had, based on the assessment of the capacity of Cobra's proposed sub-contractors for tower supplies, recommended award of Package-A on Cobra and Package-B on the JV of SAE & ABB.

33 When sought to know about prices quoted by M/s Vattenfall for the complete execution of the project, it was informed to the Committee that the package wise quoted as well as the evaluated prices of M/s Vattenfall, Sweden for the complete scope of work are as under:

Name of Bidder	Quoted Prices in Equivalent Indian Rupees		Evaluated Prices in Equivalent Indian Rupees	
	Package-A	Package-B	Package-A	Package-B
Vattenfall, Sweden	1,179,179,175	1,139,203,426	1,278,906,645	1,248,556,095

34 The Audit pointed out that based on pre-qualification and evaluation of bidders, the Company had assessed that M/s Cobra would not be able to execute both the lines in view of the tower material required for both the lines and also due to the fact that 800 kV lines are being constructed for the first time in India. Accordingly, the Company recommended the award of work for only one line to M/s Cobra, which was, however, not accepted by the World Bank. So, contracts for construction of both the lines were awarded to M/s Cobra in February, 1995 with the completion schedule of 39 months i.e. by May, 1998.

35 When desired to know whether Power Grid can not go for the selection of contractor without the World Bank concurrence, the CMD, PGCIL during briefing stated that "It is like that."

36 In this connection, the Ministry of Power in their written reply stated that most of the loan conditions and procurement, environment guidelines are standard operating procedures of a particular external funding agency. Once a particular project is taken up by the external funding agency for consideration, interaction takes place between the funding agency and the borrowing CPSU in several stages during which in-depth discussions take place to finalise precise scope of work, year wise funding requirements, loan conditions and also include

sectoral as well as project specific issues. The guidelines for procurement and implementation of projects are also discussed during these interactions.

After every such interaction, the external funding agency normally sends a draft Aide Memoire on which DEA seeks comments of the line Ministry and the proposed borrower. Ministry of Power while sending its comments to DEA also takes into account the comments of the concerned CPSU.

If the project is short-listed for loan negotiation after these interactions, the loan negotiation is held between the external funding agency and DEA during which line Ministry assists DEA and the borrowing CPSU also participates. The loan conditionalities, phasing of expenditure and requirement of compliance with procurement guidelines, environment guidelines etc. is finalised on the basis of which loan agreement is signed.

37 In the background note furnished by Power Grid, it is stated that earlier as per the practice in vogue in NTPC, bids for Transmission line Packages are invited on per ton basis and the payments were accordingly released progressively on supply of tower material. However, in such cases the payments made to the contractors were not matching with the physical progress for non-receipt of sequential erectable material and delaying the project execution. In this case, World Bank had suggested to invite the bids on per tower basis of contractor’s design in place of tonnage basis and weight of the tower was not the basis for evaluation as contractors could optimise tower weight using various

types of steel. Accordingly, bidders had quoted their prices on per tower basis irrespective of the weight of the tower to be designed / tested by them.

38 In a written reply furnished by the Ministry of Power about the procurement philosophy, the Committee were informed as under :-

> "In the case of tower packages for KMTS, PGCIL had adopted the procurement philosophy as suggested by the funding agency i.e. the World Bank. Though PGCIL took up the matter with World Bank for using their own designs for towers, the World Bank insisted on keeping the designs in the contractor's scope anticipating optimisation of cost. The bidders were required to quote on per tower basis. PGCIL have informed that the technical scrutiny of the bids were carried out both at pre-qualification and commercial bid stage strictly with reference to technical specification requirements and criteria specified in the bid document, approved by the World Bank. Though tower weight was not the evaluation criteria, the estimated weight of towers indicated by all the bidders was of the same order."

39 When asked how the World Bank anticipated that contractor would be able to optimise the cost and whether the optimisation of the cost has actually been achieved at the cost of quality and time, the Company in a written reply stated as under :-

> The World Bank opined that keeping tower and foundation designs in the contractor's scope would facilitate utilization of globally available design experience/practices, selection and use of most efficient grades of internationally available steel to yield the lowest combined tower and foundation cost and thereby most competitive bid price under international Competitive Bidding. It is to be mentioned that there are many grades of steel with varying strength available in the international market at different price levels. The expectation was that, having given freedom of selection of most efficient grades of steel internationally available, the Bidder from any country might explore globally available options to select structural steel for towers which would give the lowest overall cost of towers.
>
> Accordingly, in technical specification it was stipulated that the contractor can select the most efficient grades of steel available internationally for design of towers so as to yield the lowest in place combined tower and foundation cost.

> It is expected that cost optimization would have been taken care by the Bidder while submitting the Bid. However, it may be mentioned that the expected result did not happen due to delay in testing, non-availability of Indian test bed, dispute of Cobra with its sub-contractors & poor project management by them. However, it may be mentioned that there was no sacrifice on specified quality aspects.
>
> It may also be mentioned that Power Grid subsequently took up the matter with the World Bank and convinced them that the tower design should rest with Power Grid. The same was agreed by the World Bank and are being implemented in all its transmission line projects including those funded by World Bank/ADB etc.

40 On being asked whether PGCIL had an in-house capability of designing such types of towers at that time especially when it was executing the 800 kV lines for the first time in India, the Company in a written reply furnished to the Committee intimated as follows :-

> "Power Grid had in-house design capabilities at that time for design of towers for 400 kV as well as 800 kV towers as structural complexities are generally same. However, 800 kV tower designs had not been developed in-house as there was no requirement of these towers earlier. Power Grid insisted the World Bank to accept use of in-house designs for the lines funded by the Bank. However, the Bank did not agree this for the projects funded by them at that time anticipating possible optimization of cost through more cost effective designs by utilization of globally available design experience/practices, selection and use of most efficient grades of internationally available steel to yield the lowest in place combined tower and foundation cost."

41 To a query as to why the Company had not prescribed any time frame in the agreement for finalisation of the design by the Contractor, the Committee were informed that Power Grid did specify time period/schedule for tower design and testing by the contractor in the Bid Documents as well as in the Letter of Award.

42 As per the criteria stipulated in the bidding documents for evaluation of the bids, the tower weight were not to be factored, however, it was stated that the weight of the towers as furnished by the bidders in their bids were comparable, as can be seen from the following :-

Tower Type	Estimated total approx. tower weight(MT)			
	COBRA	SAE(RPG)	KEC	VATTENFALL
A	15.09	14.35	15.52	16.21
B	17.7	17.72	16.68	19.06
C	22.15	20.97	21.66	22.29
D	24.73	23.55	23.02	26.30
E	35.73	35.44	35.65	34.39

43 Elaborating further, CMD during briefing stated as under :-

> "If you take a look at the weight quoted by various bidders, estimations of them are within 10% to 15%. Therefore, it cannot be said so. However, no tenderer would do detailed design his tower or design his project before project is awarded to him because designing involves a lot of expenditure, and the tower has also got to be tested because without testing, a tower is not accepted, then it means crores of rupees would have to be spent by these contractors before bidding and nobody does like that".

44 When enquired what was the tower tonnage estimation in the tender based on which M/s Cobra was awarded the contract, the Committee were informed that as per the Bidding Documents the Bidders were to quote prices for entire scope of work including towers on number basis and the lowest evaluated & qualified bidder was to be considered for award. Accordingly, Cobra was

considered for award on lowest evaluated Bid and not on the basis of tower tonnage indicated in the bid.

45 When asked what was the total tower weight of each approved design for each type and which type of Tower (A, B, C or D) was finally approved, the Committee were informed that the weights of the towers as per successfully tested and approved designs are as follows :-

Tower Type (Std.)	Tested Tower Weight (MT)
A	16.99
B	21.86
C	26.30
D	33.69
E	52.29

All the 5 type of towers were approved as per specification requirements.

46 On the question of variation in tonnage of the successfully tested towers with respect to that in tender estimates by PGCIL, the Company in a written reply informed as under :-

> "As per the provisions of bidding document, Cobra was required to supply successfully tested towers on number basis and not tonnage basis. The tonnage for each type of tower indicated in the Bid was only for information purpose and any variation w.r.t. successfully tested tower to meet the specification requirements was the sole responsibility and liability of Cobra. Hence the variation analysis in tonnage of successfully tested towers vis-a-vis tender estimates of Cobra was not called for."

47 As per the information furnished by Audit, PGCIL has stated that besides designs deficiency, the other major constraints in modification of the design was that the contractor cast the tower foundation works even before freezing the tower design.

When the Committee desired to know whether the Contractor took approval of PGCIL for the same , it was informed that it is a normal practice in the transmission line construction Industry to commence casting of foundations as soon as the tower geometry and theoretical designs of towers through structural analysis are completed. This approach in the industry enables effective use of time available between completion of tower designs and its testing and also facilitates commencement of tower erection as soon as towers are tested and supplied. Power Grid allowed M/S Cobra to follow the above mentioned practice at their request to expedite project execution. However, any liability arising out of this was to the account of M/S Cobra only.

48 Audit has observed that M/s Cobra had no experience of execution of projects of 800 KV lines and had passed the pre-qualification and bid evaluation stage because no technical scrutiny was made by the Company with respect to weight of the tower. Consequently, there were repeated failures in design and testing of towers, resulting in avoidable delay of 23 months. Further, due to increase in weight of the tested towers up to 46 per cent over the estimated weight, M/s Cobra demanded compensation for the increase in cost, which led to delay of 7 months. This resulted in total avoidable delay of 30 months in completion of KMTS which increased the project cost by Rs.217.22 crore on account of interest on borrowed funds and escalation in price including exchange rate variation.

49 To a query why there were repeated failures of the tower, CMD Power Grid while deposing before the Committee stated as follows :-

> “This transmission structure is a unique structure. It is having more than 1500 members. There are several joints which are tied up with the bolts and nuts. Theoretical analysis alone does not reflect structural behaviour of members / joints in all the three directions. Therefore, proto type testing is conducted. There are 1500 members and each member is having joints. There will be load at every joint; there will be movement in the joint. So, it is a very complex analysis and that is how all over the world tower testing is carried out. It is a common practice. Failures have been observed during testing of towers designed by other contractors, as well as by Power Grid. Whatever the design being developed so far, in earlier projects also, failures had been seen. Recently, Power Grid has been developing the designs, and there are also a number of failures.
>
> I just give examples of N.Jhakri-Nalagarh 400 KV D/C Transmission Line where SAE (presently RPG), who is one of the leading contractors, had five(5) failures in DD tower. In Itarsi-Dhule 400 transmission line where KEC, who is also one of the major contractors, had three (3) failures in DB tower etc.
>
> In Power Grid lines, we have East-South Connector 500 KV HVDC, Talcher-Kobra – line – the failures are 1 each in A and B tower and 2 in C tower. Similarly, Tala 400 KV D/C (Quad), there are three (3) failures in DC towers. Recently, in Sipat 765 KV S/C – Power Grid has just developed a design where the failures are 2, 2, 3 and 1 in A, B, C and D towers respectively. Likewise, in Sipat 400 KV Quad, there are five (5) failures in DC towers. Thus quite a number of failures are there during testing. I think, failures during testing is a common phenomenon.”

50 The Committee pointed out that the contractor demanded compensation in violation of terms of the contract which stipulated that variation in tonnage (which is 12 to 46% higher) of the successfully tested tower with respect to that in tender estimates be absorbed by the contractor. When asked to state the reasons advanced by the contractor for demand of such compensation, the Company in a written reply furnished to the Committee stated as under :-

> "As per the provisions of the Contract, the contractor was required to supply successfully tested towers on number basis and not on tonnage basis. Similarly, the Contract also stipulated that payment for towers be made on number basis and not on tonnage basis. Therefore, any increase in weight of the successfully tested tower with respect to that in the contractor's tender estimates was the sole responsibility and liability of the contractor.
>
> The Contractor claimed that the payment should be made for the towers as per actual weight of the towers which was contrary to provisions of the contract as explained above and therefore was not tenable. The claim was turned down by the Dispute Review Panel (DRP) also."

51 It has been stated that at the techno-commercial stage, M/s Cobra, Spain which participated in both packages and emerged the lowest responsive bidder in both the packages, had proposed to sub-contract part of the work to the Indian firms.

When asked as to whether the Company carried out any assessment of the fabricators capabilities of the tower identified by M/s Cobra, the Committee were informed that assessment was carried out. The Assessment Committee, constituted for this purpose, concluded in its report that Cobra's ability based on the three fabricators falls short with respect to the full fabrication quantity (30,000 MT) under the package and the three fabricators combined may be able to execute a quantity of about 1000 – 1100 MT per month which qualifies them for one package only out of the two packages. It has also been informed that the fabrication facilities available with the identified sub-contractors of M/s Cobra were not found adequate for implementing both the packages in time. Hence, Board of Directors of Power Grid approved award of one package on M/s Cobra and second package on second lowest bidder i.e JV of M/s.SAE.

The award recommendations were forwarded to the World Bank in August, 1994 for their concurrence, which was pre-requisite for awarding the contract. The Bank, however, did not agree with the award recommendation of Power Grid and appointed an independent Consultant, Mr. E.Ghannoum (of Hydro Qubec, Canada) to examine recommendations of Power Grid.

52 When inquired about the opinion of the consultant Mr. E. Ghannoum appointed by World Bank for review of the Evaluation Report, the Company furnished the relevant extracts of the findings of the Consultant in regard to award of both the packages to M/s Cobra given hereunder:

> "The award of both packages to Cobra appears to be the most economical solution to Power Grid, although by a small margin, compared to the combination of Cobra (Package-A) and SAE (Package-B), i.e., Rs. 2,261 million Vs. Rs. 2,318 million."
>
> Based on the facts that Cobra is a new comer to the Indian scene and that Power Grid has found Cobra steel sub-contractors capable to fulfill the Tower needs for both packages, the Writer subscribes to the recommendation of Power Grid to award Package-A to Cobra and B to SAE. This might result in 2.5% additional cost compared to award of both packages to Cobra, but appears to be the only reasonable solution under the said circumstances, given the risk involved, the importance of the Project and the deficiency in steel supply of both contracts by Cobra.
>
> This decision of the OPRC to ask for a confirmation by Cobra regarding their capability of supplying towers for only one package will hopefully shed all doubts regarding award of only one contract to Cobra."

53 When asked the reasons why the Company could not prevail upon the World Bank to accept its recommendation of awarding only one line to M/s Cobra, the Company in a written reply to the Committee informed as follows:-

> "According to the World Bank Loan agreements signed by Government of India/Borrower, the procurement procedures/guidelines of the funding

agency were to be followed, and the concurrence of the World Bank was a pre-requisite for Award of the contracts. Power Grid's recommendations were for award of only one line to Cobra. All efforts were made by Power Grid in this regard and even a team was deputed to the Bank for the same. The Team took up the matter with the Consultant appointed by the World bank to review the evaluation and with Operating Procurement Review Committee (OPRC) of the Bank, which is its highest decision making body on procurement matters. However, the Bank did not agree with Power Grid's recommendations, though the Bank's consultant had agreed with it. The situation encountered was deliberated by the Board of Directors of Power Grid. Finally, Power Grid had to award the Contract for both the packages on Cobra, approved by Power Grid's Board of Directors.

Under the situation, the other alternative with Power Grid could have been to take out the package from the World Bank funding and fund it through internal resources/domestic borrowing. Power Grid at that time was not in a position to raise the required funds on its own through internal resources. Further, the funds from the domestic market were not forthcoming and were expensive. It is evident from the fact that Power Grid's bonds issued during the said period were under-subscribed. Besides the above, in Domestic Market only short tenure loans of 5 to 7 years, that too at very high premium, were available which were not suitable for infrastructure projects like transmission lines. On the other hand the World Bank loan tenure was for 15 years including grace period besides being substantially economical. In the context of the above constraints Power Grid was not left with any other alternatives than to avail the World Bank Loan."

54 On being asked if it was obligatory to accept the decision of the World Bank in the selection of bidders even though responsibility for the project execution lies with PGCIL and not with the Bank , the Power Grid in its written reply stated that to avail the World bank Loan, as per the Loan Agreement signed between Govt. of India and the World Bank it was obligatory for Power Grid to conduct the procurement as per the terms and conditions of the Loan Agreement. As per the conditions stipulated in the Agreement, the procurement was required to be undertaken through International Competitive Bidding (ICB) in accordance with procedures set forth in Sections I & II of the "Guidelines for

Procurement under IBRD Loans and IDA Credits" published by the Bank in May, 1985.

Regarding role of the Bank in project execution, it may be mentioned that the physical progress as well the progress in financial disbursement of each package under a project is monitored by the Bank through Quarterly Progress Report to be sent by Power Grid. Further the Bank also deputes its missions to the projects from time to time.

55 In this regard, the Ministry of Power in a written reply informed the Committee as under :-

> "Regarding award of packages for both the transmission lines to M/s Cobra, according to the loan agreements with the World Bank, the procurement procedures/guidelines of the funding agency were to be followed and the concurrence of the World Bank with respect to bid documents and award of the contracts was a pre-requisite. PGCIL had selected M/s. COBRA for one package only as it was doubtful whether they would be able to execute both the lines simultaneously in time. The independent consultant appointed by World Bank to review the same had also endorsed the view point of PGCIL. However, World Bank insisted that since M/s. COBRA was the pre-qualified least evaluated bidder for both the lines, the award of both the lines be placed on M/s. COBRA and in case M/s. COBRA refused to accept both the packages, their bank guarantees be encashed by PGCIL. PGCIL approved the award of both the lines to M/s. COBRA in line with the recommendations of the World Bank."

F. DISPUTE OF POWER GRID WITH M/S COBRA

56 In the background note furnished by Power Grid, it is stated that initially M/s Cobra, faced problems in finalising their sub-contractors in India. By the time they could resolve these issues, they faced serious difficulties in testing of towers. In the process of their efforts to optimise tower weights the towers initially designed by the Contractor repeatedly failed in testing. Consequently, as the dates for testing in India were not available, they were, thus, forced to shift the testing venue to a test bed in Spain. The testing could be successfully completed in July, 1997. This resulted in a delay of almost two years consequently delaying supply of towers and erection thereof.

The actual weight of the tested towers had gone up, over the estimated weight in the bids. Since Cobra had finalized with their sub-contractors payments on per ton basis, they demanded additional payments on account of change in weight of towers from Cobra. This apparently had resulted in additional cost to Cobra as under the respective contracts between Power Grid and Cobra the payment was to be made on per tower basis irrespective of weight of towers, hence no additional payment was payable on this account to Cobra.. Moreover, Cobra was to pay to its sub-contractors progressively on tonnage basis whereas Cobra were eligible for payments from Power Grid only on completion of the tower resulting in mis-match in cash flows at their end.

57 When asked what were the problems faced by M/s Cobra in designing and testing of 800 KV class towers, Power Grid in a written reply to the Committee

stated as under:-

> "There were no problems in designing of towers by Cobra. Proto-type testing of first tower (A type) was arranged by Cobra in Indian testing stations. During testing, premature failures were observed necessitating retesting after suitable reinforcements in the existing designs to meet the provisions of the technical specifications. Due to limited number of test beds and many projects concurrently under execution in the country, suitable time slots for retesting of the A type tower & testing of balance four towers in Indian testing stations could not be obtained by Cobra. Therefore, the tests were arranged by Cobra in testing station in Spain. Pre-mature failures of proto-type towers were observed during testing in Spain also as the contractor was required to reinforce the towers without affecting its compatibility with foundations. The successful testing of all the towers in the above manner prolonged the testing process and its completion.

58 On the issues which resulted in the disputes between Power Grid and M/s Cobra, it has been stated that plagued with delay in testing of towers, additional demand of payment from their sub-contractors and mis-match in cash flows, Cobra had raised number of disputes and claimed additional amount (to the tune of Rs.150 crore) including seeking time extension, which was not agreed by Power Grid as the same was not tenable under the contracts. The issues had been deliberated at various levels and despite Power Grid's best efforts Cobra did not reconcile resulting into a dispute which is required to be dealt as per the provisions of Contract.

59 It has also been informed that M/s Cobra raised disputes on 25 issues and additional claims to the tune of about Rs.1500 million besides claim for time extension of 36 months with price variation. These disputes and claims were referred to Dispute Resolution Panel (DRP), comprising of members one from Cobra, second from Power Grid and third Mr. E. Ghannoum of Hydro Qubec,

Canada (who is an international reputed transmission line expert) was appointed as Umpire with the approval of other two members of DRP.

Out of the 25 issues, the DRP could complete its hearings in 13 issues involving a claim of about Rs.800 million by M/s Cobra. The outcome of the same is briefly summarised below:

a) The award / interim award of DRP was against Cobra in 9 issues, which involved claim of about Rs. 700 million. These issues inter alia included the issues of Additional Tower Weight (Rs.430 million), Foundation Volume (Rs.125 million) and Change in Design Concept (Rs.73 million).

b) In the remaining 4 issues, the award/ interim award of DRP was in favour of Cobra. These issues inter alia included the issues of Price Variation and Deductions towards nuts and bolts.

The remaining issues, which included the issue of time extension (claim of Rs.641 million), could not be heard by DRP.

Even before all claims could have been deliberated by DRP, M/s Cobra issued suo-moto notice of termination of contracts in DRP proceedings. Immediately, Power Grid to protect its interest lodged claim for encashment of bank guarantees of M/s Cobra. Power Grid, in consultation with the Solicitor General of India, took appropriate action to safeguard the interests of the Corporation and terminated the contracts in July, 1998. As a result of the above stand taken by Power Grid and its skillful handling of the situation had forced M/s

Cobra to withdraw its claim and opt for an amicable settlement. The then Ambassador of India in Spain had also mediated for amicable settlement.

60 After termination of the original contract, Power Grid signed a supplementary agreement in October, 1998 reviving the earlier contract. When the Committee desired to know what led the Power Grid to sign a supplementary agreement in October, 1998 reviving the earlier contract after termination of the original contract, the Company in a written reply furnished to the Committee informed as follows :-

> "M/s Cobra on 1 July, 1998 issued a notice for termination of the Contracts and also obtained injunction from Hon'ble Delhi High Court prohibiting Power Grid from encashment of Cobra's Bank Guarantees. As per the contract, Cobra needed 30 days notice to terminate whereas Power Grid's notice period was 15 days. To safeguard the interest of the Corporation and the Project in the best possible manner, Power Grid was compelled to issue Notice dated 14 July, 1998 for termination of the Contracts. Against injunction from encashment of bank guarantees, Power Grid had also taken up the case in the court. In the meantime, Cobra had sent a letter to Power Grid indicating that they wish to seek an amicable resolution.
>
> The legal actions were taken in consultation with and advice of eminent legal experts, Dr. L. M. Singhvi and Mr. Soli J. Sorabjee, Attorney General of India who had also advised that communication channel for negotiations be kept open.
>
> For further decision in regard to the course of action to be followed in the situation encountered, a Committee was constituted to submit a detailed proposal analyzing various alternatives/options available for completion of the balance works considering the pros and cons and cost benefit of each option. After detailed analysis of the alternatives which could be considered for getting the balance work executed, considering the cost benefit of the alternatives and keeping in view the least cost option, the committee recommended settlement of issues and negotiations with Cobra. The recommendations of the aforesaid committee were considered by a High Level Review Committee of Directors/Executive Directors of POWER GRID who agreed with the same and this line of action was also considered appropriate by the Board of Directors of Power Grid.

The High level Review Committee held several rounds of "with out prejudice" discussions with Cobra for reaching a negotiated settlement. The Board of Directors of Power Grid also directed that the ongoing negotiations be concluded with Cobra and an agreement, legally enforceable, may be entered into with them based on the broad terms / understandings so reached, on overall basis, with Cobra.

While the discussions were in progress, Cobra, on 13.08.98, the date fixed by Hon'ble Delhi High Court for delivering the decision on bank guarantee issue, withdrew its case and the stay on encashment of Bank Guarantees was vacated. Thereafter, almost all the major issues with Cobra were settled and the Supplementary Agreement reviving the Contract was signed in Oct' 98. The Board of Directors of Power Grid had also approved and ratified the execution of the Supplementary Agreement. The World Bank was kept fully apprised of the developments."

61 When enquired about the new terms of the Supplementary Agreement, the Committee were informed that the terms of the Supplementary Agreement signed with M/s Cobra briefly summarized are given below :-

a) "The Notices of Termination issued by both the parties shall stand withdrawn.

b) All the issues which were raised before DRP, including those on which DRP awards have been given, stand withdrawn without any extra financial compensation to COBRA and shall be deemed finally settled except the one pertaining to price adjustment which shall be dealt as per the point (c) given below.

c) The respective price adjustment provisions as stipulated in the Principal Agreement shall remain unchanged and the same shall be applicable and governed only by the work schedule as per the Principal Agreement. No additional Price Adjustment shall be payable to Cobra by Power Grid on account of extended period under the Principal Agreement and the Supplementary Agreement. Further, Price adjustment on Ex-works portion of supply contracts shall be payable to Cobra as per the provisions of the respective Principal Agreement in accordance with the work schedule and in line with the enclosed methodology for price adjustment calculation.

d) The Time Extension, without additional PV, shall be re-fixed to March 2000 for CKT-I & to Dec. '2000 for CKT-II. However, price variation provisions shall continue to be governed by original schedule given in respective LOAs.

e) Time is the essence of the Contract and the same shall be strictly construed according to the re-fixed schedule given above. LD for delay shall be applicable with respect to re-fixed schedule.

f) Insurance policies shall be obtained by COBRA for extended period at no extra cost to Power Grid. However, the insurance charges towards owner's supplied material shall continue to be on Power Grid's account.

g) Two nos. expired BGs towards final payment shall be renewed by Cobra. CPG and BG for advance shall also be extended by them in accordance with the revised schedule at no extra cost to Power Grid.

h) No further portion of payment shall be made in Spanish Peseta. No amount can be expatriated to Spain till completion of contract. Any additional fund, if required, to complete the project shall be made available by Cobra.

i) Consent of Power Grid to Cobra for engaging KEC and Kalpataru as subcontractors, as per the provisions of the Contract.

j) Cobra shall continue to fulfill its obligations under the Principal Agreements as well as the Supplementary Agreement and not stop or interrupt the execution of the works notwithstanding any dispute between the parties."

62 When asked whether any compromise was made with regard to the interpretation of price variation clause of the contract, the Committee have been informed that as per the original Contract, the price variation provision for Ex-works portion of supply Contracts (applicable on fabricated tower parts), was as specified under Clause 6.0 of the Letter of Award for 'Supply Portion' of the packages. The formula for this purpose was inter-alia based on the indices for raw material (i.e., steel and zinc) and labour. As per the Supplementary Agreement, the respective price adjustment provisions as stipulated in the original Contract remained unchanged except for change in calculation

methodology for Ex-works portion of supply Contracts (applicable on fabricated tower parts). This change was included in the Supplementary Agreement due to the following:

i) On interpretation of the methodology, prior to the Supplementary Agreement, there were differences between Power Grid and Cobra in regard to two of the components / factors to be used in the price variation (PV) formula in the original Contract. The two components / factors were (i) P_0 - Ex-works price component less advance for completed towers, and (ii) f - Exchange rate correction factor.

ii) As per the Contract, some portion of the total ex-works price (which was in Rupees) was payable in Spanish Peseta at the exchange rate given in the Contract.

iii) Regarding 'P_0', Power Grid's interpretation was that it did not include Spanish Peseta portion of the ex-works price as the same, as per the Contract, was for engineering, design, financial cost, project management etc., and therefore would not be applicable for the purpose of PV for raw material/ labour of tower parts. Cobra's view was that 'P_0' is the Ex-works price as indicated in the original Contract less advance, and no deduction for the Peseta portion was applicable.

iv) Regarding the exchange rate correction factor 'f', Power Grid's view was that the same will not be applicable as Cobra did not furnish supporting documents in respect of import expenditure in foreign currency for raw materials. Cobra, however, contended that for the 'f' factor as per the formula given in the original Contract, no proof of import was required.

v) Cobra had referred the aforesaid dispute to the Dispute Review Panel (DRP) who by a majority decision, decided the issue in favour of Cobra. DRP held that the correct interpretation of 'P_0' was the unit ex-works price given in original Contract less advance and 'f', the exchange rate correction factor, was clearly defined in the original Contract and asking for documentary proof of imports is not within the scope of the Contract. Thus, as per DRP, price variation was applicable on total ex-works price less advance irrespective of the Rupee or the Peseta portion with 'f' factor applicable on the entire value of ex-works price less advance.

vi) The matter regarding the DRP award on price variation had been considered by the Board of Directors of Power Grid who had inter-alia noted that, if needed, the DRP award can be reviewed subsequently keeping all the relevant aspects in view, for a negotiated settlement. During the process of arriving at a settlement with Cobra, different issues including those referred to the DRP were discussed. After lot of deliberations and continued stalemate, the methodology for calculation of Price Variation (as given in the supplementary agreement) was agreed to during the negotiations on an overall basis. The Board of Directors of Power Grid had directed that the ongoing negotiations be concluded with Cobra and a legally enforceable agreement may be entered into with Cobra on overall basis, and had subsequently approved and ratified the execution of the Supplementary Agreement.

It has also been informed that methodology finally adopted in supplementary agreement is in line with Power Grid's interpretation on the PV for Rupee component. On the Spanish Peseta component, the amount of PV worked out based on the methodology is 87.5% of the amount worked out as per the DRP decision.

63 When asked whether any financial implication of the decision was assessed keeping in view the expenditure in terms of interest on borrowings, change in price level index, etc., the Company in a written reply intimated as follows :-

"Consequent to the notice of termination of Contract dated 01.07.98 of Cobra and the litigation brought in by them, POWER GRID was compelled to terminate the Contract vide its Notice dated 14.07.98. The legal actions were taken in consultation with and advice of eminent legal experts, Dr. L. M. Singhvi and Mr. Soli J. Sorabjee, Attorney General of India who had also advised that communication channel for negotiations be kept open. Cobra had sent a letter to Power Grid indicating that they wish to seek an amicable resolution.

For further decision in regard to the course of action to be followed in the situation encountered, a Committee was constituted to submit a detailed proposal analyzing various alternatives/options available for completion of the balance works considering the pros and cons and cost benefit of each option. It was opined by the Committee that under the circumstances, three alternatives which could be considered for getting the balance work executed were :

(i) Alternative I- Work execution through other agency selected under World Bank Funding;

(ii) Alternative II- Work execution through other agency selected under Domestic Funding.

(iii) Alternative III- Work execution through Cobra itself (by negotiations).

The factors considered for analysis by the committee are briefly mentioned below :-

a) Time schedule for execution of balance works:-

Alternatives I & II were estimated to take additional period of around 9 months for finalising a new agency.

b) Cost Benefit Analysis:-

Alternative III was found to be the least cost option. The analysis took into account inter-alia the cost effect of various taxes & duties, price variation, deemed export benefits under World Bank funding, insurance premium on project cost for the extended period and miscellaneous expenditure towards stores and watch & ward during the period for fixing up a new agency.

c) Analysis of issues involved in execution of balance works through other agencies:-

The issues analysed inter-alia included reconciliation and taking over of stores from Cobra & its sub-contractors, likely change of tower fabricators which would affect the supplies, hindrance due to pending litigation/court stay if taken by Cobra and their cost, remobilization at site by the new agency, delayed availability of transmission system, liabilities of Cobra's sub-contractors to be borne by Power Grid as Principal Employer, non-acceptance of warranty obligations by the new agency for the works already executed by Cobra, time and cost overrun and additional liability due to aforesaid in case of new agency.

The Committee recommended negotiations with Cobra under Alternative III above.

The recommendations of the aforesaid Committee were considered by a High Level Review Committee of Directors/Executive Directors of Power Grid who agreed with the same. The line of action was considered appropriate by the Board of Directors of Power Grid who inter alia directed that the negotiations be concluded with Cobra.

G. ROLE OF MINISTRY OF POWER

64 During the deposition before the Committee, Secretary, Ministry of Power while discussing the role of the Ministry with regard to the projects funded by multilateral agencies stated as under :-

> "…………So far loan negotiations and terms and conditions of the loan, we are involved; for project appraisal, Public Investment Board, Ministry of Power and Ministry of Finance are associated; for sanctioning of the projects, Cabinet Committee on Economic Affairs is the empowered group. But, in tendering evaluation and award, it is the Board of the Company."

65 When the Committee desired to know whether the Ministry has an exclusive Monitoring Cell for overseeing the implementation of project of the PSUs under their aegis and for taking remedial measures where necessary, the Ministry in a written reply stated as under:

a) A Project Monitoring Cell exclusively to monitor the externally aided projects was established by Ministry of Power in October, 1996.

b) A mechanism of quarterly review of externally aided projects by the Ministry of Power has been started since April, 1998. Any difficulties or other implementation issues as well as the progress is reviewed in these meetings.

c) Since 2003, a mechanism of bi-monthly meetings with Heads of CPSUs in Ministry of Power has also been started. The agenda for these meetings is suggested by the CPSUs and, therefore, this meeting also gives a platform to Heads of CPSUs to bring to the notice of Ministry of Power any important implementation problem like the one in this particular case.

d) The progress of implementation of various power projects under Ministry of Power is also reviewed in the Quarterly Performance Review meetings taken by Secretary, Ministry of Power.

e) Ministry of Power does not monitor the matters relating to award of contracts for implementation of the projects as such matters are within the purview of the Corporation.

66 After noting that M/s Cobra was able to execute only one line, Power Grid recommended World Bank to award one of the lines to M/s Cobra and the other one to SAE. However, upon World Bank's insistence, both the packages were awarded to M/s Cobra. When asked why the matter was not taken up with higher level of World Bank by the Ministry of Power, the Ministry, in their written communication stated as follows :-

> "Ministry of Power is of the view that in a situation when PGCIL was fully convinced about its own line of action and that in spite of World Bank consultant also suggesting division of work, it was a fit case to have been brought to the notice of Ministry of Power to take it up with higher level of World Bank through Department of Economic Affairs. This approach could perhaps in such cases would have been better for PGCIL."

67. On enquiry by the Committee in response to Ministry of Power's observation, Power Grid in written communication have stated as follows:-

> "The responsibility for award of contracts in a Company, registered under the Company Act, vests with its Board of Directors. Power Grid's Board of Directors at that point of time, when the award of KMTS contracts were finalized, had two Government Directors one being Joint Secretary & Financial Advisor from MoP and other Member (Power Systems), CEA. On procurement related issues, there was no practice of taking-up the matter formally to MoP. The same has also been confirmed by the then CMD and Executive Director (Contract Services & Personnel) with whom the issue was taken-up.
>
> The then CMD and the then Executive Director (Contract Services & Personnel) who were in office at that time, have stated vide their letters dtd 03.02.05 that making formal reference to MoP in procurement cases was not a practice and complicated purchase cases used to be discussed only informally with MoP at different levels. The Executive Director has also mentioned that, ' the decisions were taken by the Board of Directors after due deliberations which also comprised of representatives from MoP Govt of India.'
>
> The then CMD has also stated that, ' in this particular case there was delay in final decision in view of prolonged discussions with World Bank,

> the issue came for informal discussions in the Ministry both at Secretary and Minister level'. The same could further be noted from the Agenda Note of KMTS contracts that was put up by the then Executive Director (Contract Services & Personnel) to the Board of Directors of Power Grid in Jan 1995, wherein the following has been brought out: Subsequent to the visit of team, CMD, Power Grid as well as Secretary (Power) requested Bank to expedite their concurrence as all the queries/ clarifications further sought by the Bank were replied by Power Grid.
>
> It may be seen that the case has been dealt with in line with the prevailing practices at that point of time."

68 The Committee pointed out that Deptt of Public Enterprises has prescribed a Quarterly Performance Review (QPR) system by which the performance of each public enterprise particularly the miniratnas and navratnas are reviewed by the Secretary himself. When asked why during the QPR this fact could not be brought out, the Secretary, Ministry of Power during the evidence stated that :-

> "………………We do have system of quarterly performance review. For every three months, we review the performance of the public undertakings. In retrospect, one would see that when the contract discussion was going on in the Board, it might be that during the intervening period, it might have happened. We can also appreciate that this was going on. Obviously this item did not figure in the quarterly performance review".

69 In reply to a specific question whether the responsibility lies with the Power Grid Corporation for the excess expenditure, the Secretary, Ministry of Power during evidence stated as under :-

> "In the Ministry's view the responsibility lies with the Power Grid for extra cost".

70. Power Grid in their briefing to the Committee in response to Ministry of Power's observation have stated that whosoever will execute the project, the pain and pleasure of the project would come to that agency only. Power Grid

further stated that it should be seen as to under what circumstances, Project has been commissioned. PIB and inter-ministerial group have examined in detail and have complimented the effort made by Power Grid to bring the project back on rails.

71 When asked about the Government nominees' role on the Board, the Secretary, Ministry of Power during evidence stated as under:-

> "We have gone into detail as to who were the members from the Ministry. From the Ministry we had only one member and one from the Central Electricity Authority. It so happened that one member of the Ministry who was the then Joint Secretary – this happened to be just the first meeting – I can only report what happened then. Obviously, this point has been raised by another hon. Member whether this was brought to the notice of the Ministry. We have examined the whole file. No member of the Board from the Ministry or from the Central Electricity Authority brought it to the notice of the Ministry that such and such thing is happening and that follow up is required to be done………………..".

H. REVISED COST ESTIMATES (RCE)

72 In regard to Original Approved Cost, Revised Cost Estimate, Price Escalation, IDC etc., the information furnished by Power Grid to the Committee is as under :-

Original Approved Cost

Ministry of Power, Govt. of India had approved the construction of 2x800 KV single Circuit Kishanpur –Moga Tr. Lines as a part of Northern Region Transmission Project at an estimated cost of Rs.417.71 Crore (at Q2/1992 Price Level). The implementation schedule for the Project was March, 1998. The broad break-up of the approved Project cost estimates are as follows:-

		(Rs. in Crore)
i)	Transmission lines	321.02
ii)	Sub-Station	32.71
iii)	Civil Works	7.40
iv)	PLCC Equipments	1.46
v)	Others	53.12
vi)	IDC	2.00
	Total	**417.71**

Revised Cost Estimate

As per the FR approval, the project was scheduled to be completed in March 1998. In view of the difficult situation confronted during the project execution for a number of reasons which were beyond the control of POWER GRID as explained, the project implementation was delayed. The administrative approval for Revised Cost Estimate (RCE) for the project was given at an estimated cost of Rs.938.48 crore including IDC of Rs.310.44 crore (Q4/1999

Price Level). The revised implementation schedule as per said approval was March, 2000 for one Circuit and January, 2001 for another Circuit.

The total increase in cost in RCE was worked out to Rs.520.77 Crore with respect to original FR cost of Rs.417.71 Crs. During the process of GoI approval for RCE, the project time and cost over run were analyzed in detail by Inter – Ministerial GOI Standing Committee on Time and Cost over run comprising of members from MOP, Planning Commission, Ministry of Finance & Ministry of Program Implementation.

The said Standing Committee had examined the attributable reasons of cost variation. The Committee observed that out of total increase of Rs. 520.77 crore, the increase on account of allowable fiscal factors within the Project Time Cycle (i.e. GOI approved schedule of March ,1998) is Rs. 250.31 crore i.e. 59.92% of the sanctioned cost as per the breakup given hereunder :-

i. <u>Price Escalation</u>

This increase was due to general price escalation during the intervening period from 1993 to 1999. There has been increase of 26% to 75% change in various raw material and wholesale price indices. The total increase in cost due to price change is Rs.151.29 crores.

ii. <u>Taxes and Duties</u>

There had been an increase of Rs.15.41 crore in the project cost due to the changes in the taxes and duties applicable on the supply items.

iii. <u>Foreign Exchange Rate Variation</u>

Due to the increase in the Foreign Exchange Rate of various currencies against Rupee, there is an increase in project cost by Rs.28.51 crore.

iv. <u>Centages</u>

The centages on the project was initially considered on the basis of the percentage of the equipment cost whereas in the RCE, centages had been worked out on actual and the same was less by Rs.15.21 crore than the estimates.

v. <u>IDC</u>

There had been increase in IDC of Rs.70.30 crore during the Project Time Cycle. In the initially approved project cost, a provision of Rs. 2 crore was kept towards IDC based on the Debt Equity ratio of 1:1 with the assumption that equity shall be employed first, followed by debt. It was also assumed that part of the project i.e., one Ckt. of Kishanpur– Moga will be commissioned within the PTC and the revenue realized will be charged to the project cost. However, during the execution of the project, the debt: equity ratio became even higher than 4:1 with debt and equity flowing simultaneously resulting in increase in IDC. Further, no revenue of any circuit was charged to Project Cost.

The Power Grid also stated that the increase in cost beyond *Project Time Cycle (PTC)* due to non allowable fiscal factors was then worked out to Rs.270.46 Crore, mainly on account of change in IDC of Rs.238.14 crore and quantity variation of Rs.29.78 crore. Remaining amount of Rs.2.54 crore was due to price escalation and change in centages**.**

Final Executed Cost

Both the circuits have since been commissioned in May, 2000 and January, 2001 respectively at a total cost of Rs.857.63 crore, which is lower than approved RCE cost of Rs.938.48 Crore.

After offsetting *Rs.250.31 Crore* towards *allowable fiscal factors within Project Time Cycle (PTC)* as per RCE as brought out above, it may be observed that the increase in actual project cost *beyond Project Time Cycle (PTC)* works out to Rs.189.61 Crore only, which is mainly attributable to increase in IDC.

73 When sought to know whether the matter of delay and increase in Interest During Construction (IDC) came to the notice of the Government nominees in the Board of Directors, the Ministry of Power in their written reply stated that

> "The matter regarding delay in implementation of the project was brought to the notice of the Board of Directors of PGCIL in the 71st meeting of the Board held on 9th March, 1998 which was attended among others by the then Government nominees on the Board of PGCIL. In the same meeting, the Board decided to engage two eminent experts (a retired Judge of Supreme Court/High Court or Senior Advocate of Supreme Court/High Court and another expert in the field of financial or commercial matters) to advise and render opinion to PGCIL on the Dispute Review Panel (DRP)'s awards in the subject contract. Accordingly, opinions were sought by PGCIL from Shri S.R. Singh, Ex. Addl. Secretary, Ministry of Finance and Shri K. Parasaran, Ex. Attorney General. Based on the opinions of these experts, PGCIL took decisions regarding acceptance or otherwise of the recommendations of DRP."

74 In reply to the question whether any time and cost overrun analysis was done by CEA, the Ministry stated as follows:-

> "Much before the Audit observation, while examining the revised cost estimates of the project in the year 2001, Ministry of Power got an analysis done by CEA on the time and cost overrun for this project. On examining the report of the CEA in this regard, it was observed that greater attention to the technical specifications at the time of bidding could have helped in obtaining reasonable price and quality. PGCIL was accordingly instructed vide Ministry of Power's letter dated 7.8.2001 to take suitable corrective action to improve the system and procedures in a defined time frame to avoid such deficiencies in the implementation of the projects. Thereafter, PGCIL prepared a manual on 'Work & Procurement Policy and Procedure' for streamlining future procurements and award of contracts in a transparent manner. These facts along with the reply dated 4.9.2001 of the PGCIL explaining their stand in this regard were also placed before the Cabinet Committee on Economic Affairs while seeking their approval to the revised cost estimates of the project. The revised cost estimates were thereafter approved by the Government."

75 According to Audit Para, the Central Electricity Authority (CEA) observed that the original design of the tower of the firm was substantially below the required level.

Commenting on the observation of the CEA, Power Grid in its reply stated as under :-

> "The observation of CEA that the original design of tower of the firm was substantially below the required level is not correct as the tower weights of Cobra was comparable to the other bidders who were in the consideration zone including Vattenfall who had experience of design & construction of 800 kV towers."

76 In the Brief submitted to the Committee it has been informed that the Time and Cost overrun (Revised Cost Estimate) was also examined by an Independent Committee on Time & Cost Over Run set up by GOI comprising of Members from MOP, Planning Commission, Ministry of Finance, Ministry of

Program Implementation and their relevant observations are reproduced as under:

> "The Committee observed that in the difficult situation confronted, all possible efforts have been taken by Power Grid which led to resolution of disputes and revival of the contract. Although, in the process, the project suffered a time overrun of 39 months with respect to originally approved time cycle… .. The Committee also feels that the delay was beyond the control of Power Grid."

77 The Committee observed that pursuant to the letter dated 7 August, 2001 of the Ministry of Power to take suitable corrective action to improve the system and procedure in a definite time frame to avoid deficiency in the implementation of the project, Power Grid prepared a manual on Works and Procurement Policy & Procedure for streamlining future procurements and award of contracts in a transparent manner. However, the CMD, Power Grid claimed during the evidence that it was only after the initiative taken by the Power Grid, the Ministry of Power have suggested to incorporate certain changes in the draft Works and Procurement Policy & Procedure of the Power Grid.

Clarifying the position further in the matter, Power Grid in a written reply informed the Committee as under :-

> "Power Grid's initiative for preparation of Works & Procurement Policy had formally commenced by January 2001. The appointment of Shri B.K. Banerjee, ex- Executive Director (Contracts and Material Management), Power Grid, the Advisor for this purpose was approved by Power Grid's Board of Directors in 113th meeting held on 24.01.2001. In the corresponding Background note put up to the Board it has been noted that, 'Power Grid, immediately after its formation , had adopted NTPC's policies on procurement as well as other policy document of NTPC for its Corporate functioning. These have subsequently been rationalized to suit the requirements of the Corporation. However all these need a re-look after our experience as transmission organization and moreover the Work & Procurement policy for Power Grid is yet to be evolved (presently

NTPC's policy in this regard are being followed). … Keeping in view Shri Banerjee's above background and experience, it is felt that his services may further be gainfully utilized for reviewing and preparation/ redrafting of various Policies and Manual for Power Grid.'

In May 2001, the 1st complete draft of the document covering the Introductory chapter and the Pre-award Section was ready. The aforesaid draft was circulated on 23.05.2001 to all the Executive Directors including the Regional and other Departmental Heads of Power Grid for their comments. After taking into account the comments received, the revised draft of the document was discussed in detail on 11.07.2001 at Corporate Centre with representatives of all the concerned departments. Various suggestions that emerged out of the discussions were incorporated in the draft and the same was circulated for perusal and feed back. Thereafter, on 18.07.2001, a presentation on the draft document was made before the CMD, Director (Finance), Chief Vigilance Officer, Executive Director (Engineering) & Executive Director (Contracts) of Power Grid.

The draft document so finalized was placed before the Board of Directors of Power Grid in July 2001 for consideration and deliberations. The Board, in its 119th meeting held on 13.08.2001, after a detailed presentation on the document by the Advisor before the Board, decided that the draft policy be further discussed with MOP and CEA members on the Board i.e. with Joint Secretary(S), JS&FA, MOP and Member (G&O), CEA, and any further suggestions given by them be incorporated in the Policy. The Board further directed that thereafter the policy as finalized be put up for approval to the Board.

After the discussions as directed by the Board and incorporating the suggestions of the Directors, the document was put up to the Board for approval. The Board in its 121st meeting held on 17.09.2001 & 24.09.2001 inter-alia approved the adoption of the aforesaid document for implementation in Power Grid. The document, under the title Works and Procurement Policies & Procedures, Vol.-I (September 2001), was thereafter issued in October 2001 for implementation in Power Grid. A copy of the same was also forwarded in October 2001 to the Central Vigilance Commission, Comptroller and Auditor General of India, PMO, Secretary (Power) Government of India and the World Bank and subsequently, it was uploaded on Power Grid's web site so as to make it accessible to all those concerned with Power Grid's business.

It may be seen that Power Grid had taken initiative for preparing the Works and Procurement Policy & Procedure, Vol-I in January 2001 and the document was finalized and approved for implementation by the Board of Directors of Power Grid in September 2001."

78 As regards considering KMTS as a system improvement project, benefit stream of KMTS had deviated from the originally envisaged benefit for the investment, as observed by Public Investment Board.

CMD, PGCIL, commenting on this observation, stated during briefing as under :-

> "This project, right from the beginning has been a system improvement line to evacuate pooled power from Kishenpur in J&K and evacuate it further. It was planned that about 5500 MW to 6000 MW power will be pooled at Kishenpur and then further evacuation will take place".

I. LESSON LEARNT AND REMEDIAL MEASURES PROPOSED TO BE TAKEN

79 With regard to the lessons learnt and subsequent directions issued, Secretary, Ministry of Power during evidence stated as follows :-

> "We have learnt a number of lessons and those lessons have been translated into some definite actions too. Like in this case, this was first 800 KV system in India. It depended on the provisions or stipulations, which were being suggested by the Consultant and by the World Bank. A definite provision – relating to the design, supply and construction – came under the total jurisdiction of the supplier. Now, there, one can say, the problem lies – should the design have been within the purview of the supplier ? Since it was in the purview of the supplier, they got into problems between mismatch of foundation, the profile of foundation, the weight of the tower. This contract was on the basis of rate of the tower. Tower will have a weight depending upon what type of foundation and what type of spread of foundation is chosen, the type of tower and the weight of steel that goes into the making of the tower. It was from there that the project started getting into difficulties. This gave us a big lesson. This was the first project but it gave us a hard lesson. It gave a lesson to the Power Grid also ; which gave the feedback to the World Bank. At the instance of the Ministry of Power, the Power Grid took up the matter with the World Bank. The Ministry of Power also took it up with the World Bank. It was finally accepted by the World Bank that the design would not belong to the supplier. So, thereafter, for each and every project of 800 KV being built in the country, irrespective of the source of funding, the foundation design and the tower design do not belong to the suppliers. That is a big lesson that has been drawn.
>
> Another lesson that has been drawn – and that again in retrospect – is that in future, if any of the sponsoring organisation or project organisation faces any difficulty – where they feel that their view is not being properly entertained or appreciated by the funding agency – it can raise the problem to the Ministry of Power and through the Ministry of Power, the Department of Economic Affairs. The DEA in turn can take up those problems at the appropriate level of funding agency. As a matter of fact, arising out of this case, since 1999, the Department of Economic Affairs has institutionalised a mechanism wherein every three months of post-negotiations and post-disbursement, it evaluates each project. If the project-implementing agency has any difficulty, it can use this forum to bring that difficulty out so that it may be taken up at appropriate levels. In the Ministry of Power too, we have a mechanism in which a meeting is held after every three months. We have an International Co-operation Group, which deal with funding by the ADB or the World Bank or JBIC,

etc. and this three monthly meeting takes care of problems that are brought to its notice by the implementing agency.

80 Adding further in this regard, the Ministry of Power stated in their written communication as follows -

> PGCIL based on its past experience of using standardised tower and foundation designs, took up the matter with the World Bank for adoption of standard in- house design which has since been agreed by them. Presently, PGCIL invites the bids and implements the transmission system both in domestic and external funding, based on the standardised and tested in-house tower designs and associated foundations. This has resulted in advantages like shorter project implementation schedules, better definition of the project scope at the time of bidding, reduction of inventories for O&M, participation from bidding community leading to competitive prices and less unforeseen contingencies during the execution etc.

81 When asked what action has been taken by the Ministry of Power to avoid recurrence of such happenings, the Committee were informed as under :-

> "The Ministry of Power had recently convened a meeting of Heads of CPSUs which are likely to avail or are availing loans from multilateral funding agencies. In the meeting, Secretary (Power) asked the CPSUs to make full use of the mechanism of quarterly review of externally funded projects by the Ministry of Power. Any difficulties being faced during implementation of such projects should be discussed during these meetings. Ministry of Power also emphasised that if any important matter needs to be brought to the knowledge of the Ministry even before the next review meeting, then it must be raised by the concerned CPSU."

82 When asked to give suggestions about the remedial measures to be taken in the matter and to ensure that such happenings do not recur, the Ministry in a written reply informed as follows :-

> The following remedial measures are suggested in this regard:
>
> (1) In awarding the contracts during implementation of the projects funded through multi-lateral funding agencies, the interest of the implementing Public Sector Undertaking should be paramount.

(2) In case there is any conflict in regard to the interest of the company, the matter should be taken up by the Company with the concerned funding agency and the Ministry of Power at the highest level.

(3) There should be a separate Cell in the Public Sector Undertaking for monitoring of the projects funded through multi-lateral agencies. The implementation of projects, particularly those funded through multi-lateral agencies, should be monitored regularly and any bottlenecks in implementation of the project should be immediately brought to the notice of Ministry of Power by the implementing PSU/agency. The Ministry of Power will immediately take up the matter with the concerned Ministry/Department/agency for taking remedial action.

J. WORLD BANK LOAN TO POWER GRID FOR OTHER PROJECTS

83 The Committee noted that apart from KMTS project, there were many other such projects which were implemented with World Bank assistance (Reply to Lok Sabha Unstarred Question No.2488 dated 18.12.2003 enclosed Annexure-II).

84 On the question of time overrun and cost overrun in implementation of these projects, the information which was furnished to the Committee by Power Grid about the World Bank Funded Projects having time & cost overrun alongwith the reasons for time overrun is given in Annexure-III. From the Annexure it has been stated that all the listed projects were completed within the contractual schedule agreed to with the Contractors except the Kayamkulam Transmission System which had suffered due to ROW problems and in the case of Kayamkulam however, the line completed ahead of schedule of generation Project.

In reply to the same question, the Ministry of Power stated as under :-

> "The implementation of the externally aided projects is monitored periodically in the Ministry of Power by the Project Monitoring Cell as well as in the Quarterly Performance Review meetings taken by Secretary, Ministry of Power. PGCIL has informed that the progress of implementation of various projects funded under PSDP-II loan 4603 – IN is satisfactory, and no time overrun in this regard is anticipated by PGCIL till date."

85 The details of joint ventures entered into by the Power Grid with the national and international companies in the last three years and the PGCIL personnel inducted into the Board of Directors of each such joint venture have been indicated below :-

"During the last 3 years Power Grid has entered into Joint Venture for the implementation of transmission lines associated with Tala HEP, East-North Inter Connector and Northern Region Transmission System. This is the first transmission project being implemented on Joint Venture Route by the Joint Venture Company viz. Powerlinks Transmission Ltd. Power Grid and TATA POWER are the Joint Venture Partners and hold 49% and 51% equity respectively. Approval of Govt. of India for investment in this project and formation of Joint Venture Company was accorded on 02.7.03 and the Joint Venture Company was formed on 03.7.03. Various Agreements (Shareholders Agreement, Implementation Agreement & Transmission Service Agreement) were signed on 04.7.03. The project cost estimate as per investment approval accorded by GOI is Rs.1099.64 crores."

A total debt amount of Rs.980 crore has been tied up with the consortium of multilateral and domestic financial institutions viz. IFC (Washington), ADB (Manila), SBI & IDFC. Loan Agreements were signed in January 2004. Financial closure of the project took place in May, 2004.

All major contracts have been awarded by the Joint Venture Company and the project is successfully under implementation. The schedule date of completion of the above project is June, 2006.

The following transmission lines are being executed by the Joint Venture Company which start from Siliguri (WB) and go via Bihar upto Mandola (UP):

Transmission Line	Route length (approx.)
i) Siliguri-Purnea 400 kV D/C (Quad. Conductor)	162 Kms.
ii) Purnea-Muzaffarpur(New) 400 kV D/C (Quad. Conductor)	242 Kms.
iii) Muzaffarpur(new)-Gorakhpur(New) 400 kV D/C (Quad.	233 Kms.
Conductor)	20 Kms.
iv) Muzaffarpur(new)-Muzaffarpur(BSEB) 220 kV D/C	277 Kms.
v) Gorakhpur(New)-Lucknow(New) 400 kV D/C	237 Kms
vi) Bareilly-Mandola 400 kV D/C	

Presently, the POWER GRID nominee Directors in Powerlink Ltd., are the following :-

1.	Shri R.P. Singh, CMD, POWER GRID	} Part time
2.	Dr. V.K. Garg, Director(Finance), POWER GRID	} Directors
3.	Shri V.M. Kaul, ED(JV&HR), POWER GRID	}
4.	Shri Suresh Sachdev a, ED(CMG), POWER GRID	} Full time Director

PART – II

RECOMMENDATIONS / CONCLUSIONS OF THE COMMITTEE

RECOMMENDATION NO. 1

UNCRITICAL ACCEPTANCE OF LOANS FROM INTERNATIONAL FUNDING AGENCIES

The Committee note that the first ever 800 KV Transmission system between Kishenpur and Moga was approved by the Government in May 1993 and was scheduled to be completed in March, 1998. But the project could be completed only in January, 2001, which resulted in a time over-run of 34 months. The original approved cost of the project was Rs. 417.71 crore in May 1993. But the final executed cost of the project was Rs. 857.63 crore in January, 2001. The cost over-run comes to Rs. 439.92 crore which is 100 percent more than the original approved cost.

The Committee find that various factors such as unreasonable World Bank conditionalites / guidelines, lack of adequate initial technical scrutiny having been undertaken by the Power Grid at the techno-economic evaluation stage, lack of prudence in the initial planning and estimation, the inability of Power Grid to take the World Bank into confidence on various issues contributed significantly to the cost and time overruns in implementing the project.

The Committee note that the sort of infirmities that were allowed in the bidding process while awarding the contract for

completion of KMTS project had actually paved the way for a foreign firm, M/s Cobra of Spain to secure the contract. The Committee further note that the foreign firm had 'no previous experience in designing 800 KV class transmission systems and also had no experience of executing projects in India'. The stipulations in the bidding documents prescribed that the rates for the work should be quoted on "per tower" basis and not on the basis of the 'tower weight' or 'tonnage'. Thus, the firm which had estimated the 'tower weight' at a 'lower level' quoted a 'lesser rate per tower' and managed to secure the contract. The result was repeated failures in optimizing the tower designs by the successful bidder and contractual problems, which contributed to the significant delay of about three years in the implementation of the project. Despite the fact that Power Grid had the experience in the field of designing and building transmission tower, the Committee fail to understand as to why the Company could not prevail upon the World Bank on the need to clearly define the project scope at the bidding stage by suitably taking into consideration, the aspect relating to technical scrutiny of 'tonnage /weight' and also offer its in-house design for acceptance.

The Committee also find that upon the insistence of World Bank, Power Grid chose to award both the packages of KMTS to

M/s Cobra of Spain though it had no previous experience in designing 800 KV class tower. The Committee feel that merely for the sake of getting loan facilities from the International funding agencies, the public sector companies should not accept unreasonable terms imposed by them. Uncritical acceptance of such loans would compromise our economic interests and the sovereign right to get a service established at a cost advantageous to us. The Committee, therefore, recommend that the whole matter of acceptance of loans from World Bank and the conditionalities attached to it, should be thoroughly analyzed to safeguard our sovereign economic independence and for this purpose, a High-powered Committee of Experts comprising of independent minded technocrats and economists should be formed to suggest suitable measures. The Committee feel that such an analysis is very much necessary keeping in view the fact that PGCIL had implemented several other projects with World Bank funding which had also faced the problem of cost over-run / time over-run.

RECOMMENDATION 2

UNUSUALLY HIGH INTEREST INCURRED DURING CONSTRUCTION.

The Committee have been informed that at the techno-commercial stage, M/s Cobra, Spain had proposed to sub-contract part of the work to the Indian firms. However, M/s Cobra soon faced a host of problems in finalizing the sub-contractors in India. The company faced several problems such as delay in testing of towers, additional demand of payment from their sub-contractors and mismatch in cash flows. M/s Cobra also raised a number of disputes and claimed additional amount and also sought extension of time. The direct fallout of the contractual problems that surfaced immediately after the award of the work for erection of the Kishenpur-Moga Transmission towers to the Spanish firm (M/s Cobra) in February, 1995 led not only to the substantial time overrun in commissioning the project but also to the huge escalation in project costs. The Committee find that out of the total project cost escalation, more than Rs.300 crore was on account of Interest During Construction (IDC) alone. The amount assigned for IDC as per the approved project estimate of 1993 was only to the tune of Rs. 2 crore. In the opinion of the Committee, the delay of about three years in commissioning the project was the main contributory factor for the unusually high

interest incurred during construction on this project. The Committee wish to point out that a facility that could have been established by spending Rs.417.71 crore was eventually got established by spending actually Rs.857.63 crore, out of which the interest paid during construction alone comes to more than Rs.300 crore, thus making World Bank and the foreign construction Company, M/s Cobra, the real gainers in the whole deal, as Power Grid submissively accepted all the terms and conditions imposed by the loaning agency. The Committee feel that the terms for calculating Interest During Construction are very harsh and require a pointed review in all future financing of projects and desire that the government should examine this aspect thoroughly. The Committee also recommend that it should be examined as to whether the matter of payment of IDC to the World Bank in this case may be re-opened to find out if any claim for refund of IDC can be lodged on the ground that the entire delay in completing the project can be attributed solely to M/s Cobra the agency thrust upon the PGCIL to execute the project only at the behest of the World Bank.

RECOMMENDATION NO. 3

NEED FOR EXPLORING POSSIBILITY OF NEGOTIATION WITH M/S VATTENFALL.

The Committee note that the major contract for erection of transmission towers was awarded by the Company in February, 1995 to an inexperienced foreign firm which faced repeated failures in testing. Power Grid was apparently aware of this aspect of possible repeated failures as they have stated that such failures are 'usual' in the tower industry. The contract for tower erection ran into serious difficulties subsequently and had to be re-negotiated in October, 1998 and the project finally was completed only in January, 2001.

The Committee also note that no effort was initiated by Power Grid to explore the possibility of negotiation with M/s Vattenfall, one of the qualified bidders, and was the only firm with the experience of laying the 800 KV transmission lines. If this option could have been exercised, the Committee feel that delay in completing the project could have been completely avoided and as a result the need for payment of high IDC to the World Bank would have never arisen, keeping the project within the original time frame and cost. The Committee desire that while taking such critical decisions in future the commercial consideration and pecuniary interest of the government company concerned should be accorded foremost priority. Such options should be

taken up for discussion with the funding agencies in future highlighting the merits of resorting to such options.

RECOMMENDATION NO. 4

NEED FOR EFFECTIVE MONITORING OF PROJECT IMPLEMENTATION

The Committee note that PGCIL is a mini-ratna Company, and the Ministry of Power oversee the progress of the implementation of the projects through the Quarterly Performance Review (QPR) meetings, besides having Government's Directors / nominees on the Board of Directors of PGCIL. The Committee also note that the issue of non-acceptance of the Power Grid's recommendation by the World Bank for awarding the contracts to two separate firms was not brought to the notice of the Ministry during the QPR meetings as has been revealed by Secretary, Ministry of Power during evidence. The Government nominees in the Board of Directors also did not bring the matter to the notice of the administrative Ministry. The Committee are constrained to note that such a delicate issue was dealt with by Power Grid unilaterally at the Board level without consulting its administrative Ministry and also the Deptt. of Economic Affairs which was the nodal agency for seeking loans from foreign funding agencies. Reacting to the Power Grid's handling of the situation, Ministry of Power stated that "it was a fit case to have been brought to their notice". The Committee also note that the Ministry have now issued instructions to Central Public Sector Units (CPSUs) to make full use of the mechanism of quarterly

review of externally funded projects by the Ministry of Power. Any difficulties being faced during the implementation of such projects should be discussed during these meetings. They also emphasized that if any important matter needs to be brought to the knowledge of the Ministry even before the next review meeting, it must be raised by the concerned CPSUs. The Committee recommend that the Ministry and the Public Undertakings should scrupulously adhere to the guidelines / instructions in this regard. The Committee also recommend that the Government should examine the issue of need for fixing of responsibility on the officials responsible for the lapses mentioned above.

RECOMMENDATION NO. 5

NEED FOR EFFECTIVE COORDINATION BETWEEN POWER GRID AND ADMINISTRATIVE MINISTRY

Another particularly disturbing aspect noticed during examination of the related issues, was the furnishing of contradictory statements to the Committee. The Committee note that a Manual on Work and Procurement Policy and Procedure for streamlining future procurement and awards of contract in a transparent manner was brought out by Power Grid. From the information furnished by the Ministry of Power to the Committee, it is seen that the said Manual was prepared by the Power Grid at the instance of the Ministry of Power following their instructions issued on 7 August, 2001. However, Power Grid has stated that the initiative for preparation of the document had formally commenced in Power Grid in January, 2001 and the document was finalised and approved for implementation by the Board of Directors of Power Grid in September, 2001. The Committee are constrained to note that there is no coordination between the Ministry of Power and Power Grid. The Committee take a serious view of this matter and expect that in future effective coordination and consultation should be held before furnishing the information

to the Parliamentary Committees so as to avoid furnishing of contradictory information.

New Delhi **RUPCHAND PAL**
22 March, 2005 CHAIRMAN
1^{st} Chaitra, 1927(S) COMMITTEE ON PUBLIC UNDERTAKINGS

ANNEXURE –I

Power Grid Corporation of India Limited

15.3.1 Extra expenditure in construction of Kishenpur- Moga Transmission System

Due to avoidable delay of 30 months attributable to inexperience of a foreign contractor, the Company incurred extra expenditure of Rs. 217.22 crore on execution of a transmission system. Further, excess capacity created at expenditure of Rs. 433.81 crore would remain grossly underutilized in near future owing to non-execution of generation projects.

Power Grid Corporation of India Limited (Company) commissioned (January 2001) Kishenpur – Moga transmission system (KMTS) having two lines of 800 kV each at a total cost of Rs.847.91 crore with an overall cost overrun of Rs. 430.20 crore and time overrun of 34 months. Out of this, delay of 30 months was attributable to inexperience of a foreign contractor, which resulted in extra expenditure of Rs. 217.22 crore. Besides, excess capacity of 800 kV created at an additional expenditure of Rs. 433.81 crore would remain grossly under-utilised for years to come due to non materialisation of expected generation of power as most of the identified generation projects were not taken up for implementation. A review of execution and implementation of the KMTS revealed the following

Government of India sanctioned (May 1993) the scheme of KMTS at an estimated cost of Rs. 417.71 crore with the completion schedule of March 1998. The scheme was conceived to transfer power from various generation projects (Jammu and Kashmir) to the load centre at Moga (Punjab). The Company invited (May 1993) global tenders for pre-qualification and issued (March 1994) tender documents for price bids to six qualified bidders, out of which five bidders submitted their price bids, which were opened in May 1994.

M/s Cobra emerged lowest for both the lines of KMTS. Based on pre-qualification and evaluation of bidders, the Company had assessed that M/s. Cobra would not be able to execute both the lines in view of the tower material required for both the lines and 800 kV lines being constructed for the first time in India. Accordingly, the Company recommended award of work for only one line to M/s Cobra, which was, however, not accepted by the World Bank. So, contracts for construction of both the lines were awarded to M/s. Cobra in February 1995 with the completion schedule of 39 months i.e., by May 1998.

It is observed that M/s. Cobra had not experience of execution of projects of 800 kV lines and had passed the pre-qualification and bid evaluation stage because no technical scrutiny was made by the Company with respect to weight of the tower. Consequently, there were repeated failures in design and testing of towers, resulting in avoidable delay of 23 months. Further, due to increase in weight of the tested towers up to 46 per cent over the estimated weight, M/s. Cobra demanded compensation for the increase in cost, which led to delay of 7 months. This resulted in total avoidable delay of 30 months in completion of KMTS, which increased the project cost by Rs. 217.22 crore on account of interest on borrowed funds and escalation in price including exchange rate variation.

Both the lines were commissioned in May 2000 and January 2001 respectively. However, as no generation project except Dulhasti and Chamera (stage II) was taken up for execution, KMTS could not be put to use at its rated capacity and chances for evacuation of power at 800 kV level in near future were remote. In fact, the KMTS was initially to be operated at 400kV level and transmission of power at 800 kV was required only after commissioning of Sawalkot, Baghlihar, Ratle, Dulhasti and Chamera (stage II) generation projects. A World Bank supervision mission had suggested (July 1993) construction of two 400 kV double circuit lines initially instead of two 800 kV lines, so as to defer the 800 kV conversion investment till 2015-20. Novetheless, the Company went ahead with the construction of two 800 kV transmission lines on the grounds of difficulties in acquiring right of way and prolonged government clearance procedure. Additional cost of construction of two 800 kV lines as compared to two 400 kV lines worked out to Rs. 433.81 crore.

The Management stated (May 2002) that no technical compromise was made in adopting qualifying requirement for selection of M/s. Cobra and the delay was not attributable to its inexperience, but to actual failure of towers during testing and limited availability of test beds in India. The Ministry added that overall cost overrun was contributed to factors like change in debt-equity ratio, escalation in price index, etc. Further, while stating that construction of 800 kV lines was a prudent decision in view of severe right of way problem and was not linked to commissioning of all the generation projects, they endorsed the Management's reply that KMTS has improved reliability of the Northern region grid and as such should be viewed as a system improvement project.

The reply is not tenable as the Central Electricity Authority (CEA) while reviewing the cost and time overrun had, *inter alia*, observed (July 2001) that original design of the firm was substantially below the required level and the firm passed the pre-qualification stage because no technical scrutiny regarding design of the towers was undertaken by the Company. Abnormal increase in the weight of the tested towers was considered by the CEA as the main reason for failure in design. As regards considering KMTS as a system improvement project, benefit stream of KMTS had deviated from the originally envisaged benefit for the investment, as observed by Public Investment Board.

ANNEXURE-II

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO 2488
TO BE ANSWERED ON 18.12.2003

WORLD BANK LOAN TO PGCI

2488. SHRI SULTAN SALAHUDDIN OWAISI

Will the Minister of **POWER**
be pleased to state:-

(a) whether the Power Grid Corporation of India received $450 million loan assistance from the World Bank for various projects;

(b) if so, the details thereof;

(c) whether projects for which loan was sanctioned have been completed;

(d) if not, the reasons therefor and the present status of these projects; and

(e) the time by which these projects are likely to be completed?

ANSWER

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRIMATI JAYAWANTI MEHTA)

(a) & (b) : Power Grid Corporation of India Ltd. (PGCIL) signed an agreement with World Bank on 13th June, 2001 for a loan of $ 450 million (PSDP-II Ln.4603 IN). The loan has become effective from 21.11.2001 and will close on 30.06.2006.

(c) to (e) : Some of the projects covered by this loan have been completed. The status of the projects implemented/being implemented by PGCIL under this loan is indicated at Annex.

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ANNEX REFERRED TO IN REPLY TO PARTS(C0 TO (E0 OF UNSTARRRED QUESTION NO. 2488 TO BE ANSWERED IN THE LOK SABHA ON 18.12.2003.

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Status of projects implemented / being implemented by Power Grid Corporation of India Ltd. (PGCIL) under PSDP-II Loan 4603 IN.

S.No.	Description	Present status
1.	East – North Interconnector –I Project (Sasaram HVDC B/B Project)	Completed
2.	System Coordination & Control Project in Eastern Region	Under implementation. The project is expected to be completed by March, 2005
3.	System Coordination & Control Project in Western Region	Under implementation. The project is expected to be completed by March, 2006
4.	PGCIL's Diversification into Telecom	Under implementation. The project is expected to be completed by December, 2004
5.	High capacity East-North Interconnector-II	Under implementation. The project is expected to be completed by June, 2006
6.	National Load Despatch Centre	Detailed Project Report has been submitted by PGCIL for investment approval by the Government
7.	System Strengthening-III in Southern Region Grid.	Detailed Project Report has been submitted by PGCIL for investment approval by the Government
8.	Balance work in respect of the following projects which were being executed under earlier World Bank loans (No. 3577-In & No. 3237-IN): i) Moga-Hissar-Bhiwani Transmission System ii) Kishenpur-Moga Transmission System iii) Nthpa-Jhakri Transmission system iv) SC&C project in Northern Region v) Vindhyachal-Dhule Transmission system vi) Ramaguandam-Hyderabad Transmission System vii) Central Power Transmission Project-I viii) Rihand Power Transmission Project ix) Transmission System associated with Kayamkulam GBCC x) SC&C Project in Southern Region.	Completed

ANNEXURE-III

PROJECT FUNDED BY WB HAVING TIME & COST OVERRUN

Sl. No.	Name of Project	Funding	Cost (Rs. In crore)			Time		
			Org./ latest appd.	Actual	Cost overrun	Org. / latest appd.	Actual	Time overrun (in months)
1	Nathpa – Jhakri Trans. System	WB	889.95/ 1561.63	1446.01	556.06/0	April'97/ May'01	May'01	49/0
2	Vindhyachal addl. Trans. System	WB	339.69/ 707.40	707.4	367.71/0	Dec'97	Dec'97	0
3	ULDC NR	WB	479.51/ 658.92	658.92	179.4/0	March'00/ July'02	July'02	28/0
4	ULDC SR	WB	621.57/ 683.8	683.8	62.23	March'02/ Jun'02	Jun'02	27/0
5	ULDC ER	WB	282.49/ 387.41	387.41	104.92	Sept'03/ Jun'05	Jun'05	21/0
6	Sasaram HVDC	WB	671.56	529.74	0	Dec'01	Sep'02	9
7	Kayamkulam Trans. System	WB	83.0 / 204.41	204.41	121.41/0	March'99/ Sept'99	Sep'99	6/0

Note: The reasons for the time overrun have been enumerated in the subsequent pages. All the listed projects were completed within the contractual schedule agreed to with the Contractors except the Kayamkulam Transmission System which had suffered due to ROW problems and even in the case of Kayamkumlam the same was completed ahead of schedule of generation Project.

Reasons for Time & Cost Over-run for WB funded Projects

1. **Nathpa-Jhakri Trans. System:**

Reason for Time Over run-

i) Signing of loan agreement by GoI with WB in Oct'90(i.e., 18 months after investment sanction)
ii) Appointment of consultant by NHPC in Nov'91 (i.e., 30 months after investment sanction)
iii) Delay in preparation of tech specification (i.e., in Feb'94 due to delay in approval of WB & review of tech. parameters by CEA)
iv) Delay in generation project from Apr'97 to Mar'02. However, POWERGRID has completed lines from Jul'97 to May'01, i.e., much ahead of Gen. Project.

Reason for Cost Over-run-

i) Increase in price indices
ii) Exchange rate variation
iii) Change in scope
iv) Centages

2. **Vindhyanchal addl. Trans. System** – Although the project was sanctioned in May'89 work could not be started till Mar'93 due to non-finanlisation of funding agency.

3. **ULDC NR-**

Reason for time Over-run- Initial delay in award of contract due to complexity involved in finalisation of BOQ/Scheme catering to the need of different SEBs & Central Sector Utilities.

Reason for Cost Over-run-

i) Price change due to escalation
ii) Change in scope
iii) New additions/deletions
iv) Change in taxes & duties
v) Increase in Centages & IDC

4. **ULDC SR-**

Reason for time Over-run- I) Initial delay in award of contract due to complexity involved in finalisation of BOQ/Scheme catering to the need of different SEBs & Central Sector Utilities.

Reason for Cost Over-run-

i) Price change due to escalation
ii) Change in scope
iii) New additions/deletions

iv) Change in taxes & duties
v) Increase in Centages & IDC

5. ULDC SR-

Reason for time Over-run-

I) Placement of award delayed due to non-signing of MOU by BSEB despite constant persuasion at various levels by POWERGRID, CEA & MoP. BSEB signed MOU during Dec'00 & award placed in Dec'00 itself.

Reason for Cost Over-run-

i) Price increase due to escalation
ii) Change in quantity of approved items
iii) FERV
iv) Increase in Centages & IDC
v) Change in scope (Creation of Jharkhand State)

6. Sasaram HVDC:

Reason for Time over-run

i) Delay in notification regarding Custom Duty waival delaying HVDC Package tendering & award (notification issued in Jun'99 against project approval of Sep'98
ii) Delay in effectiveness of World bank funding due to Economic Sanctions imposed in Jun'98.
iii) Delay in issue of PAC due to delay in issuance of "Deemed Export Status" to the Project-tower pkg. awarded in Feb'99, PAC could not be issued till Jul'99 which delayed the supplies.
iv) Law & order problems at Sasaram – Two of the employees of the HVDC Package Civil Contractor were kidnapped by anti-social elements affecting erection activities for more than a month.

7. Kayamkulam Trans. System

Reason for Time Over-run- Completion delayed as line passing through thickly populated & dense rubber plantation area. Most of the line in low lying marshy land with treacherous soil condition resulting in collapsing of pits for foundation. Un-precended rain fall leading to flooding & submergence of locations. However, Kayamkulam – Endmon D/C Line alongwith GIS Switchyard at Kayamkulam was test charged in Aug'98 much ahead of schedule of generation project. There was no evacuation problem.

Reason for Cost overrun

i) Price change due to escalation
ii) Change in scope
iii) New additions/deletions
iv) Change in taxes & duties
v) Increase in Centages & IDC

ANNEXURE IV

MINUTES OF THE 3rd SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS HELD ON 1st OCTOBER, 2004

The Committee sat from 1100 hrs to 1315 hrs.

CHAIRMAN

Shri Rupchand Pal

MEMBERS, LOK SABHA

2. Shri Gurudas Dasgupta
3. Shri P. S. Gadhavi
4. Shri Sushil Kumar Modi
5. Shri Kashiram Rana
6. Shri Rajiv Ranjan Singh
7. Shri Bagun Sumbrui

MEMBERS, RAJYA SABHA

8. Prof. Ram Deo Bhandary
9. Shri Ajay Maroo
10. Shri Jibon Roy
11. Shri Dinesh Trivedi

SECRETARIAT

1.	Shri S. Bal Shekar,	Director
2.	Shri Raj Kumar,	Under Secretary
3.	Shri N. C. Gupta,	Under Secretary
4.	Shri Ajay Kumar,	Assistant Director

REPRESENTATIVES OF THE OFFICE OF COMPTROLLER AND AUDITOR GENERAL OF INDIA .

1.	Shri T.G.Srinivasan	Deputy C & AG (Commercial)
2.	Shri Sunil Chandra	Principal Director (Commercial)

REPRESENTATIVES OF POWER GRID CORPORATION OF INDIA LIMITED.

1.	Shri R.P.Singh	Chairman & Managing Director
2.	Dr. V.K. Garg	Director (Finance)
3.	Shri R.N.Nayak	Executive Director (Engineering)
4.	Shri V.L.Dua	Addl. General Manager (Finance)
5.	Shri M.K.Krishan kumar	Addl. General Manager (Engineering)

2. At the outset, the Chairman, COPU welcomed the Officials of Power Grid Corporation of India Limited and asked the Chairman & Managing Director, Power Grid Corporation of India Ltd. to give a briefing on the functioning of the Company and also on Audit Para No. 15.3.1 of Report No. 3 (Commercial) of C&AG (Extra expenditure in Construction of Kishenpur – Moga Transmission System-Additional Expenditure of Rs. 433.81 crore). Thereafter, the Committee were briefed by the representatives of Power Grid Corporation of India Limited. Members raised the queries which were replied to by the officials of Power Grid Corporation of India Ltd.

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4. A copy of the verbatim proceedings has been kept on record separately.

The Committee then adjourned.

MINUTES OF THE 9th SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS HELD ON 18 JANUARY, 2005

The Committee sat from 1530 hrs to 1700 hrs.

CHAIRMAN

Shri Rupchand Pal

MEMBERS, LOK SABHA

2. Shri Manoranjan Bhakta
3. Shri Gurudas Dasgupta
4 Shri P. S. Gadhavi
5. Smt. Preneet Kaur
6. Shri Kashiram Rana
7. Shri Mohan Rawale
8. Shri Rajiv Ranjan Singh
9. Shri Bagun Sumbrui
10. Shri Rajesh Verma
11. Shri Parasnath Yadav

MEMBERS, RAJYA SABHA

12. Shri Ajay Maroo
13. Shri Pyarimohan Mohapatra
14. Shri Jibon Roy
15. Shri Dinesh Trivedi

SECRETARIAT

1.	Shri S. Bal Shekar	Director
2.	Shri Raj Kumar	Under Secretary
3.	Shri N. C. Gupta	Under Secretary

OFFICE OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA

1.	Shri T. G. Srinivasan	Dy C&AG (Comml)-cum Chairman
2.	Shri Sunil Chander	Principal Dir (Comml)

REPRESENTATIVES OF THE MINISTRY OF POWER

1.	Shri R. V. Shahi	Secretary
2.	Shri A K Jain	Special Secretary
3.	Shri Ajay Shankar	Additional Secretary
4.	Shri Gireesh B. Pradhan	Joint Secretary
5.	Shri Mrutunjay Sahoo	Joint Secretary & FA
6.	Shri Jiwesh Nandan	Director

REPRESENTATIVE OF MINISTRY OF FINANCE (DEPTT. OF ECONOMIC AFFAIRS)

Shri Ranjit Bannerji	Joint Secretary

2. The Committee took the evidence of the representatives of the Ministry of Power in connection with examination of Audit Para No.15.3.1 of C&AG's Report No.3 (Commercial) of 2004 on Power Grid Corporation of India Ltd. – Extra expenditure in construction of Kishenpur – Moga Transmission System – Additional expenditure of Rs.433.81 crore.

3. A copy of the verbatim proceedings of the sitting of the Committee has been kept on record separately.

The Committee then adjourned.

MINUTES OF THE 10th SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS HELD ON 7 FEBRUARY, 2005

The Committee sat from 1500 hrs to 1630 hrs.

CHAIRMAN

Shri Rupchand Pal

MEMBERS, LOK SABHA

2. Shri Manoranjan Bhakta
3. Shri Gurudas Dasgupta
4 Shri P. S. Gadhavi
5. Smt. Preneet Kaur
6. Shri Kashiram Rana
7. Shri Mohan Rawale

MEMBERS, RAJYA SABHA

8. Shri Ajay Maroo
9. Shri Jibon Roy
10. Smt. Ambica Soni
11. Shri Dinesh Trivedi

SECRETARIAT

1.	Shri S. Bal Shekar	Director
2.	Shri Raj Kumar	Under Secretary
3.	Shri N. C. Gupta	Under Secretary
4.	Shri Ajay Kumar	Assistant Director

OFFICE OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA

1.	Shri T. G. Srinivasan	Dy C&AG (Comml)-cum Chairman
2.	Shri Sunil Chander	Principal Dir (Comml)
3.	Smt. Revathi Bedi	Principal Dir (Comml)

REPRESENTATIVES OF POWER GRID CORPORATION LTD.

1.	Shri R. P. Singh	Chairman & Managing Director
2.	Dr. V. K.Garg	Director (Finance)
3.	Shri S. C. Mishra	Director (Projects)
4.	Shri Anand Mohan	Executive Director (Contracts)
5.	Shri R. N. Nayak	Executive Director (Engineering)

2. The Committee took the evidence of the representatives of the Power Grid Corporation of India Limited in connection with examination of Audit Para No.15.3.1 of C&AG's Report No.3 (Commercial) of 2004 on Power Grid Corporation of India Ltd. – Extra expenditure in construction of Kishenpur – Moga Transmission System – Additional expenditure of Rs.433.81 crore.

3. A copy of the verbatim proceedings of the sitting of the Committee has been kept on record separately.

The Committee then adjourned.

MINUTES OF THE 11th SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS HELD ON 22 MARCH, 2005

The Committee sat from 1600 hrs to 1630 hrs.

CHAIRMAN

Shri Rupchand Pal

MEMBERS, LOK SABHA

2. Shri Gurudas Dasgupta
3. Shri P. S. Gadhavi
4 Dr. Vallabhabhai Kathiria
5. Smt. Preneet Kaur
6. Shri Bagun Sumbrui
7. Shri Rajesh Verma

MEMBERS, RAJYA SABHA

8. Prof. Ram Deo Bhandary
9. Shri Ajay Maroo
10. Shri Pyarimohan Mohapatra
11. Shri Jibon Roy

SECRETARIAT

1.	Shri John Joseph	Additional Secretary
2.	Shri J. P. Sharma,	Director
3.	Shri Raj Kumar,	Under Secretary
4.	Shri Ajay Kumar,	Assistant Director

2. The Committee considered the draft Report on `Power Grid Corporation of India Limited – Extra expenditure in construction of Kishenpur – Moga Transmission System – Additional expenditure of Rs.433.81 crore' and adopted the same.

3. The Committee authorised the Chairman of the Committee to finalise the aforesaid Report and to present the same to the Parliament.

4. XXXX XXXX XXXX

The Committee then adjourned.