

**COMMITTEE ON PUBLIC
UNDERTAKINGS
(1980-81)**

(SEVENTH LOK SABHA)

SIXTEENTH REPORT

ON

DAMODAR VALLEY CORPORATION

(Ministry of Energy—Department of Power)



Presented to Lok Sabha on 7 APR 1981

and

Laid in Rajya Sabha on

**LOK SABHA SECRETARIAT
NEW DELHI**

March, 1981 Chaitra, 1903 (Saka)

Price : Rs 3.90

**LIST OF AUTHORISED AGENTS FOR THE SALE OF LOK SABHA
SECRETARIAT PUBLICATIONS**

ANDHRA PRADESH

1. Andhra University General Co-operative Stores Ltd., Waltair (Visakhapatnam).

BIHAR

2. M/s. Crown Book Depot, Upper Bazar, Ranchi (Bihar).

GUJARAT

3. Vijay Stores, Station Road, Anand.

MADHYA PRADESH

4. Modern Book House, Shiv Vilas Palace, Indore City.

MAHARASHTRA

5. M/s. Sunderdas Gianchand, 601, Girgaum Road, near Princess Street, Bombay-2.
6. The International Book House Pvt., 9, Ash Lane, Mahatma Gandhi Road, Bombay-1.
7. The International Book Service, Deccan Gymkhana, Poona-4.
8. The Current Book House, Maruti Lane, Raghunath Dadaji Street, Bombay-1.
9. M/s. Usha Book Depot, 585/A, Chira Bazar Khan House, Girgaum Road, Bombay-2.

10. M & J Services, Publishers, Representatives Accounts & Law Book Sellers, Bahri Road, Bombay-15.

11. Popular Book Depot, Dr. Bhadkamkar Road, Bombay-400001.

MYSORE

12. M/s. Peoples Book House, Opp. Jaganmohan Palace, Mysore-1.

UTTAR PRADESH

13. Law Book Company, Sardar Patel Marg, Allahabad-1.
14. Law Publishers, Sardar Patel Marg, P.B. No. 77, Allahabad—U.P.

WEST BENGAL

15. Granthaloka, 5/1, Ambica Mookherjee Road, Belgharia, 24-Pargana.
16. W. Newman & Company Ltd., 3, Old Court House Street, Calcutta.
17. Mrs. Manimala, Buys & Sells, 128, Bow Bazar Street, Calcutta-12.

DELHI

18. Jain Book Agency, Connaught Place, New Delhi.
19. M/s. Sat Narain & Sons, 3141 Mohd Ali Bazar, Mori Gate, Delhi.

C O R R I G E N D A

SIXTEENTH REPORT OF THE COMMITTEE ON PUBLIC UNDERTAKINGS (1980-81) ON DAMODAR VALLEY CORPORATION.

<u>Page</u>	<u>Para</u>	<u>Line</u>	<u>For</u>	<u>Read</u>
1.3		3	industries	industries
1.10		5 from below	of	or
1.12		9	also	also
1.15		4	the	The
1.17		4	BRL	BPE
1.38		3	After 'one add'	'or'
1.38		5	is	in
1.43		10	leads	loads
-		last	149	1949
2.7		4 from below	that	the
2.10		10	baance	balance
2.20		1	After 'Corporation' read 'stated'.	read
2.25		9	reallyy	really
3.5		last in the Table	1175 42.9*	1175* 42.9
3.6		4 - 5		
-		3	KWl.KMW boiled	kwh/kw boiler
3.8		5,6	recommented	recommended
3.24		3	agreed	agree
3.25		8 from below	its	it;
3.27		6	6,927	6.927
4.4		8	CLA	CIA
4.5		15	agred	agreed
-		7	fist	first
4.25		4	reduced	reduce
5.3		1	After 'comparative' read 'Statement'	read
5.14		8	embarge	embargo
In the table Column 3 (Total)			3788.43	3788.41
1.33		8	Executive Officer which, besides	Executive Officer. Besides
-		4	seen	seem
-		9-10	in which the Government acquiesced	and the Govern- ment acquiesced in it.

<u>Page</u>	<u>Para</u>	<u>Line</u>	<u>For</u>	<u>Read</u>
71	1.37	4	are	DVC
71	1.37	5	reluctance	relevance
72	-	4	After 'restructured' add 'Corporation'	
73	2.22	7-8	period 1974-79. project (Dur In all these Unit IV) is cases delay in to be comple completed.	
74	-	7	was	by
74	2.25	2	arms	any
83	5.8	15	property	propriety

CONTENTS

	PAGE
COMPOSITION OF THE COMMITTEE	(iii)
COMPOSITION OF STUDY GROUP III.....	(v)
INTRODUCTION	(vii)
I. INVESTMENT AND CONTROL	
A. General	1
B. Administrative Control	2
C. Chief Executive Officer	2
D. Investment Control	5
E. Performance Appraisal	7
F. Audit Reports	9
G. Capital Structure	9
H. Advisory Committee	14
II. MAJOR PROJECTS	
A. Delay in commissioning	18
B. Escalation of Cost	19
C. Project Benefits	23
D. Completion Reports	24
E. Monitoring	26
III. POWER GENERATION AND DISTRIBUTION	
A. Generation	28
B. Distribution	34
C. Core Sector Requirement	34
IV. GENERATING SETS AND THEIR MAINTENANCE	
A. Performance of Generating Sets	40
B. Consumption of Fuel	47
C. Maintenance of Boilers and Turbines	49
V. WORKING RESULTS	
A. Rate of Return	57
B. Power Tariff	57
C. Transmission Losses	60
D. Inventory Holding	61
E. Sundry Debtors	65
APPENDIX	
Summary of conclusions/Recommendations of the Committee on Public Undertakings contained in the Report.	70

COMMITTEE ON PUBLIC UNDERTAKINGS

(1980-81)

Shri Bansi Lal—*Chairman*

MEMBERS

2. Shri Gulam Nabi Azad
3. Shri Niren Ghosh
4. Shri Harikesh Bahadur
5. Shri Arif Mohammad Khan
6. Shri S. M. Krishna
7. Shrimati Geeta Mukherjee
8. Shri B. K. Nair
9. Shri Rameshwar Neekhra
10. *Shri Hiralal R. Parmar
11. Shri Darur Pullaiah
12. Shri Nagina Rai
13. Shri K. Ramamurthy
14. Shri Ravindra Varma
15. Shri Chandradeo Prasad Verma
16. Shri R. Ramakrishnan
17. Shri R. R. Morarka
18. Shri Shrikant Verma
19. Shri Ramanand Yadav
20. Shri Harisinh Bhagubava Mahida
21. Shri Swami Dinesh Chandra
22. Shri Sunder Singh Bhandari.

SECRETARIAT

1. Shri H. G. Paranjpe—*Joint Secretary.*
2. Shri T. R. Krishnamachari—*Chief Financial Committee Officer.*
3. Shri S. P. Chanana—*Senior Financial Committee Officer.*

*Elected w.e.f. 28-11-1980 in the vacancy caused by appointment of Shri P. A. Sangma as Deputy Minister.

**STUDY GROUP III ON PUBLIC UNDERTAKINGS UNDER
MINISTRIES OF DEFENCE, ENERGY, IRRIGATION, INFORMA-
TION AND BROADCASTING, HOME, PETROLEUM & CHEMI-
CALS, SHIPPING AND TRANSPORT AND SOCIAL WELFARE**

1. Shri Swami Dinesh Chandra—*Convener.*
2. Shri B. K. Nair—*Alternate Convener.*
3. Shri Harikesh Bahadur
4. Shri Harisinh Bhagubava Mahida
5. Shri R. Ramakrishnan
6. Shri Ravindra Varma
7. Shri Shrikant Verma

INTRODUCTION

1. The Chairman, Committee on Public Undertakings having been authorised by the Committee to present the Report, on their behalf, present this Sixteenth Report on Damodar Valley Corporation.

2. This Report of the Committee deals with the generation and distribution of power by the Damodar Valley Corporation, besides certain general issues. The Committee's examination of the work-in of the Corporation in this regard covered also the Audit Reports on the accounts of the Corporation.

3. The Committee took evidence of the representatives of Damodar Valley Corporation on 9th, 11th and 12th December, 1980 and of the Ministry of Energy (Department of Power) on 19th and 20th December, 1980.

4. The Committee considered and adopted the Report at their sitting held on 26 March, 1981.

5. The Committee wish to express their thanks to the Ministry of Energy (Department of Power) and the Damodar Valley Corporation for placing before them the material and information they wanted in connection with the examination of the Corporation. They wish to thank in particular the representatives of the Department of Power and the Corporation who gave evidence and placed their considered views before the Committee.

6. The Committee also place on record their appreciation of the assistance rendered to them by the Comptroller and Auditor General of India.

March 31, 1981.

Chaitra 10, 1903 (S).

BANSI LAL,
(
Chairman,
Committee on Public Undertakings.

CHAPTER I

INVESTMENT AND CONTROL

A. General

The Damodar Valley Corporation established under the Damodar Valley Corporation Act, 1948, came into being on 7th July, 1948. The Corporation is responsible for the unified development of the Damodar Valley in the States of Bihar and West Bengal. While the main functions of the Corporation are flood control, irrigation and generation, transmission and distribution of power, its subsidiary activities include navigation, soil conservation, the promotion of public health and the agricultural, Industrial, economic and general development of the Damodar Valley.

1.2. The Corporation has so far completed the construction of four multi-purpose dams at Tilaiya, Konar, Maithon and Panchet, a barrage at Durgapur, an irrigation canal system of 2,495 KMs, with a 137 KM long irrigation-cum-navigation canal on the left bank of the Damodar river, three hydel stations appended to Tilaiya, Maithon and Panchet dams and three large thermal power stations at Chandrapura, Bokaro and Durgapur, with a network of associated transmission and distribution lines.

1.3. The Corporation's activities are now concentrated mainly on power generation, transmission and distribution to feed the rapidly growing industries within and outside the valley.

B. Administrative Control

1.4. As per Section 4 of the DVC Act the Corporation consists of a Chairman and two other Members appointed by the Central Government after consultation with the State Governments of West Bengal and Bihar. Under Section 6 of the Act the Secretary and Financial Advisor of the Corporation are appointed by the Central Government. Under Sub-Section (6) of Section 51 of the Act the Central Government has the power to remove the Chairman and Members of the Corporation and appoint a Chairman and Members in their places if the Corporation fails to carry out its functions or follow the directions issued by the Central Government under the Act.

1.5. About the mechanism of control over the DVC by the Central Government, the Secretary of the Department of Power stated in evidence that the DVC Act had given autonomy to the Corporation much more than what was normally done in other cases. Government of India was a share holder, not on the company pattern but in terms of capital. Government of India was one of the three participants but with a little more dominant role as an overall controller since, as per Act, it was the Government of India which had an authority to make top appointments. Supposing Chairman's voice was not carried out, the Government of India could issue directions. That type of over-riding authority was there. It was through that instrument that lot of things could be controlled. The Secretary added that the administration of the DVC Act was the responsibility of the Corporation. On the Committee enquiring whose responsibility it would be if the Corporation did not carry out the provisions of the Act, the Secretary reacted: "that would be the responsibility of the Ministry."

C. Chief Executive Officer

1.6. According to Sub-Section (2) of Section 6 of the DVC Act the Secretary appointed by the Central Government should be the Chief Executive Officer of the Corporation. The designation 'Secretary' was, however, changed to 'General Manager—Secretary' in 1959. Explaining the reason for change in the designation and the powers of the General Manager-cum-Secretary the Corporation in a written reply stated (January 1981):

"The DVC Board was re-constituted with effect from April 12, 1959 with Shri T. Shivsankar a part-time Chairman and S/Shri A. B. Ganguli and T. P. Singh as Part-time Members. Having regard to the fact that the Chairman and Members were functioning part-time and the executive power of the Corporation was concentrated in Shri U. K. Ghosal, who was the then Secretary, it was felt by the Central Government that his function was analogous to that of a General Manager. His existing designation did not, however, correctly convey the responsibilities of the post held by him. The Central Government, therefore, decided in June, 1959 that Shri Ghosal should be designated as the General Manager-Secretary of the Corporation.

It was felt at that time that the change in designation did not require any amendment of the DVC Act, because the designation 'Secretary' was still being retained. In his

capacity as Secretary of the Corporation, the Secretary and General Manager would be in a position to discharge all the statutory functions under the DVC Act.

With this change in designation and recognising the fact that the day-to-day activities of the Corporation had to be run by the General Manager and Secretary in the absence of the Corporation's Chairman and Members, who were part-time, a much wider delegation of powers was made by the Corporation to the General Manager and Secretary by an order, dated March 14, 1960. Under this order all administrative and financial powers of the Corporation were delegated to the General Manager and Secretary, except for certain matters which were reserved for decision by the Corporation.

For proper and timely discharge of the business and functions of the Corporation, the General Manager and Secretary was also authorised under the aforesaid order to pass orders on reserved matters in emergent cases, subject to a report being made to the Corporation. But this power was subsequently withdrawn by Corporation's resolution No. 2650 adopted in its meeting held on November 6, 1970 in view of the fact that the initial practice of providing a full-time Chairman of the Corporation had been revived during the intervening period."

1.7. In the course of their examination the Committee desired to know how the Secretary was not at present the Chief Executive Officer of the Corporation as envisaged by the Act. The Chairman, DVC stated:

"But, in actual practice, this system is found to be not workable. I have not found it to be workable at all, the Secretary functioning as the Chief Executive."

1.8. Asked if there was an officer in the Corporation who was higher in status than the Secretary, the witness stated that the post of Principal Chief Engineer was higher than that of the Secretary. The designation of Principal Chief Engineer did not exist at the time of enactment of the Act. Asked if he was answerable to the Secretary, the witness replied in the negative. In his view the Chairman, DVC ought to be the Chief Executive and he explained:

"According to the Act, the Chairman is only a constitutional Head. He does not have any executive functions and the

Chairman need not be there at all if he has to function as per the Act as it exists. The functioning of Tennessee Valley Authority (TVA) on which DVC is supposed to be modelled is entirely different. There is a Secretary and General Manager who is supposed to function as Chief Executive like a Managing Director. The Chairman and the Board function as a Court of Appeal for those who are affected by the activities of TVA. The General Manager and the Chief Executive defend the viewpoint of the TVA. The Board functions like a Court. What the Chairman is required to do here is entirely different from what the original concept in 40s was. A review of the structure is called for to enable the Chairman to function as an effective Head of the Organisation."

1.9. The Secretary, Department of Power in evidence stated:

"It is a historical anomaly which we are planning to remove through the restructuring of the organisation."

1.10. Enquired of the authority for vesting the Chairman with the function of the Chief Executive the witness stated: "Corporation by its own resolution did so." As regards the provision of the DVC Act the witness added when the Committee pointed out that the action of the Corporation was not in consonance with the Act:

"I have to say very frankly that I am afraid this is an anomaly which has crept in by the Act, the parameters of the Act. I just want to say that there is a Chairman who is full time and he is expected to discharge the administrative functions. We all question him and he is not called chief executive."

The Secretary went on to say further:

"In most of our public sector organisations, the Board of Directors is a policy-making body and an appellate body; but in most of the cases, we make the Chairman of the Board also the Managing Director of the Chief Executive. I would consider him as the administrative head. But still there is scope for considering it as an anomaly; and this is the type of anomaly which we want to remove in our re-structuring pattern."

D. Investment Control

1.11. The Committee desired to know the powers of the DVC in regard to capital expenditure and whether any prior clearance of outside authorities was needed. The Secretary, Department of Power stated in evidence:

"In the Act it has been mentioned that it has all the powers. If one goes into the history of Corporation's operations on the major investment, this was being exercised by the Government of India in a very different manner. Nobody in the country can set up a power system unless the project report has been techno-economically studied and cleared by the Central Electricity Authority. It applies to even those organisations which are not directly under our control. The Central Electricity Authority sends the report, after clearing it, to the Department of Power and the Department of Power with their comments forwards it to the planning commission. The system was changed in 1977. From 1977, on the basis of a new practice which the Government of India started in 1974, this new system was applied to the DVC. The system is that the Public Investment Board recommends investments to the Cabinet and the Cabinet gives approval. It was suggested that the same thing should apply to DVC also. For example, there was the Bokaro expansion project which had gone to the Public Investment Board; they recommended to the Cabinet and the Cabinet gave the approval. That became the investment decision for the DVC to follow. Today, this is the practice that is going on.

"This gives a fair amount of not only authority but an opportunity for various Government of India organisations to go into details of the project report. When a project report is sent to the Public Investment Board, they send it to a large number of organisations including the Project Appraisal Division of the Planning Commission, the Bureau of Public Enterprises, the Plan Finance Division of the Finance Ministry itself, etc. All of them scrutinise the project report, the feasibility of it and they give their comments. They discuss it with the project authorities. The Ministry of Energy also comes into it. It takes three or four months. It gives full opportunity to tie up all the loose ends and then only the investment decision is taken by the Cabinet."

1.12. Asked as to who issued the financial sanction, the Secretary stated that "in the case of DVC the sanction was issued by the Department of Power in January, 1978 for the first time in the case of Bokaro Thermal Power Project. He added before 1977 DVC used to do that under its own powers. Asked why the system of investment approval by the Public Investment Board/Cabinet was applied to the DVC only in 1977, the witness explained "it was not then taken as a normal Central Sector Organisation because the States were also having shares."

1.13. Normally in case the expenditure is likely to exceed the approved estimates by more than 10 per cent a public undertaking has to come back to Government and if the excess is more than 20 per cent approval of PIB/Cabinet is necessary. As regards the DVC, the witness deposed:

"It comes in a different form that when the annual budget discussion takes place, at that time, it is coming to light formally. I would concede that mid-year if somebody has noticed that they have exceeded, they do not come."

The witness agreed that strictly speaking Government's control over excess expenditure on a project of the DVC was weak. He further stated that in many cases the Government were being presented with a *fait accompli* in the matter of capital expenditure in excess of sanctioned estimates.

1.14. The Committee pointed out that after 1977 when DVC was being treated on par with other public undertakings, DVC estimates had to be submitted to the PIB like any other public undertakings. The Secretary stated: "the revised estimates—I quite agree."

1.15. The Committee then invited the attention of the Secretary to a circular issued in 1969 by the Bureau of Public Enterprises on the basis of the recommendation of the Committee on Public undertakings. The circular laid down:

"At the time of the scrutiny of annual budget of the undertaking, it will be desirable to examine the total capital expenditure that it would incur vis-a-vis sanctioned estimate so that, whenever necessary, sanction of the competent authority is obtained in respect of variations within a reasonable time."

The Secretary stated:

“This was not applied to the DVC because the DVC by its Act did acquire all the powers. We may question it today whether it was a right decision or not. After all, Parliament had enacted an Act and gave that authority to DVC.”

Asked if it was made applicable from 1977, the witness stated: “only it was decided that the DVC projects should also be scrutinised by the PIB as in other central projects”. Asked if the guidelines issued through Bureau of Enterprise were meant for DVC also the witness answered in the negative. The witness added:

“We are examining the need of it within the Ministry but we have not come to a final view as yet. We are looking into the possibilities. There are opinions that we should restructure the DVC. We would be consulting the BPE and we would probably come to Parliament again for an amendment to the original Act. We are doing that exercise at the moment. There are extreme views—whether it will become a totally central sector organisation or not. Then States will have to be consulted because both of them held the shares. So, this exercise is going on.”

The witness further stated:

“We have not formalised any scheme. We are studying this. In restructuring there can be a number of items. It can be totally on the pattern of the Central Government undertaking, registered under the Indian Companies Act, or a statutory body, or a statutory body with a Board of Directors, something on the pattern of the company. So, there are a number of alternatives.”

E. Performance Appraisal

1.16. Although the Department of Power intimated the Committee that only daily reports of power generation, power supply to various consumers and assistance received by the DVC are received in the Ministry the Chairman DVC informed the Committee in

evidence that following reports and returns were sent by DVC to the Ministry:

1. Daily Power generation report.
2. Monthly report of energy generated and sold.
3. Monthly progress report on construction projects.
4. Financial Adviser's quarterly report.
5. Annual return on generation, transmission and distribution.
6. Annual return on energy sale and forecast.
7. Annual report of the DVC and the Audit Report.

1.17. According to the information furnished to the Committee by the Department of Power the Ministry took no performance appraisal meetings for DVC associating the representatives of the BPL and the Planning Commission. The Department, however, stated that "Directions are given from time to time depending on the exigencies of the case."

1.18. Asked if the Annual Reports and Accounts of the public undertakings came up for review, it has been stated:—

"The Annual Report of the DVC is received in the Ministry. The same is placed on the Table of both Houses of Parliament along with a review thereon."

1.19. The Committee called for the reviews of the Government for the years 1975-76 to 1979-80. The Department intimated that "due to the delay in laying of the report for 1975-76 no review appears to have been placed in Parliament according to our records. The annual report for 1979-80 has not yet been received."

1.20. The Committee desired to know from the Ministry the inter-enterprise or inter-ministerial problems in relation to the working of the DVC that came to notice during the years 1977-78 to 1979-80 and what solutions were found. The Ministry intimated that no major problems arose during these years.

1.21. Asked to give general comments on the working of the DVC and intimate the main difficulties felt at present by the management, the main requirements that were wanting for better and more efficient working and suggestions for economy in working, the Ministry had nothing to state. Similarly the Ministry was silent on the enquiry of the Committee whether there was any inbuilt mechanism in the Ministry to come to know of the problems contemporaneously and to initiate remedial action before it became too late and the problems got aggravated.

F. Audit Reports

1.22. According to Rule 28 of the DVC Rules, 1948 the accounts of the Corporation are audited by an officer appointed by the Comptroller & Auditor General of India and under his direction and control. According to Rule 31 the Audit Officer certifies to the correctness of the Annual Accounts prepared by the Corporation and appends to the certificate an audit report. The annual accounts so certified and the audit report after counter signature by the Comptroller & Auditor General are submitted with three additional copies to the President. One copy is retained by the Central Government and one copy is sent to the other two participating Governments. The Audit Report is printed alongwith the Annual Report and Annual Accounts. According to Section 45 of the DVC Act the annual report is laid before Parliament and the State Legislatures concerned.

1.23. To a question whether the reports of C&AG were discussed by the Governing Board of the DVC with a view to giving directions to the Management for action the Department of Power replied in the negative. Although the Chairman, DVC claimed in evidence that the reports were discussed by the Board but not formally placed before them in a note submitted to the Committee subsequently the Corporation *inter alia* stated (January 1981):

“Copies of the Annual Report, Annual Accounts and the Audit Report are invariably circulated to the Chairman and the Members of the Corporation after the report is laid on the table of both the Houses of Parliament. But the reports are not formally placed before the Board meeting. However, this will be done in future starting with the audit report for the year 1979-80.”

1.24. Whereas the Department of Power intimated in writing to the Committee that no reports of the C&AG were received in the Ministry, the Chairman, DVC stated in evidence: “the Annual Report contains the C&AG report, and that Annual Report is submitted to the Ministry and placed before Parliament.” The Secretary, Department of Power in evidence however stated: “I might say that technically it was received because it forms part of annual report.”

G. Capital Structure

1.25. In terms of Section 30 of the Damodar Valley Corporation Act, 1948, the three participating Governments viz. the Union Government, the Governments of West Bengal and Bihar are to provide

the entire capital required by the Corporation for the completion of any project undertaken by it. Under Section 38 of the Act, the Corporation has to pay interest on capital provided by the participating Governments at such rates as may be fixed by the Union Government. The capital expenditure of the Corporation is supposed to be met from the internal resources and the capital provided by the participating Governments. However, under Section 42 of the Act, the Corporation may with the approval of the Central Government borrow money in the open market or otherwise for the purpose of carrying out of its functions.

1.26. The total capital expenditure on a Project shall be allocated between the three main objects, namely, irrigation, power and flood control in the manner prescribed and the total amount of capital so allocated to each of these objects shall be shared by the participating Governments in the manner laid down in the Act. As per the Act the total amount of capital allocated to power shall be shared equally between the three Governments.

1.27. The total capital outlay and the capital provided by the participating Governments were Rs. 425.45 crores and Rs. 214.72 crores respectively upto 31 March, 1979. Tables below indicate the details of allocation of the total outlay and the actual contribution by the Governments.

Main objects	Total capital outlay			Total
	(Rupees in crores)			
	Allocation of outlay			
	Union Govt.	West Bengal Govt.	Bihar Govt.	
1. Irrigation	..	49.46	0.28	49.74
2. Power . . .	119.07	119.07	119.07	357.21
3. Flood control	7.00	11.50		18.50
TOTAL;	126.07	180.03	119.35	425.45
Capital Provided				
1. Union Government		56.09		
2. West Bengal Government		109.27		
3. Bihar Government.		49.36		
		214.72		

1.28. Under Section 31 of the Act each participating Government shall provide its share of the capital on the dates specified by the Corporation and if any Government fails to provide such share on such dates the Corporation may raise loan to make up the deficit at the cost of the Government concerned. From 1969—70 onwards the participating Governments did not make any contribution towards capital. The gap between the requirement and the internal resources is therefore met by public borrowing and other sources the details of which as on 31 March, 1980 as intimated by the Department of Power are as follows:—

	Rs. in crores
(a) Loan	
(i) Debentures.	6.50
(ii) Banks	36.57
(iii) Unsecured (Govt. of India)	9.34
	52.41
(b) IDBI Assistance	1.10
	53.51
TOTAL:	53.51

1.29. Stating that the State Governments have refused to contribute capital since 1969—70 the Chairman, DVC deposed (December, 1980) in evidence before the Committee:

“By virtue of the Act, certain advantages flow to the State Governments, but the necessary obligations are not being fulfilled by the States. For this, I would like to suggest reconsideration of the structure of DVC. At present, there is a Chairman, and there is one member from each of the States on part-time basis and that is on the concept that they will keep on financing the growth of DVC. But since it is not happening, the basis of that structure does not exist. The structure of the Corporation may be remodelled on the lines of a Government undertaking.”

1.30. The Secretary, Department of Power stated in evidence (December, 1980) that the, two State Governments refused to give capital as they felt that their ways and means position was not good. Thereupon the Centre also decided to stop their contribution. Asked if the Corporation suffered at any time for want of funds for investments, the witness replied in the negative.

1.31. Under Sub-Section (1) of section 37 of the Act net profit, if any, attributable to each of the three main objects, namely irrigation, power and flood control, shall be credited to the Participating Governments in proportion to their respective shares in the total capital cost attributed to that object.

1.32. The DVC is a unique public undertaking having participation of Central Government and State Governments of Bihar and West Bengal, created in 1948 by an Act of the then Dominion Legislature on resolutions having been passed by all the Chambers of Provincial Legislatures of the then provinces of Bihar and West Bengal to the effect that certain matters which were enumerated in the provincial legislative list should be regulated in those provinces by an Act of the Dominion Legislature. Although the Committee had mainly taken up the power portion of the DVC for examination, in view of the unique features of the Corporation, they also went into the structure of the DVC Act, 1948 and the control mechanism.

1.33. The structure of the DVC Act envisaged a control board for the Corporation to formulate policies and exercise supervision leaving the execution to the Secretary, who should be the Chief Executive Officer. Unfortunately it is not the position in actual practice. The Chairman of the Board has become the de facto Chief Executive Officer. Besides being legally untenable, this has led to blurring of executive responsibility and dilution of the Board's control over the Corporation. This assumes seriousness especially since the degree of autonomy enjoyed by the DVC is uncommon among public undertakings. The Government seem to think that restructuring of the Corporation is necessary in order to remove certain anomalies and improve the control mechanism. The Committee are, however, unable to resist a feeling that the anomalies are largely the creation of the Corporation and the Government acquiesced in it.

1.34. It follows from Section 51 of the DVC Act that the Central Government should satisfy themselves from time to time that the Corporation carried out its functions properly. It is, therefore, surprising that no systematic performance appraisal of the Corporation was made by the Government periodically. No cognisance seems to have been taken of the reports of the Comptroller & Auditor General of India on the Corporation. Even in the Corporation, the Audit Reports were not formally placed before the Board. The Committee were, however, assured that it would be done in future. Though the Annual Reports of the DVC are presented to

Parliament alongwith a review by the Government, the review hardly adds to the Annual Reports and what is worse there was no review for the year 1975-76.

1.35. Investment control in respect of the DVC is also weak. Prior to 1977, though clearance of the Central Electricity Authority and the Planning Commission was obtained for various projects undertaken by the Corporation, there was no expenditure control as such by Government. Since 1977, major investment proposals are approved by Cabinet after a scrutiny by the Public Investment Board also and specific expenditure sanction accorded by the Ministry as in the case of other public undertakings. However, there is still no control over the actual expenditure for the revised estimates do not come before the Government irrespective of the extent of excess over original estimates.

1.36. Capital expenditure of the Corporation is to be met from its internal resources and the capital provided by the participating governments, who share the profits of the Corporation. However, the governments did not make any capital contribution since 1969-70 and the investment needs of the Corporation are met entirely by internal resources and borrowings. The total borrowings as at the end of March 1980 stood at Rs. 53.51 crores. Secretary, Department of Power, explained that the two participating State Governments refused to contribute to the capital investments on account of their not-so-good ways and means position whereupon the Centre also decided to stop its contribution. According to the Chairman, DVC, though certain advantages flow to the State Governments, the necessary obligations are not being fulfilled by them. The Committee are not clear as to how the liability for meeting the capital requirements through borrowing is shared by the participating Governments. They desire that the financial arrangements obtaining now should be examined with reference to the provisions of the Act in consultation with the Comptroller & Auditor General of India to ensure that the liabilities of the participating Governments for raising resources are fully discharged.

1.37. The Committee agree that the participating Governments having made no capital contribution for the last more than 10 years, the structure with which the DVC was set up in 1948 seems to have lost its relevance. Any restructuring of the Corporation should, however, carry conviction with the participating State Governments and whatever form the restructured Corporation might take, it

should provide for effective control over the Corporation and in this respect the Committee's observations in the foregoing paragraphs should be taken note of. The Committee would await the outcome of the examination by the Government on the restructuring of the Corporation.

H. Advisory Committee

1.38. Section 10 of the DVC Act provides:

“Subject to any rules made under Section 59 the Corporation may from time to time appoint one more Advisory Committees for the purpose of securing the efficient discharge of the functions of the Corporation, and is particular for the purpose of securing that these functions are exercised with due regard to the circumstances and requirements of particular local areas.”

1.39. Section 59(6) of the Act empowers the Central Government to make rules to provide for the appointment of an Advisory Committee, the Advisory Committee rules notified on 23 May, 1949 laid down that the Advisory Committee should consist of seven Members, namely:—

- (a) three persons to be nominated by the Central Government of whom one to be the representative of Ministry of Finance.
- (b) two persons to be nominated by the Government of West Bengal.
- (c) two persons to be nominated by the Government of Bihar.

The functions of the Committee should include:

- (i) the examination of the progress made by the Corporation from time to time and of the way in which each project was taken up and submission of reports thereon, if necessary, to the Participating Governments.
- (ii) the arrangement of discussions for facilitating mutual appreciation of the respective view-points of the Participating Governments and the Corporation in regard to the overall plan, the programme and the pace of the work.
- (iii) the communication of the suggestions of the Participating Governments with respect to the issue of directives on matters of policy by the Central Government under Section 48 of the Act.

1.40. Pursuant to the Rules, the Corporation passed a resolution on 26 July, 1949 constituting the Damodar Valley Corporation Advisory Committee. It was decided that the Hon'ble Ministers and Secretaries concerned would represent the respective State Governments on the Committee.

1.41. The Department of Power informed the Committee (January 1981) that in September 1952 a Committee was set up under the Chairmanship of Shri P. S. Rau, Adviser to the then Government of Madhya Bharat to inquire into various matters relating to the DVC. One of its recommendations was the abolition of the Advisory Committee as it was considered to be 'extralegal'. The Enquiry Committee also recommended that the Advisory Committee Rules might be rescinded. The Rules were accordingly rescinded by Government of India Notification dated 24 September, 1954 and the DVC Advisory Committee was abolished by a Corporation's resolution adopted in its meeting held on 7 April, 1955. Asked if the enquiry committee suggested that there should be no advisory committee even though the Act provided for that, the Department of Power replied in the negative.

1.42. During examination of Department of Power the Committee pointed out that there being no Advisory Committee in the nature of Consumer Consultative Council at present the mechanism for making the DVC responsible to consumer interest continuously was not in existence. The Secretary, Department of Power stated: "the Act says, the Corporation may appoint, it does not say, it shall appoint. It has discretionary power."

1.43. Asked the Ministry received complaints and suggestions from consumers and whether there was any cell in the Ministry to attend to them and to see that the DVC similarly attended to the complaints and suggestions received by it as also to monitor the opinions/suggestions of the consumers that appeared in the columns of newspapers, all that the Ministry intimated the Committee was as follows:

"DVC sometimes receives complaints in regard to low frequency of power supply and heavy restrictions on consumers' leads adversely affecting industrial production of the consumers which are sometimes routed through the concerned Ministries of the Central Government."

1.44. It appears to the Committee that the DVC Act contemplated the constitution of advisory committees in the nature of consumer consultative councils. But the rules that the Central Government framed in May 1949 on the appointment of an advisory committee did

not give it such a character. It was in the nature of a governing advisory council. The advisory committee formed as per the rules, which functioned for a brief period of about 16 years, but was rightly regarded extra legal and wound up. The relevant rules were also rescinded. The Corporation thus has gone without any advisory committee for 25 years now, and the mechanism that the Act envisaged for making the Corporation continuously responsive to consumer interests has not been in existence for all these years. In this connection, the Secretary, Department of Power, in evidence took protection under the strict letter of the law saying that the Corporation had discretionary power as the Act provided that the Corporation "may" appoint an advisory committee. Clearly, the spirit of the Act would demand the constitution of advisory committee(s) consisting of representatives of the various interests to be served by the Corporation in order to advise the Corporation and make it responsive to their needs. The Committee would, therefore, urge the government to formulate rules suitably and see that advisory committees are appointed as early as possible.

CHAPTER II

MAJOR PROJECTS

2.1. There were four projects (Chandrapura units IV, V and VI and Durgapur Unit IV) costing Rs. 20 crores and above each, commissioned/expected to be commissioned during the 5-year period 1974—79.

Statement below gives the dates on which the schemes were submitted to the Government, the dates on which these were approved, scheduled dates of completion of the projects and the actual dates of completion.

Name of the Project	Date of submission of the scheme	Date of GOI approval	Scheduled completion	Actual completion
CTPS IV. (120 MW)	Jan., 67	June, 67	Dec., 71	March, 74
CTPS V (120 MW)	Jan., 67	April, 68	August, 72	March, 75
CTPS VI (120 MW)	Feb., 70	August, 72	Dec. 76	March, 79.
DTPS IV (200 MW)	August, 72	Feb., 74	June, 79	May, 81 (anticipated)

2.2 The original estimated cost, revised cost and up-to-date investment in respect of the above projects as intimated by the Department of Power are given below:—

(Rs. in lakhs)

Name of the Project	Original Estimate	Latest Estimate	Expenditure upto 3/80
			1979-80)
1. CTPS (IV & V)	2813.00	4790.00*	4766.37*
2. CTPS (VI)	1994.62	3600.00	4611.50*
3. DTPS (IV)	3780.00	7514.00	6137.00*

*At the time of factual verification Audit have furnished the following figures:

CTPS (IV and V)	latest estimates	Rs. 4686 lakhs
CTPS (IV and V)	Actual expenditure	Rs. 4627.58 lakhs
CTPS VI	" "	Rs. 4219.96 lakhs
DTPS IV	" "	Rs. 6134.37 lakhs

2.3. In a note submitted to the Committee the Department of Power stated (December, 1980) that the increase in cost was not attributable to change in scope of the project and that the escalation of cost was mainly due to price rise and increased establishment cost consequent upon the prolongation of the construction period.

(A) Delay in commissioning

(i) CPTS Unit IV:

2.4. The commissioning of this unit was delayed by about 27 months. Explaining the delay the DVC intimated to the Committee: "The major heavy capital machinery installed by BHEL took considerable time to be fully operational. Besides, installation of some of the machineries for manufacture of equipment was delayed on account of Indo-Pakistan war. The overall progress of manufacture was very slow. M/s. BHEL took considerable time to gear up their working arrangement for which they had to develop adequate skill and expertise indigenously. BHEL revised the delivery schedule of TG Set to February 1973 and that for associated piping work by August 1973 with the result the commissioning of the unit was correspondingly delayed."

(ii) CPTS Unit V:

2.5. This unit was delayed by about 31 months. In regard to this delay the Department of Power intimated to the Committee: "The original target date for commissioning of the Unit V was August 1972 based on major equipment supplies like TG and auxiliaries from HEIL|BHEL by February 1971. As against this, TG and auxiliary supplies from HEIL|BHEL were considerably delayed, and were in effect completed by February 1975. Unit V could accordingly be synchronised in March 1975 only."

(iii) CPTS Unit VI:

2.6. The commissioning of this unit was delayed by about 27 months. Attributing the delay mainly to the supplies of equipment by BHEL the Department of Power stated: "Against the original target date of commissioning of this unit in December, 1976, the unit was actually commissioned in March, 1979. This unit was delayed as its generator stator had to be diverted to Chandrapura Unit 4 whose stator got damaged in September, 1976 in order to bring unit 4 back to service with least possible delay. The repaired stator was later received at site in July, 1978. Besides, the 100 MVA

Auto-Transformer, the Generator Rotor and the Generator Bearings were also delivered late by BHEL and these were received in November, 1978, December, 1978 and February, 1979 respectively."

(iv) DTPS Unit IV:

2.7. This unit is likely to be delayed by about 18 months. In this connection the Department of Power had submitted the following:—

"Although, the unit was originally scheduled for commissioning in December, 1978 the said target could not be maintained on account of the following main reasons beyond our control.

The main reasons for the delay, already brought to the notice of the concerned Ministry/CEA are attributable to:—

- (i) Slippage of maintaining the scheduled delivery of major equipment by various contractors;
- (ii) Delay in civil works;
- (iii) Unprecedented rains and subsequent severe flood in 1978 hindering progress of various works already under execution.
- (iv) Labour unrest in contractors works particularly by workers of IL, Durgapur for 5 months in 1980.

However, as per present indications, hat unit is expected to be commissioned in March, 1981. Boiler has been successfully hydro tested on 2-7-1980 and boiler operation is expected to commence by 4th week of November, 1980."

2.8. The Committee enquired if any assessment had been made of the effect of the loss of production on account of delay in commissioning of projects and shortfall in execution of capacity as anticipated. The Department of Power have stated 'Consumer demand had to be restricted to certain extent and production did suffer even after staggering of loads at consumers' end.

(B) Escalation of Cost:

CTPs Units IV & V:

2.9. Escalation of cost as compared to original estimates in respect of CTPS IV & V is Rs. 1977 lakhs. In a note submitted to the Committee the Corporation stated that the original estimate submitted by DVC to the concerned Ministry/CEA for approval was for

Rs. 2,813 lakhs. While according approval, the Planning Commission revised the estimate to Rs. 3,438 lakhs in June, 1967 towards the post-devaluation cost of the scheme. The detailed project estimate was sanctioned by the DVC in April, 1973 for Rs. 4,264 lakhs. The subsequent revised cost is Rs. 4,790 lakhs.

2.10. About the upward revision of the estimates the Corporation stated:—

“The original estimates based on the prices prevailing in 1966 envisaged an expenditure of Rs. 4264 lakhs for both the units 4 & 5. These estimates have since been revised to Rs. 4790 lakhs. The increase in the project estimate is primarily due to the enhancement in cost of plant and equipment to the extent of Rs. 400 lakhs. (This includes BHEL’s share of increase of Rs. 150 lakhs for TG and auxiliaries). The balance increase is on account of higher cost of civil work and continued establishment charges due to project over run.”

CTPS Unit VI:

2.11. Actual expenditure upto March, 1980 in the case of this unit was about 2617 lakhs more than the original estimates. In regard to increase in cost the Corporation stated: 1

“The original project estimate sanctioned by Government of India for Rs. 1995 lakhs was based on 1969 prices. This estimate had to be revised in May 1975 by Rs. 1600 lakhs as in the meanwhile there had been spiralling price rise in Engineering Industry as well as wage increase. The enhanced amount was meant to cater to the increase in cost of civil work (Rs. 173 lakhs), increase in cost of equipment—965 lakhs (TG—419 lakhs, Generator-Transformer—30 lakhs, Boiler Feed Pumps—31 lakhs, AVB’s Boiler Plant—223 lakhs, Cooling Towers—40 lakhs, the balance amount being towards increase in cost of various other equipment) and also higher establishment and other expenses.

The actual expenditure, however, has been higher by another 1000 lakhs out of which Rs. 500 lakhs were on account of enhanced cost of plant and equipment (BHEL’s share being 190 lakhs, IL-Kota—70 lakhs and the balance for other equipment) and Rs. 250 lakhs for

increase in cost of civil work and another 250 lakhs for enhanced establishment and other expenses necessitated by project over-run. Against his increase of 1,000 lakhs, it is expected that there would be a return of about 250 lakhs towards transfer of equipment and spares to the Operating Wing."

2.12 Whereas the latest sanctioned estimate in the case of CTPS VI was Rs. 3600 lakhs, the actual expenditure upto March, 1980 was stated to be Rs. 4611.50 lakhs. The Committee enquired how DVC could spend about Rs. 10 crores and 11 lakhs more than the sanctioned amount. The Chairman DVC in evidence stated:

"The sanction for the revised estimate has not yet been obtained. This should have been done." He added "the Ministry and the Planning Commission have been kept informed about the increase in the expenditure."

The witness further stated:

"The general practice is that in respect of on-going project, the work is not stopped. We continue the work and keep the concerned agencies informed that the cost estimate has overrun and we are continuing the project. After the completion of the project, a completion report is made and we ask for sanction on the basis of the completion report. That is the usual practice."

The Financial Adviser of the Corporation deposed:

"The first estimate of Rs. 36 crores was prepared by us and duly approved by the Planning Commission and that was placed before the Corporation and the Corporation also approved it. On that basis we met the expenditure. Subsequently due to escalation and some slippage, the cost has gone up and that we propose to place before the Corporation and the Board is already aware because every expenditure we made beyond the budget, we place before the Board for approval. On the completion of the CTPS-6—it has now been completed. We will make a consolidated statement of expenditure and place it before the Board for final approval."

DTPS Unit IV

2.13. Latest estimates are more than the original estimates by Rs. 3734 lakhs for this unit. About the increase in estimates the Corporation stated:—

“The original estimate prepared on the basis of prices prevailing in 1972 was approved by Government of India in February 1974 the amount being Rs. 3780 lakhs. This estimate has been revised to Rs. 7514 lakhs to accommodate increase in the cost of civil work and exorbitant increase in the cost of plant and equipment. While increase in the cost of civil work accounts for 614 lakhs, that for plant and equipment amounts to Rs. 3052 lakhs, out of which BHEL’s share alone is Rs. 1870 lakhs. The cost of instrumentation was up from Rs. 100 to 212 lakhs, transformer from Rs. 13 to 90 lakhs, Coal Handling Plant from Rs. 90 to 323 lakhs and Switchgear from Rs. 72 to Rs. 304 lakhs. The balance increase in the amount is towards higher establishment charges.”

2.14. In the table at page 226 (column 5) of Audit Report for the year 1978-79 expenditure upto 31-3-1979 for the DTPS Unit IV has been shown as Rs. 51.67 crores and the same amount has been shown in column 6 as excess over sanctioned estimate. The Committee enquired how the Corporation could incur the expenditure without the estimates having been sanctioned. The Chairman, DVC stated (December, 1980) that it needed to be looked into.

2.15. Subsequently the Corporation, intimated to the Committee (January, 1981):

“Evidently, the entry under column 6 in respect of DTPS 4th Unit in the annexure at page 226 of the Audit Report for the year 1978-79 is based on a misconception*. Even if the Planning Commission’s approved estimate of Rs. 3,780 lakhs is taken into account, the excess will be Rs. 1,387.32 lakhs. However, in August, 1977, the project estimate was revised to Rs. 7514.30 lakhs, which was communicated to the CEA in July, 1978.”

*At the time of factual verification Audit pointed out that this was based on the data supplied by the Corporation *vide* its letter No. RA/AQ/3/78-79/3664 dated 20th July, 1979.

216. While examining the Department of Power on DVC (December, 1980) the Committee asked the Secretary how sanction had not been obtained in this case from Government and how without sanction such a large expenditure could be incurred by the DVC. The Secretary stated that at that time PIB had not been imposed on DVC. As regards the sanction having not been obtained even from the DVC Board, the witness stated:

“This is a surprise to me that the Board did not give sanction, although in the annual plan discussions it was being agreed to that this year they will spend so much on the project.”

He added:

“It is not justified. I am not justifying DVC but the Planning Commission's clearance in 1974, they interpreted as sanction.”

2.17. Asked whether it was ever reported to the Ministry through Financial Adviser's quarterly reports or otherwise that the Corporation was spending money without specific sanction the witness replied in the negative.

C. Project Benefits:

2.18. The Committee desired to know how the Economic|Social Benefit-cost ratio and the rate of financial return on the investment compared with those anticipated at the time of initially and finally sanctioning each of the projects commissioned. The Department of Power intimated the following:

“CTPS IVth Unit came into commercial operation from 1-4-1975 and CTPS Vth Unit came into commercial operation from 1-4-76. The percentage return on gross assets for

two units for the period from 1975-76 to 1978-79 is shown below:—

CTPS IVth UNIT

Year	Returns as envisaged in the project	Actual return on gross assets
1975-76		11.63
1976-77		2.79
1977-78	8.46	(—)2.46*
1978-79		12.41

CTPS Vth UNIT

1976-77		0.39
1977-78	8.45	7.32
1978-79		14.20

*Due to low generation.

N.B. In the above computation, as the unit-wise consumption of fuel and expenditure thereon is not known, proportionate expenditure for CTPS as a whole has been reckoned.

D. Completion Reports

2.19. In para 4 of Audit Report for the year 1978-79, Audit have pointed out that completion reports in respect of the following projects, completed on dates indicated against each, have not been prepared/approved by the Corporation so far (August, 1979).

Project	Date of completion	Expenditure incurred (Rs. in lakhs)	Remarks
1	2	3	4
Panchet Hill (Hydel)	September, 1959	261.05	The Corporation has stated (August, 1979) that no useful purpose would be served by Preparing a detailed completion report for these projects at this stage.
Maithon (Hydel)	December, 1958	418.62	

1	2	3	4
Barrage & Irrigation	March, 1959	1971·56	The Corporation has stated (December, 1979) that it has not been possible to finalise the preparation of completion report. This will be done after ascertaining the expenditure by the Government of West Bengal to whom the operation and maintenance of Barrage and Irrigation canals with land was handed over in 1964.
G & H Stages of Transmission & Distribution system	Not available	1069·83	Completion report under revision.
Chandrapura Thermal Power Station Unit			
I	Oct. 1964	2708·52 1433·90	Completion report under revision
II	May, 1965		
III	July 1968		
IV	March, 1974	4630·06 3946·77	The Corporation has stated (August, 1979) that preparation of completion report will be taken up after construction accounts are closed.
V	March, 1975		
VI	March, 1979		
Durgapur Thermal Power Station Unit			
I	Oct, 1960	1354·59	Completion report under revision.
II	Feb. 1961		
III	Dec. 1966	1672·12	Do.

2.20. In a note submitted to the Committee the Corporation (December, 1980) that preparation of completion reports for the following projects at this late stage will not serve any useful purpose:

- (i) Panchet Hill (Hydel)
- (ii) Maithon (Hydel)
- (iii) G&H stages of Transmission and Distribution System.
- (iv) Chandrapur Thermal Power Station Unit-I.

Regarding other projects the Corporation stated that Completion reports will be finalised by 30-6-1981.

E. Monitoring:

2.21. To a query of the Committee regarding the machinery in Government for monitoring of the performance of projects of DVC the Department of Power stated in a note:

“Performance of the project is actually monitored by CEA, New Delhi. Besides detailed discussions are held each year from time to time in CEA where major suppliers and DVC participate. And Annual Plan deliberations are held between DVC and concerned Ministry|Planning Commission/CEA while allocating DVC's yearly fund requirements.”

2.22. There were four projects (Chandrapura units IV, V & VI and Durgapur unit IV) each costing Rs. 20 crores and above, commissioned/expected to be commissioned during the 5-year period 1974—79. In all these cases delay in commissioning was more than two years and one project (Durgapur unit IV) is yet to be completed. Though the delay was mainly due to slippage in the schedule of delivery of equipments by BHEL, the DVC cannot be absolved of the blame altogether. The result was that there was considerable shortfall in the creation of capacity for power generation during the 5-year period. Admittedly, consumer demand had to be restricted and production in vital sectors did suffer even after staggering of loads at the consumers' end.

2.23. Cost escalation, which was largely due to price rise and increased establishment cost consequent upon the prolongation of the construction period, was as high as nearly 100 per cent as against the original estimated overall cost of Rs. 85.88 crores in all these projects. In the case of Chandrapura units IV & V, the project estimates underwent revision thrice. The project estimates of Chandrapura unit VI were revised in May 1975, but the actual cost exceeded the revised estimates by more than Rs. 10 crores. Yet sanction for the excess has not been obtained so far. The Committee were surprised to hear from the Financial Adviser and the Chairman, DVC, that it has become the usual practice in the Corporation in such cases to await the completion report and seek sanction ex post facto. What is even more curious is that in the case of Durgapur unit IV, though expenditure of Rs. 61.37 crores has been incurred upto March, 1980, expenditure sanction as such had not been obtained on the basis of detailed estimates. Strangely clearance by the Planning Commission was construed as sanction by the Corporation. It is obvious that the Financial Adviser did not con-

sider the continued expenditure without proper sanction an irregularity and failed to bring it to the notice of the Government or the Board of the Corporation. ..

2.24. It is not clear to the Committee whether the successive revised estimates of projects went before the Planning Commission so that they could be reappraised to see whether the initial anticipations held good and if not, whether there was any scope for economy. Although original project reports envisaged a financial return of more than 8% in the case of Chandrapura units IV & V, the average actual annual return after commissioning of these projects was much less upto 1978-79. Though the Committee desired to have data on the economic/social cost benefits in respect of these projects, no such data were forthcoming. ..

2.25. It appears that the DVC has not yet brought out completion reports for virtually any of the projects undertaken by it so far. In respect of a number of old projects, the Corporation has now pleaded that the preparation of completion reports at this late stage would not serve any useful purpose. As the detailed completion reports are expected to give a comparison and explanation of differences between quantity, rate and cost of the work executed and those entered in the estimates, and the object is to enable the superior authorities to scrutinise the excess, it is really a serious lapse on the part of the Corporation that it has not attended to this work with any sense of responsibility so far.

2.26. The observations of the Committee in the foregoing paragraphs of this section would unmistakably show that the system of project planning and coordinated implementation and control over cost is anything but satisfactory. In view of the serious implications of the kind of laxity that have become almost built-in, the Committee recommend that these aspects should be gone into by Government in consultation with the Planning Commission, Central Electricity Authority and Comptroller & Auditor General of India with a view to putting matters on a sound footing without loss of time.

CHAPTER III

POWER GENERATION & DISTRIBUTION

A. Generation

3.1. The present installed capacity of the Power Stations of the DVC is indicated in the following table:

Name of the Station	Name Plate Rating	Present capability
<i>Thermal</i>		
	MW	MW
(i) Bokaro Thermal Power	247	227.5
(ii) Durgapur Thermal Power Station	290	250
(iii) Chandrapura Thermal Power Station	780	780
Total Thermal :	1317	1257.5
<i>Hydel</i>		
(i) Tilaiya Hydel Station	4	
(ii) Maithon Hydel Station	60	
(iii) Panchet Hydel Station	40	
Total Hydel :	104	

(Source: Annual Report of the D.V.C., 1978-79)

3.2. The Secretary, Department of Power informed the Committee in evidence that the actual capability of the DVC power system was less than the installed capacity.

He added:

“The Central Electricity Authority from time to time examines the capability of equipments which have been in service

for long. Some of the equipment of the DVC is 20 years old. There is a 100 MW unit, whose capability may be really only 80 or 90. In the case of DVC, today the derated capacity, to be exact, is 1257.5 thermal capacity."

He also added that the hydro had almost nil capability as it had no water for power generation.

3.3. The Secretary further informed the Committee that in any power system some machinery was either under overhaul or under break-down. The norm for the country that had been adopted was the ratio of peaking requirement to the installed capacity. The maximum that was expected from the power system at any time of the day was peaking. The ratio adopted by the Planning Commission for all the regions in the country was 64 per cent. But for eastern region it had been adopted as 59 per cent. He stated that if firm capacity of DVC was worked out on the basis of derated installed capacity of 1257.5 MW and the norm of 59 per cent it came to 741 MW.

3.4. About fixing a lower norm for the eastern region the Chairman, CEA stated:

"In thermal the variations are there from hour to hour. We have given five per cent lower capability factor to eastern region as compared to other regions. The other regions have a lot of hydro. The wide variation is met by hydro. But that particular facility is not available in the eastern sector. In DVC, hydro is only 100 MW and that too seasonal."

The Secretary, Department of Power however, deposed:

"In principle, it should be the same. But what has been seen over the last many years is that in the eastern region, it is predominantly on account of labour industrial relations problems. Although our objectie is to improve that, it will not happen in one stroke. It will take time."

He cotinued: "last month, the performance of eastern region was slightly better than that of Southern region. So there is already a case for second look, at the norm fixed".

3.5. The table below gives the installed capacity, actual capacity (capability), and the average power generation during the years

1976-77 to 1979-80 together with the percentage of generation to actual capacity:

Name of the Station	Installed Capacity	Actual Cap.	1976-77		Actual to ed caps. Cap.	1977-78		
			Actual Average Gen.	% age of Actual cap.		Actual Ave. Gen.	% age of Gen. to Actual cap.	
CTPS	660	615	294	47.8	660	615	522	52.4
DTPS	290	250	146	58.4	290	250	107	42.8
BTPS	247.5	205c	132	64.4	247.5	205c	130	63.4
	1197.5	1070	572	53.45	1197.5	1070	559	52.2
	1978-79				1979-80			
CTPS	660	615	317	51.5	780	730a	295	40.4
DTPS	290	235b	144	61.2	290	235b	100	42.5
BTPS	247.5	205c	133	64.9	247.5	205c	109	53.2
	1197.5	1055	594	56.3	1317.5	1175	504	42.9*

(a) is shown as 780 MW

(b) as 250 MW and

(c) as 227.5 MW in the Annual Report of the DVC for the year 1978-79.

* is 1257.5 MW according to the Annual Report and the evidence of the Secretary, Department of Power.

3.6. Another parameter for measuring the efficiency of power system is generation of power in Kwh per K.W. of installed capacity. The expected norm of generation after taking into account all the relevant factors is 5,000 Kwh of power per K.W. of capacity. KWH. KMW of installed capacity of thermal stations of DVC for the period 1976-77 to 1979-80 as furnished by DVC are given below:—

Name of the Station and Units	1976-77	1977-78	1978-79	1979-80
C. T. P. S.	3912	4284	4212	3327
D. T. P. S.*	5129	3771	5092	3532
B. T. P. S.*	5092	5000	5123	4215

*These are worked out by the DVC on the basis of actual capacity (derated capacity)

3.7. According to the DVC the shortfall in generation of power was mainly attributed to unsatisfactory performance of BHEL units

4 & 5, poor quality of coal and Dugda II middlings and increase in downtime for maintenance due to frequent breakdown of auxiliaries and boiled tube leakages.

3.8. The Secretary, Department of Power stated in evidence that if the performance of DVC was to be judged on a long-term basis it should be done on the basis of utilisation factor. Subsequently in a note furnished to the Committee the Department of Power stated (January, 1981) that the Rajadhyksha Committee recommended (i) Plant availability for operating thermal units should be assumed to be 80 per cent at an average and (ii) Plant load factor of 58 per cent should be considered as the norm for the system.

3.9. Following table gives the performance details of DVC system as compared to the All India Average during 1976-77 to 1980-81 (April, 1980 to November, 1980) as furnished by the Department.

Year	P. L. F. (%)	
	D.V.C.	All India
76-77	50.4	56.0
77-78	49.2	50.8
78-79	52.3	48.4
79-80	40.1	45.0
1980-81 (Apr-Nov.)	33.8	42.5

3.10. The Secretary informed the Committee that the last 18 months—the whole 1979-80 and 6 months of 1980-81 had been the worst period. According to the Chairman DVC this was because “there was lack of necessary climate of motivation, discipline and accountability”.

The Committee wanted to know if it was not a fact that Management failure in looking after the plant was mainly responsible for shortfall in generation. Chairman, DVC stated that the big gap between target and the generation actually realised in 1979-80 was attributable also certain causes other than those applicable to earlier years. He, however, added that there was always scope for improvement in the performance of the management.

3.11. The Chairman, DVC further explained:

“When I say lack of discipline and accountability, I am not confining this remark to any level of employees, not to the workers only. It is pervasive; that is why I advisedly used the word “accountability”; because, accountability permeates the whole organisation, including management, certainly, discipline and accountability at all level, not excluding the management.”

The witness however claimed:

“The trend that we have been able to establish from October is very encouraging in as much as our generation today is about 40 per cent higher than it was till August this year.”

3.12. Dealing with the factors responsible for the recent improvement the witness continued:

“Basically two. One is, we have been able to inculcate a climate of discipline and accountability. The second is as a consequence of that—we have been able to execute successfully some plant betterment schemes.”

3.13. While examining the Department of Power the Committee enquired if the Government has considered the situation arising out of lack of discipline and accountability in the DVC at any time in the past and if so, whether any policy directions had been given to the Corporation. The Secretary stated in evidence:

“This had been the most important problem before the Government particularly during the current year because of the poor performance of the earlier 18 months or so. Lack of discipline in work and to some extent even the law and order problem in the power sector areas in the eastern regions has certainly been a problem all-round. We had constituted certain committees which went from here to study these problems. We had sent 3 committees from here during the last few months. Certainly one could say that this has been a ‘Management problem’ to some extent; and that is why the Government decided to effect a change at the top. The Chairman was changed. Discussions were held with senior officers of the Corporation also.”

3.14. In a written reply the Committee had been informed earlier by the Department of Power that in DVC during 1977-78, 36,675 mandays were lost, during 1978-79, 3,803 mandays were lost and during 1979-80, 47,044 mandays were lost; but there was practically no effect on power generation. While hearing the witness the Committee asked how it could be said that poor performance of DVC was due to labour problems. The Secretary stated:

“1978-79, when in terms of mandays lost it was the minimum, the generation was maximum. But in addition to this, there can be a situation when technically a strike is not there, but the indiscipline has become of that type, the atmosphere is so developed that the people are not working.”

3.15. Dealing with other problems besides law and order, the Secretary continued:

“Basically the reason was the management structure. For example, if the personnel management department does not even exist, it is a lapse on the part of the management. If there is no proper material management, procurement of certain spares of the right quality at the right time may not be possible.”

3.16. Asked if this was going on like this for the last 31 years, the witness stated:

“In many organisations in the country that was the position. I am myself criticising it. I am not defending it. I say, it was a lapse. In the power industry throughout the country that has been the practice. Every Government and every committee knows that in every State Electricity Board and power utility in India, these things have not been structured professionally. The whole industry was being worked all over the country on lines in which these professional disciplines had not been emphasised. No effort at any time was probably made except in some isolated cases here and there by some individuals, it was not done as a policy.”

3.17. The Committee enquired about the management innovations or techniques suggested by the Department of Power to improve the power generation. The Secretary deposed:

“The whole exercise, according to our view, is to start with the organisation, top management. What should be the

structure of the top management. Tied up with that, what should be the method of monitoring, reviewing of performance of the organisation. We have started this exercise recently; probably we will be coming forward before Parliament because that is the starting point."

B. Distribution

3.18. The Committee were informed that forecast on system demand was regularly made on annual basis. The estimated demand for the years 1974-75 to 1978-79 (at power station bus) was indicated as below:—

1974-75	.	.	848	MW	} As per 9th Annual Power Survey
1975-76	.	.	912	MW	
1976-77	.	.	1038	MW	
1977-78	.	.	932	MW	} As per 10th Annual Power survey
1978-79	.	.	1027	MW	

3.19. As regards the actual demand compared to the assessment made by the DVC the Committee were informed that maximum demand recorded during period 1974-75 to 1978-79 was 856 MW.

3.20. Total maximum demand allocated to all DVC consumers was stated by the Corporation to be 800 MVA in October, 1977. This based on 0.85 load factor corresponded to 680 MW average generation. Against this the actual yearly generation of power during the period 1977-78 to 1979-80 as indicated earlier is as follows:—

1977-78	.	.	559	MW
1978-79	.	.	594	MW
1979-80	.	.	504	MW

3.21. As the generation was generally short of demand, load restrictions and load sheddings had to be imposed almost regularly.

C. Core Sector requirement:

3.22. The Chairman, DVC stated before the Committee that the railways demand was 147 MVA and that they had met the demand in full. Against the contract demand of 147 MVA, the actual load was about 100 to 120 MVA. The contract demand of steel sector was 422 MVA but this included the power generated by steel plants

themselves. Asked about the demand on DVC; the witness stated as follows:—

“They put the entire demand on DVC because they would prefer to get power from DVC rather than generate their own power which is more costly. The extent to which we do not supply power to steel plants, they are supposed to make up by their own generation.”

3.23. The Committee enquired about the extent to which shortfall in supply of power by DVC affected production in core sectors such as coal and steel.

The Secretary Department of Power stated during evidence:—

“We have not assessed it. It is correct that some losses have taken place, but we do not have any figures—such figures are not compiled. Those sectors themselves would compile them. Probably this question has been discussed many times with the industry—in every industry—because when there is less production, certainly power is one of the factors responsible, but it is difficult to segregate the factors.”

3.24. The Committee pointed out that if the problem of power generation was solved that would remove one of the main *alibis* for shortfall in production. The witness said: “I entirely agreed.”

3.25. The Committee pointed out that in reply to an Unstarred Question (No. 24 dated 18-11-1980) answered in Lok Sabha it was stated that the total contractual demand of Steel Plants was 426.3 MVA whereas the DVC actual average supply per day during October 1979 to September 1980 ranged from 137.8 MVA to 201.55 MVA.

The witness stated:

“With regard to contractual demand, I may say this. I do not say that they were getting it they were not getting what they should get; they were certainly getting less. The only point that I am making is that if you compare with the contractual commitment, the gap seems to be much bigger which is not correct. They could never have drawn the contractual demand. Today in the unrestricted supply position, they are not able to draw more than 220.”

3.26. When the Committee visited the Bokaro Steel Plant for an on-the-spot study in October, 1980 the plant had in a note submitted to the Committee stated as follows.

“Power position has been deteriorating month by month and possibly September, 1980 has been the worst so far.

The matter has been taken up at all levels to ensure the increased power supply from DVC to our contractual level. In spite of repeated request there has been no improvement from their end. Unless priority of power to steel plant is refixed at least at par with coal, it is inevitable that the present trend of power shortage to the Steel Plant will continue.”

3.27. In a note submitted to the Committee when they visited the Coal India Limited at Calcutta the Coal India had stated:

“Power situation in ECL, BCCL and part of CCL was not satisfactory since 1977, but the situation took the worst shape during the year 1979-80. Total loss of production on account of power was 6,927 m.t. Out of the above ECL alone lost nearly 3. m.t. of production due to power interruptions and BCCL lost around 2.154 m.t.”

3.28. When the position in relation to the Coal India Limited, as mentioned above was pointed out to the Secretary, Department of Power, the Secretary said that he was aware of this and added:

“There has been bad performance and low generation. I have not once said that the performance of DVC has always been satisfactory. I myself said that in the last 18 months it was very bad performance and in that situation all those consumers were getting less than what they should have got.”

3.29. Claiming that there has been improvement in power generation and distribution since October 1980 on account of change of management and strict monitoring by Government the Secretary further said:

“There is a continuous improvement. I again say that things have stabilised. Of course, there is scope for improvement and I think by February we are fairly hopeful that things will stabilise when all these problems of steel requirements and coal requirements should be sorted out.”

1.30. The Committee consider the position of demand and supply of power very disheartening. As per 10th Annual Power Survey, the forecast on system demand for DVC was put at 1027 MW for the year 1978-79. However, maximum demand recorded during the period 1974—79 was stated to be 856 MW. As against this, the installed capacity for power generation was 1317 MW which has been derated to 1257.5 MW and the firm capacity adopting a ratio of 59% of peaking requirement to the installed capacity as fixed by the Planning Commission for the eastern region worked out to 741 MW. This brings out the extent of shortfall in the creation of firm capacity to meet the demand. Further, the maximum demand allocated to all DVC consumers was only to the extent of 680 MW since October 1977. This was less than the firm capacity. The actual average generation of power was 504 MW during the year 1979-80. This shows the extent to which there has been under-utilisation of the capacity already available as well as the gap between the demand and supply.

3.31. Judging by prescribed norms the performance of the DVC in regard to power generation has been poor during the period 1976-77 to 1979-80. The percentage of average generation to the derated installed capacity ranged from 42.9 to 56.3 compared to the norm of 59%. The plant load factor attained by the DVC was throughout falling behind the all India average except in one year, 1978-79, and it ranged from 40.1% to 52.3% as against the norm of 58%. The performance by any standard touched an all-time low during the period of 18 months, April 1979 to September 1980. That this should have been so in spite of the fact that a 120 MW unit was installed at Chandrapur in March 1979 at a cost of Rs. 46.12 crores speaks volumes about the unsatisfactory way the DVC has been discharging its responsibilities of power generation and distribution.

3.32. The disappointing performance of the DVC, especially during the 18 months period, referred to in the foregoing paragraph, was attributed by the Chairman, DVC, primarily to the lack of the necessary climate of motivation, discipline and accountability in the Corporation. However, it was conceded both by him, and the Secretary, Department of Power, that the position could well be attributed to the general failure of management. In this connection, the Committee note that the management has not been professionally structured. There was no department of personnel management, nor a proper system of material management. It is also evident that no proper system of monitoring and reviewing of the performance of the DVC has been evolved as yet. The Com-

mittee have, however, been assured by the Secretary, Department of Power, that these deficiencies are now being looked into for remedy. It is unfortunate that such basic deficiencies and their deleterious consequences did not attract the attention of the Government so long and no directive was issued to the DVC. This can only be regarded as gross negligence on the part of the Government in the discharge of the responsibilities vested in them under the DVC Act. The Committee desire that immediate attention should be given to improve particularly the industrial relations in the DVC.

3.33. As stated earlier, the norm of 59% for the ratio of peaking requirements to the installed capacity to be reached by the power system in eastern region has been adopted, although the Planning Commission have fixed the ratio for all the regions as 64% for the purpose of planning for power production in the country. The Chairman, Central Electricity Authority, explained the lower ratio for the eastern region as due to the absence of adequate hydro support unlike in other regions. The Secretary, Department of Power, however, stated that the lower norm for the eastern sector was predominantly on account of industrial relations problems. According to him, the performance, of late having been slightly better than that of the southern region, there was already a case for a second look at the norm fixed for the eastern region. The Committee desire that the matter should be taken up with the Planning Commission and a reasonable norm fixed, so that the efficiency of the DVC could be properly assessed. ..

3.34. One of the parameters for measuring the efficiency of the power system is to see how far the norm of generation of power in terms of KWh per KW of capacity has been reached. Applying this norm the Chandrapura power station fared consistently badly during the period 1976-77 to 1979-80 and all the 3 thermal stations, Chandrapura, Durgapur and Bokaro, fared poorly during 1979-80. According to the DVC, the shortfall in generation of power was mainly attributable to unsatisfactory performance of 2 BHEL generating sets, besides the poor quality of coal and increase in downtime for maintenance due to frequent breakdown of auxiliaries and boiler tube leakages. The Committee have dealt with these problems in the succeeding chapter of this Report.

3.35. As the generation of power was always short of demand, load restrictions and load sheddings had to be imposed almost regularly. This affected production in vital sectors of industry in the country. The Committee were informed by Coal India that the

power supply which was unsatisfactory since 1977 took the worst shape during 1979-80 and that the loss of production in that year alone was of the order of 6.927 million tonnes on account of lack of power. As regards steel plants, though the contract demand was 426.3 MVA, the actual supply during October 1979 to September 1980 ranged from 137.8 to 201.55 MVA. The Committee were, however, told in evidence by the Secretary, Department of Power, that lately in an unrestricted supply position, the steel plants were able to draw not more than 220 MVA. They were informed earlier by the Bokaro Steel Plant in October 1980 that the matter had been taken up at all levels to ensure increased supply of power from DVC to their contractual level with no improvement. The Secretary held out a promise before the Committee that by February 1981 things would stabilise when all the problems of steel requirements and coal requirements could be sorted out. In view of the serious implications of uncertain power supply, the Committee wish to caution Government that sorting out of such problems cannot be a one-time affair, but should get built into the system. In this connection, they would urge that the advisory committee, which should be set up without delay, should also include in it the representatives of consumers in core sectors like steel and coal.

CHAPTER—IV

GENERATING SETS AND THEIR MAINTENANCE

A. Performance of Generating Sets:

4.1. The performance of various generating units installed by the DVC in terms of generation of power in KWH per KW of installed capacity against the norms of 5000 KWH of power per KW of capacity during the years 1976-77 to 1979-80 as furnished by the DVC is shown below:—

Name of the Units	1976-77	1977-78	1978-79	1979-80
GE Units	5371	5281	4920	4039
MAN Units	4996	4393	4249	2700
BHEL Units	1100	1310	3391	2828

4.2. One of the main reasons for the lower generation of power by the DVC is the unforeseen outages of the units caused by a variety of factors. Table below gives the percentage of forced outage hours to total available hours for all the units of DVC for the last 4 years:—

Name of the station and unit	1976-77	1977-78	1978-79	1979-80
B.T.P.S.				
Unit No. 1	5.1	3.18	11.50	6.20
Unit No. 2	5.5	3.85	4.04	3.70
Unit No. 3	3.89	2.03	6.93	4.60
Unit No. 4	20.4	14.2	21.69	36.81

Name of the station and unit	1976-77	1977-78	1978-79	1979-80
C.T.P.S.				
Unit No. 1	6.53	2.44	17.12	10.50
Unit No. 2	5.90	8.64	10.65	56.04
Unit No. 3	3.59	5.72	4.75	5.52
Unit No. 4	78.00	97.41	37.59	37.03
Unit No. 5	86.4	53.67	78.15	51.26
Unit No. 6	44.92

D.T.P.S.

Unit No. 1	23.6	19.21	27.52	56.03
Unit No. 2	28.00	17.28	26.36	35.00
Unit No. 3	2.6	7.65	12.30	16.70

4.3. CTPS Units 4 & 5 installed with BHEL generating sets were down due to Turbo Generator trouble for long duration as shown below:

Units No. 4	2-2-1974	..	833 hrs.
	4-7-1974		1511 hrs.
	5-7-1976		1533 hrs.
	8-9-1976		12955 hrs.
	Upto March, 1978		585 hrs.
Unit No. 5	31-3-1975	..	925 hrs.
	14-6-1975		3074 hrs.
	5-2-1976		2739 hrs.
	18-8-1976		720 hrs.
	20-9-1976	..	6252 hrs.
	29-11-1977		1070 hrs.
	23-1-1978		811 hrs.

4.4. In regard to these units the Department of Power stated (December, 1980):

“The trouble relating to the plant and equipment supplied by HEIL/BHEL and others for CTPS Units 4 and 5 were regularly reported to the suppliers as and when the trouble arose. Ultimately, in June 1977, the Government of India appointed a Committee headed by Shri H. R. Kulkarni, Member (Thermal), CLA and consisting of representatives from the DVC as well as BHEL and others, to examine the various problems connected with BHEL's equipment. The Committee submitted its report to the Govt. of India in January, 1980. As a sequel a Renovation Committee under the Chairmanship of Shri L. J. Sane, Consultant to the Ministry of Energy, recommended requisite rectifications which were duly carried out.”

4.5. The Chairman, DVC deposed (December, 1980) before the Committee that the incidence of failure with BHEL equipment had been higher than that of imported equipment. The Committee enquired whether BHEL had accepted that the equipment supplied was defective. The Chairman, DVC stated:

"In some cases, they accepted that the malfunctioning of the equipment was due to faulty manufacture. They accepted it for instance for the pumps which they replaced wholesale. They accepted that they were faulty in the design or manufacture of it. In some cases, it is not always possible to apportion the blame clearly whether the fault had occurred due to faulty manufacture or faulty design or faulty maintenance and operation. In this particular case, the BHEL took a very generous view and agreed to make their services and spare parts available to rectify and upgrade the equipments. They even replaced those spare parts. They did not argue on that and they made available their services free of charge to rectify those parts."

4.6. Asked about the total cost of rectification, the witness stated "no costing has been done." He added, "since no claim was thought of, this has been charged to the general head of maintenance."

4.7. About the poor performance of BHEL units the Secretary of the Department of Power stated (December 1980) in evidence:

"First of all I would request you wherever BHEL is said it should be indigenous equipment because in the case of Chandrapura IV, V and VI turbo-generation of BHEL is there but Boiler which is more important is of ABVP. Problem to my mind is indogenous versus imported equipment."

He added:

"The analysis of BHEL equipment has been done in the country on a number of occasions and our analysis uptil now does show that performance of indigenously manufactured units compared to the imported ones is low."

4.8. The witness further stated "the right steps have to be taken to improve. We cannot depend all the time on total imports. We have to improve. We have to depend to a good extent on our internal industry."

Asked if the poor performance of BHEL units was attributed to the lack of maintenance or lack of skill, the Secretary said "it would be a combination of lack of maintenance and equipment deficiencies." The Committee enquired if the problem of equipment deficiency had been taken up with the concerned Ministry or undertaking. The Secretary stated as follows:—

"This is a question which I can legitimately say that in the Department of Power it is practically discussed every month. Many a time with the Ministry of Industry which is controlling Ministry for the equipment manufactured in very close liaison with BHEL. and constant review is undertaken by CEA; we discuss such issues in the Power Ministers' Conference. Twice it was discussed in last 6 months. This is continuously being discussed. What is the level of the indigenous equipment, how to improve it, to what extent we should accept it and so on. Lately the conclusion has been arrived at that as customer of this equipment we should play a more intense role right from manufacture stage, and we should associate ourselves in seeing to what extent we could have quality control, even in regard to contractual obligation. We along with CEA are working on a model contract which can be serving as model for State Electricity Boards and power utilities in the country. In association with BHEL they will lay down the method of testing quality, at what stage customer will check, how much will be the quantum, delivery schedule, penalties etc. The responsibility of both sides will have to be defined. Both sides have obligations. He has to provide certain inputs; and now all that exercise has started. We had certain committees which went into this. The present generation equipment which is 200 MW has performed very badly. During the last 2 years these have been commissioned. These came during the last 2 years; earlier they were not there. Out of 17 or 18 units, near about 14 have gone to the stability period but we were not satisfied with their performance. We had set up a Committee which went to each and every place to identify the problem during the last few months, as a result of which some of the 200 MW units have improved."

4.9. In evidence the Chairman, DVC told the Committee (December, 1980) that the Rotor of CTPS IV was under repair at Bhopal. About the cost of repairs the witness stated that DVC had filed

a claim with BHEL for failure of generator rotor. He stated that it was a debatable issue whether the failure was on account of faulty manufacture or mal-operation. The matter had not been decided. Their claim was that BHEL should not charge anything for repairing the rotor. The cost of repair of the first rotor would not exceed Rs. 10 lakhs. For the second rotor they had not claimed anything. The first rotor became defective three months ago. It was against that they were asking BHEL to accept liability due to what they thought was defective manufacture, but they had not accepted it.

4.10. The Committee were informed that even after the rectifications carried out as a result of the Committee appointed by Government Unit V went out of commission on February 27, 1980 due to major fault in the turbine rotor. The rotor had to be sent to BHEL, Bhopal for repairs. The unit was recommissioned on November, 11, 1980.

4.11. In regard to the repair of turbine rotor the Chairman DVC informed the Committee that the rotor had to be practically rebuilt to rectify the major consequential damage that it had suffered. He explained that there was a casing around the rotor. The casing was held in position by a key. The key failed resulting in casing shifting and touching the rotor thereby causing serious damage to the rotor. The reason for failure of the key was under investigation.

4.12. Asked as to why the matter had not so far been investigated, the witness stated:

"I do candidly admit that it had not come to my consciousness so far till this question has been raised here."

4.13. According to the Chairman, DVC total expenditure of Rs. 88 lakhs* was incurred for recommissioning the unit. BHEL had lodged the claim with the DVC. But DVC had not paid this amount to BHEL. Asked if any claim had been made on BHEL for their defective supply of key which caused this failure, the witness stated:—

"There are a number of failures of similar keys. This is the point we have brought to the notice of BHEL and this appears to be a general sort of malady which is afflicting all the plants supplied by them. There is apparently some defect in design or manufacture.

*At the time of factual verification Audit stated that claims lodged by BHEL is for Rs. 92.26 lakhs.

The witness further stated:

"This was the first failure that caused damage. After this all units were checked up and keys of all other units were also found broken. Those keys were replaced before any damage was done. The system did react as soon as the malady came to be known. At Santhaldih, however, some consequential damage occurred. We checked up and found that the key had cracked and before the casing could shift, the key was replaced."

4.14. Asked if this continuous failure of keys in various places indicated a manufacturing defect, the witness stated that they had taken up this point with the BHEL. He further added:

"The amount of Rs. 88 lakhs has been spent by BHEL, not by us. We have told them that we would not pay them because the key has failed on four other units also and, therefore, there is something wrong in the design or manufacture for which they are responsible."

4.15. Asked if the matter was being investigated by any third party, the witness stated that one external agency, namely, the British Electricity International were looking into it not as arbitrators but as advisors.

4.16. Subsequently the Corporation informed the Committee (January, 1981):

"Investigation on palm key failure started in April, 1980. The analysis is under examination in collaboration with British Electricity International U.K. Inadequate or incorrect clearance, incorrect key material, excessive pipe thrust and inadequate key lubrication are possible causes which are under investigation."

4.17. The Committee enquired if BHEL agreed to this matter being referred to the foreign agency. The Corporation has stated:—

"British Electricity International experts came to DVC to study and suggest measures for improving the station performance of CTPS and DTPS. While identifying the defects or constraints and analysing the performance of the various units, they came across the incidence of palm key failure of CTPS Units 4, 5 and 6. They are investigating into the problem and BHEL are aware of this."

4.18. About making a counter claim on BHEL the Chairman, DVC stated "we will make a note of that." In regard to the suggestion of the Committee for referring the matter to arbitration the witness stated "we will look into that." The Chairman, DVC further informed the Committee:—

"There is a procedure prescribed by the government for settling internal public sector undertakings' disputes. There is a procedure where the matter is supposed to be referred to the Ministry of Law. The Joint Secretary in the Ministry of Law had to function as an arbitrator. We can adopt that procedure."

4.19. Asked if DVC had taken any legal opinion in this particular case. The Chairman, DVC stated "I have taken legal opinion in similar cases but not in this case. We will refer it to the Ministry of Law straightaway."

4.20. During the Committee's examination of the Department of Power the Secretary stated that the claim of BHEL was for Rs. 88 lakhs on DVC but DVC had not accepted it. He added:

"Generally, an inquiry committee is set up. Even in this case, an inquiry committee was set up under Mr. Kulkarni, I think. A BHEL man was also represented on it; he disagreed, and so it became a matter of controversy. That is why the claim has not been accepted. Secondly, we also felt that the amount of the claim is far bigger than what it should have been."

4.21. Asked why DVC had not claimed any damages, it was stated:

"Technically somebody could say that claim could be made, but no contracts ever provide for such type of damage after the guarantee period is over."

4.22. The Committee pointed out that as reflected in the Annual Report for the year 1977-78 BHEL had made a provision for Rs. 22.98 crores for renovation/rectification of their equipment outside the warranty period. The Secretary stated "if we are able to prove that it is due to a basic shortcoming, then we would be able to impose this."

B. Consumption of Fuel

4.23. In para 5.03 of the Audit Report for the year 1978-79 Audit have pointed out that the consumption of coal and oil per KWH varied from Station to Station. The table below compares the consumption of coal and oil per KWH of power generated in the different thermal power stations during 1977-78 and 1978-79.

Year	BTPS		DTPS		CTPS	
	Coal (kg.)	Oil (Litre)	Coal (kg.)	Oil (Litre)	Coal (kg.)	Oil (Litre)
1977-78	0.72	0.0037	0.65	0.0047	0.54	0.0091
1978-79	0.74	0.0048	0.60	0.0059	0.56	0.0140

4.24. It is seen that while the consumption of coal (kg) per KWH of power generated had increased slightly that of oil (Litre) per KWH of power generated was much higher in 1978-79 as compared to the figures for 1977-78. In evidence the Chairman, DVC stated (December, 1980) that the boilers in DVC thermal units conformed to a standardised design according to which a minimum percentage of VM content of coal was needed. If the VM content was lower than the normal, oil support became necessary.

4.25. As regards the steps taken to reduce oil consumption the Corporation stated that efforts were being made with Coal India Limited to obtain coal of specified VM and stabilise CTPS units IV and V in association with the manufacturers which would reduced oil consumption in flame support and start/stop operations.

4.26. According to Audit a Departmental Committee set up by the Corporation in November, 1971, had reported in September, 1973 that it was not possible to fix the standards for coal consumption for the reasons that, while there were no means for measuring the coal fed at CTPS, the scales at BTPS and DTPS were out of order. Thus it was clear that there was no control over consumption of coal—to check any pilferage. The Committee enquired about the present difficulty in fixing norms for coal consumption in power stations. The Chairman, DVC stated:

“It depends upon so many variables like ash contents of coal. V.M. of coal, wetness of coal, calorific value of coal; there are so many variables, it is impossible to control these variables. They are subject to constant variation.”
He added.

"We have norms on the basis of fuel efficiency. We watch what is the efficiency of fuel utilisation in boiler, that gives an indication whether they consume 'too much' or 'too little' coal. To fix rigid norm is almost impossible."

4.27. A major cause of lower generation of power by the DVC is unforeseen outages of generating units caused by a variety of factors. The details of forced outages furnished to the Committee revealed that during the years 1979-80, 7 out of 13 thermal units were down for more than a third of the total available time. The position in this regard is indeed alarming in respect of Chandrapura units IV & V which were installed with BHEL generating sets in March 1974 and March 1975 respectively. The forced outages of these units ranged from 37 per cent to 97 per cent and 51 per cent to 86 per cent respectively since 1976. As against the norm of 5000 KWHs of power generation per KW of capacity, the BHEL units generated between 1100 and 3391 KW during the period 1976—80, which was very poor compared to the imported GE and MAN units, though MAN units also seem to have developed some problems during the year 1979-80. The Committee agree that some price has to be paid for indigenisation of power equipments, but they feel that the country has already paid a heavy price and that the time has come for the indigenous power units to stabilise and give a good account of themselves.

4.28. The Committee note that the BHEL equipments of units IV & V of Chandrapura station, which started giving trouble since installation, were rectified recently by the BHEL bearing the cost of their services and spare parts. However, the expenditure incurred by the DVC on the extraordinary repairs carried out has not been identified, which ought to be done. In this context the Committee recommend that the DVC's system of determining cost centres and costing should be gone into for suitable refinement.

4.29. Even after the major rectification carried out by the BHEL, problems arose mainly on account of turbine key failures with consequential damages in unit V. The BHEL had claimed a sum of Rs. 88 lakhs for further rectification carried out. As this claim is considered to be very high and in view of repeated failures of turbine keys, the DVC is considering the advisability of filing a counter claim after taking the opinion of the Ministry of Law. Incidentally, the BHEL units are yet to stabilise in order to reduce oil consumption in flame support and start/stop operations, which is high at present.

4.30. Even as the DVC's performance has to be judged with reference to its capacity to meet contractual demands for power and not with reference to financial profits that it may have made, the performance of the BHEL has to be judged on the basis of the consumer satisfaction, both in regard to timely deliveries of equipments and their trouble-free service. In this connection, the Committee have been informed that the Government are working along with the Central Electricity Authority on a model contract to be entered into by the purchasers with the BHEL in order to provide for clearly quality test, delivery schedules and penalties, defining responsibilities and obligations of both the parties to the contract. The Committee desire that this should be finalised early and the contracts in future should provide for a satisfactory performance test and guarantee for a sufficiently long period in the light of the past experience.

4.31. The Committee are clear that all the problems cannot be attributed to the design or manufacture defects of the power equipments. They are conscious of the fact that the maintenance and operation by the DVC are not quite sound. This requires a critical study in consultation with suppliers of equipments and improvement backed by adequate training to the operatives and engineers on a planned basis.

C. Maintenance of Boilers & Turbines

4.32. According to the statutory obligations under Section 6(b) and (c) of the Indian Boiler Act, 1950 and subsequent amendments a boiler is required to be shut down for annual inspection and overhauling on the expiry of 12 months from the date of its last overhaul. The turbines are generally overhauled once after every 3 & 4 years.

4.33. From the data given in para 6.02 of the Audit Report for the year 1973-74 it was observed that during the years 1964-65 to 1973-74 boilers were kept in service for extended periods varying between 12 to 29 months. The Technical Advisory Committee, while reviewing the working of CTPS observed (June, 1972) as follows:—

“...It is inadvisable to keep the boilers in operation over such long periods without overhaul as it contributes to uneconomical and inefficient generation, increase in forced outages and planned outages for emergent maintenance and occurrence of certain damages necessitating costly replacement.”

4.34. The 'Vij Committee' appointed by the Government of India in May, 1967 to examine generation, transmission and distribution aspects of the West Bengal, Bihar and Damodar Valley Corporation Power system in its report submitted in November, 1967 had stated that the period of shutdown for the purpose of overhaul and maintenance of boilers should be taken as eight weeks for each boiler every year. They recommended a period of 12 weeks for the overhaul of a turbine. Audit have furnished the following statement indicating the number of overhauls of boilers, actual period that should have been taken as per recommendation of the 'Vij Committee' and the excess period taken during the period of 8 to 9 years ending 31st March, 1974:

Station	No. of boilers	No. of overhauls	Actual period taken in overhauling	Period that should have been taken as per recommendation of 'Vij Committee'	Excess period taken
BTPS	7	37	481 weeks	296 weeks	185 weeks
CTPS	3	6	96 weeks	78 weeks	48 weeks
DTPS	3	8	219 weeks	64 weeks	155 weeks

4.35. The Corporation intimated Audit (June, 1975) that "we are endeavouring to limit overhauling for GE boilers at Bokaro, to four weeks, for MAN Boilers 5-6 weeks and large boilers for 140 MW sets to 8 weeks"

4.36. From the details furnished by the DVC to the Committee the following position emerged in regard to the delayed overhaul of boilers and the excessive time taken in overhaul during the period 1975-76 to 1979-80:

Station	No. of boilers	No. of overhauls	No. of overhauls delayed	No. of overhauls that took longer than 8 weeks.
BTPS	7	22	17	12
CTPS	5	15	12	6
DTPS	3	9	4	4

4.37. The maximum delay between two overhauls was 80 weeks and the maximum time taken for overhaul was 24 weeks.

4.38. Following position emerged in regard to the delayed overhaul of turbines and the excessive time taken in overhauling during 1975-76 to 1979-80:

Station	No. of Turbines	No. of overhauls	No. of overhauls delayed	No. of overhaul that took longer than 12 weeks
BTPS		2	2	
CTPS		4	4	4
DTPS		3	3	1

4.39. The maximum time taken for overhaul was 32 weeks.

4.40. Explaining the reasons for keeping the boilers in operation for long periods the Department of Power in a note furnished to the Committee stated (March, 1981) as follows:—

“Owing to the acute shortage of power in the area served by the DVC System, it is not always possible to undertake annual overhauling of the boilers within the scheduled date i.e. 12 months from the preceding date of overhaul. In that event the Corporation has to apply to the labour Department of the respective State Government for grant of exemption from the provisions of the Indian Boiler Act

to permit the Corporation to continue steaming of the boiler beyond the scheduled date. On receipt of necessary recommendations from the Chief Inspector of Boilers and the Power Commissioner of the State Government, the Labour Department issues a certificate after completing all formalities granting the exemption empowering the DVC to continue steaming of the boiler beyond the scheduled date. Normally, the exemption is granted for not more than six months, but sometimes this period is extended upto 12 months and, in such a case, the boiler remains in operation for 24 months including the normal licensing period of 12 months from the preceding date of overhaul.

On some occasions, owing to very compelling situation the Corporation had to continue steaming of the boiler beyond 24 months (12 months normal licensing period and 12 months exempted period). In such cases, special permission had to be obtained for which Chairman, DVC, approaches the Chief Secretary of the concerned State Government.

During the period from 1975—80, the Corporation carried out 46 overhauls in 16 boilers of the three thermal power stations. On many occasions the Corporation had to defer the overhauling from the scheduled date owing to the following reasons viz:

- a. to prevent further reduction of generation in the face of unscheduled break down of one or more units in the system;
- b. to avoid overhauling of two boilers simultaneously at the same power station;
- c. to ensure that not more than one large unit/boiler (140 MW) should be under scheduled shut down.

Owing to acute power crisis prevailing over the eastern region, the DVC had to continue steaming of the boilers beyond the scheduled date in many cases in order to ensure maximum supply to the priority consumers like railways, collieries and steel plants as well as other consumers in the region. DVC is also required to render assistance to the SEBs of West Bengal and Bihar as and when required in case of emergency.

From what has been stated above, it would be clear that the DVC had to resort to postponement of the scheduled shut down of the boilers for overhauling in the interest of maintenance of industrial production in the eastern region. Had this not been done, production in the core sector and other sectors would have suffered grievously. This would have damaged the national economy in the face of shortage of steel, coal, wagon etc. thereby adding fuel to the inflationary fire."

4.41. The Chairman, DVC informed the Committee (December, 1960) in evidence about the statutory requirement in regard to overhaul of boilers:

"The system in India is very different from the system in most other countries. The period of one year is not prescribed in any other country. In U.K. it is 2 to 3 years. Here for some peculiar reason—I do not know why the period is fixed much too low and there is a case for reviewing it. If the condition of the boiler so warrants it can be overhauled after one year. But the statutory prescription of one year appears to be much too low."

4.42. The Secretary of the Department of Power, however, stated: "Overhauling should be done to the boiler every year. There have been lots of cases where on account of shortage of power, they were not allowed to do overhauling once in a year."

4.43. About the reasons for taking more time for overhaul the Department of Power stated as follows:

"Out of 46 numbers of overhaulings done, the work was completed within the scheduled time of 6 to 8 weeks in 22 cases. In 7 cases, the Corporation had to keep long shut down for more than 10 to 12 weeks, because capital maintenance as well as major overhaul of the turbo-generator units was undertaken concurrently with the overhauling of the boiler. Usually, completion of turbine overhaul takes a long period of 16 to 20 weeks, although boiler overhauling is completed within the scheduled time of 6—8 weeks. Hence, there was no loss of generation on account of boiler overhauling in these cases.

Out of the remaining 17 cases of overhauling completion of the job took longer time than scheduled, because major

repairs had to be undertaken. The major repairs included changing of tubes/bends in the super heater, replacement of ID fans and other auxiliaries and replacement of gas ducts. While overhauling of one boiler, we had to face tube leakage and other major defects in some other boilers/units in the same station where the maintenance personnel had to be shifted considering the higher priority. On one occasion, overhauling of Boiler No. 1 of Chandrapura Thermal Power Station during the period from 26-12-78 to 27-3-79 priority was shifted over to commissioning of the new unit, viz. unit No. 6, which was commissioned in March, 1979. This shifting caused inordinate delay in the overhauling of Boiler No. 1 over the scheduled date."

4.44. During the Committee's examination of the Department of Power the Secretary stated:

"They have been working for one shift in case of turbine overhauling. This is a highly skilled job. Such people were not available. But today in all the stations including DVC we have introduced two shift working."

4.45. In a post-evidence written reply the Deptt. of Power stated (March, 1981) that two-shift work for overhauling of boilers was started at Bokaro Thermal Station from April 1975, Durgapur Thermal Power Station from September 1975 and Chandrapura Thermal Power Station from October, 1975.

4.46. As pointed out earlier, lack of proper maintenance is also a factor in causing forced outages of generating units. Although the Indian Boiler Act lays down that boilers should be shut down for annual inspection and overhauling on the expiry of 12 months of their last overhaul, the DVC has been very lax. Between 1964 and 1974, boilers were kept in service for extended period varying from 12 to 29 months, and a technical advisory committee, while reviewing the working of Chandrapura station, had warned that such long intervals between two overhauls would contribute to uneconomical and inefficient generation of power, increase in forced outages and planned outages and occurrence of certain damages necessitating costly replacement. Evidently this warning went unheeded as even subsequently the position did not improve inasmuch as 33 overhauls out of 46 were delayed during the period 1975-80 and the maximum delay between two overhauls was 80 weeks. The explanation given to the Committee that "owing to acute power crisis, the DVC had to continue steaming of the boilers

beyond the scheduled date in many cases in order to ensure maximum supply" of power does not impress the Committee, as this practice is counter-productive. The Committee are, therefore, of the view that the relevant provisions of the Boilers Act should be adhered to not only for proper maintenance of boilers but also for safety reasons, and that delay with approval of competent authorities, if at all, should be an exception rather than the rule that it has come to be in the DVC.

4.47. The position in regard to the time taken on overhaul of boilers and turbines is also not satisfactory. A committee called 'Vij Committee', appointed in 1967, had recommended a period of 8 weeks for overhaul of boilers and 12 weeks for overhaul of turbines. An analysis by Audit has revealed that the time taken was on an average more than twice as much as it should have been during the period of about 8-9 years upto March, 1974. Though the Corporation had intimated Audit in 1975 that they were endeavouring to limit the period of overhaul to 4 to 8 weeks, the position did not improve. Out of 46 overhauls, 22 took longer than 8 weeks and the maximum time taken was 24 weeks. That this should be so inspite of the fact that double shift for the work was introduced in 1975 is indeed disappointing. Further, out of 9 turbine overhauls during the period 1975—80, 5 took longer than 12 weeks and the maximum time taker was 32 weeks. The Committee note that recently two shifts have been introduced for the turbines overhaul also. They hope that the time taken on overhaul will now be reduced. They need hardly point out that if the boilers and turbines are maintained properly and the time taken on the overhauls reduced, the power generation in DVC would certainly be better than what it is today.

CHAPTER V

WORKING RESULTS

A. Rate of Return

5.1. D.V.C. is mainly a power supply organisation and it sells power to bulk consumers like State Electricity Boards, Government undertakings, Private and Public Sector industries and distributing licences. The Government of India prescribed the rate of return for Power as 9.5 per cent on capital plus internal resources as per directive given to the D.V.C. in May, 1975. The actual return achieved during the years 1975-76 to 1979-80 as communicated to the Committee by the D.V.C. is shown below:

Year	Rate of return (per cent)
1975-76	6.38
1976-77	10.26
1977-78	8.04
1978-79	8.69
1979-80	5.88

Asked as to why D.V.C. did not get 9.5 per cent return when it was built up in their tariff, the Secretary stated before the Committee: "It was due to poor performance."

B. Power Tariff

5.2. The D.V.C.'s Power tariff is fixed by the Corporation with the approval of the Government of India. The tariff is stated to be fixed keeping in view the required rate of return. Dealing with the existing Tariff the D.V.C. intimated the Committee:—

"The existing DVC tariff is in force with effect from December, 1974 and no revision took place since then, although there has been spiralling rise in prices and operation and maintenance charges during the intervening period. Consequently, DVC has been unable to earn a reasonable

return of 9.5 per cent and a total shortfall of about Rs. 40 crores has occurred in the last six years from 1975-76 to 1980-81. This state of affairs has called for a review of the financial position expected to prevail in the future years from 1980-81 to 1984-85. If the tariff is not changed, the return for the 10-year period from 1975-76 to 1984-85 would be only 8.32 per cent and the internal resources for ploughing back into continuing a new projects would be only Rs. 139 crores. During the last Annual Plan discussions, the Planning Commission estimated a capital outlay of Rs. 351 crores in the Sixth Plan upto 1984-85 and in order to reduce the gap has suggested that the tariff in the DVC, which is still the lowest in the country should be increased by at least 5 paise per unit."

5.3. The Corporation has furnished the following comparative on electricity rates of DVC and State Electricity Boards for H.T. supply to Bulk consumers:

(Figures in P/Kwh)

Power System	5000 KW	10000 KW	15000 KW	25000 KW	50000 KW
	60% L.F.	70% L.F.	70% L.F.	80% L.F.	80% L.F.
1. D.V.C.	19.46	18.54	18.40	17.60	17.33
2. W.B. State Electricity Board	22.16	21.01	21.01	20.14	20.14
3. Bihar State Electricity Board	25.16	24.02	24.02	23.16	23.16
4. U. P. State Electricity Board	21.75	20.77	20.69	20.02	19.98
5. Gujarat State Electricity Board	22.58	21.87	21.79	21.42	21.38

- NOTE: (1) The figures above represent overall rates comprising Energy Charge, Demand charge and Fuel cost surcharge of 33 KV tariff.
- (2) In the study, predominantly hydro-electric systems have not been considered, as those stand on a different footing.
- (3) The data have been quoted from Central Electricity, Authority Publication (Aug. 1976).
- (4) Since then, the DVC tariff has remained same, but some of the above State Electricity Boards have made upward revision of their tariff."

5.4. The cost of generation in the DVC power system during the last five years was stated to be as follows:

(in Paise per kwh)				
1975-76	1976-77	1977-78	1978-79	1979-80
9.75	9.98	10.75	13.15	16.31

The State Electricity Boards are given a rebate of 10 per cent on the power tariff. In evidence the Chairman, DVC stated:

“There is an urgent need for revising the tariff. This is resisted again by the representatives of the two State Governments because two are the biggest beneficiaries of the highly depressed tariff rate of DVC.”

The witness added that “the States charge according to their tariff. Supposing, we give some power to Bihar, they make money on it.”

5.5. The Committee enquired whether DVC had put any restriction on bulk clients that they could not charge more than a particular rate from their consumers. The Chairman, DVC stated:

“We cannot do that, because what we supply goes into a pool, eg., of the Calcutta Electricity Authority. They generate about 140 MWs., and we give them 60 to 70 MWs. They charge their own tariff, DVC is losing, but West Bengal Electricity Authority is gaining.

5.6. While pleading for the upward revision of tariff the witness stated:

“We are going to spend about Rs. 350 crores out of which we can meet nearly Rs. 300 crores through internal resources, if we increase the rate by 5 paise per unit. Planning Commission are willing to agree; but I cannot make my Corporation agree to it. I want a directive from the Central Government to be issued. These are a few instances and limitations showing how the functioning of DVC's Board is, as it is present constituted, makes things difficult, and contrary to the dynamism needed for this organisation.”

5.7. In the earlier chapters of this Report, the Committee have dealt with the lack of control over the management of the DVC, the delay in implementation of major projects and their cost escalation, under-utilisation of the capacity for power generation and the forced outages of generating units. In the concluding section of this Report they have also dealt with the transmission losses, sundry debtors and inventory holding of the Corporation. It is no wonder that the cost of generation of power per unit jumped from

9.75 p. in 1975-76 to 16.31 p. in 1979-80. Although the power tariff of the Corporation has been fixed keeping in view the required rate of return of 9.5% on capital plus internal resources as per a directive of the Government of India, the actual rate of return fell short of this in all the years during 1975—80 except in one year, 1976-77. The total shortfall is stated to be of the order of Rs. 40 crores during the last 6 years. The Committee have no doubt that granting good management and effective cost control, the working results of the Corporation would be much better even with the existing tariff structure.

5.8. Since the DVC has to mainly depend upon the internal resources for investment during Sixth Plan period, the Planning Commission has suggested that there could be a 5 paise increase in the tariff of the Corporation. The DVC sells power to bulk consumers and the Committee note that the Electricity Boards of West Bengal and Bihar are given a rebate of 10% on the power tariff. In view of the fact that the profits of the Corporation are shared by the participating State Governments, there does not appear to be strictly any need for subsidising their Electricity Boards alone in the matter of supply of power, leaving out the bulk consumers in the Central sector. The propriety of this practice, should, therefore, be gone into. Incidentally, the rates charged by the Electricity Boards from their consumers are much higher compared to the rate at which they get power from the DVC.

C. Transmission Losses

5.9. Particulars regarding transmission loss in DVC Power System for the years 1971-72 to 1978-79 as intimated by the DVC are given below:

Year	quantity (MKWH)	% to avail abilitly	Monetary value (Rs. lakhs)
1971-72 .	132	3.17	97
1972-73 .	138	3.47	107
1973-74 .	76	2.13	67
1974-75 .	180	4.04	208
1975-76 .	153	3.26	252
1976-77 .	145	2.95	261
1977-78 .	93	1.96	171
1978-79 .	99*	1.92*	208
TOTAL:			1371

*At the time of factual verification Audit-pointed out that figures as per page 187 of Audit Report for 1978-79 is 2.05 per cent. The quantum as per page 186 of Audit Report is 105 MKWH

5.10. The Committee enquired if norms had been fixed for the transmission losses. The Chairman, DVC stated (December, 1980) during evidence, "No norms have been fixed, Sir. But norms should be fixed." Asked as to why these had not been fixed till now the witness stated, "we did not have the opportunity of these discussions earlier." He added, "now that you have mentioned it, sir, we have noted, that there should be norms".

D. Inventory Holding

5.11. The table below indicates the closing stock of spares for the three power stations of the Corporation at the end of the years 1976—77 to 1979—80 and closing balance in months of consumption during these years as furnished by the DVC:

(Rs. in lakhs)

Name of power station	Closing Balance				Closing balance in months of consumption				
	76-77	77-78	78-79	79-80	76-77	77-78	78-79	79-80	
CTPS	G	55	47	60	85	10	11.35	14	15
	S	347	385	451	443	40	47.12	53	47
	T	12	12	15	15
	Total	414	444	526	572				
BTPS	G	39	32	32	32	17	15.38	15	12
	S	109	119	118	117	36	29.16	44	46
	T	2	2	2	2				
	Total	150	153	152	151				
DTPS	G	36	35	30	31	12	15.55	11	13
	S	178	242	209	206	85	54.87	104	58
	T	3	4	4	4				
	Total	217	281	243	241				

N.B.: G— Denotes General Stores

S—Denotes Spares.

T—Denotes Tools.

5.12. The table below indicates (as given in Audit Report for the year 1978—79) the value of total closing stock, value of items not

moved for more than 9 months and their respective percentages for the three Thermal Power Stations for the year ending March, 1979:—

Name of the Power Stations	Closing stock (Rs. in lakhs)	Non-moving stores (Rs. in lakhs)	%age
Chandrapura Thermal power Station	527	419	79.51
Bokaro Thermal Power Station	153	106	69.28
Durgapur Thermal Power Station	245	194	79.18

5.13. No age-wise break-up of the non-moving stores was available with the Corporation.

5.14. As regards the non-moving stores the Corporation intimated in a written reply:

“Normally, the gap between acquisition and consumption of high value item of spares parts is long. It is one of the reasons for the bulk quantum of the non-moving stores. It is already under active consideration to analyse the non-moving stores into surplus, unserviceable and insurance parts. Already an embargo has been put to their future purchases.”

5.15. On the Committee pointing out that DVC had stock of spares for 47 months in CTPS, 46 months in BTPS, 58 months in DTPS at the end of March, 1980 and that the DTPS had spares for 104 months at the end of March 1979. The Chairman, DVC stated in evidence “This needs examination.” He added the exercise they had initiated was this:

“There are two kinds of spares which are mixed up in these figures. One is insurance spares and the other routine replacement spares. Insurance spares we should segregate, because dividing the total amount of insurance plus routine spares by the consumption figures is misleading. It is not correct. Insurance spares we have to keep aside. They may be required once in 10 years, 15 years or 20 years. We don't know. As long as the plants remain we have to keep insurance spares for it.”

About the remaining items, he stated:

“The exercise we have already started is, segregate these two, insurance spares and routine spares and for the routine spares prepare a vintage-wise statement. Spares which

have not moved for more than two years, one to two years or less than one year. We propose to take up, in the first instance, the spares which have not moved at all for two years or more. And in case some other agencies have similar plants, we will offer them on sale basis. If nobody accepts then we dispose them of as scrap because the longer we keep them, the less is their net worth."

5.16. Asked if this exercise had not been done at any time, he stated "it is done periodically". He, however, added:—

"I understand an incisive exercise of the type that is needed has not been done. We are doing it now. In fact, I am thinking of engaging a consultancy organisation for refurbishing all inventory management."

5.17. Age-wise analysis of stores for the three power stations as at the end of 1979—80 as furnished by the Corporation is indicated below:—

(Rs. in lakhs)

Name of Power Station	Unmoved Stock	Age wise analysis
C.T.P.S.	46—G	3-6 to 12 months
		34-12-24 ..
		3 ⁸ 24-36 ..
		6-above 36 ..
	186—S	22-6-12 months
		39-12-24 ..
		20-24-36 ..
		105-above 36 months
	10—T	2-12-24 months
		1-24-36 ..
		7-above 36 ..
B.T.P.S.	17—G	2-6-12 months
		2-12-24 ..
		1-24-36 ..
		12-above 36 months

Name of Power Station	Unmoved Stock	(Rs. in lakhs)
		Age wise Analysis
	91—E	8-6—12 months 12-12—24 „ 8-24—36 „ 63-above 36 months.
	1—T	1-above 36 months.
D.T.P.S.	15 G	4-6—12 months 2-12—24 „ 1-24—26 „ 8-above 36 months
	171 S	6-6—12 months. 24-12—24 „ 10-24—36 „ 131-above 36 months
	3 T	3-above 36 months.

5.18. During Committee's examination of the Department of Power (December, 1980) the Secretary admitted that proper material management was not there. He also admitted that the Government review was not satisfactory and said "we are going to improve it". The witness, however, stated further :—

"Inventories,—is not very high for a plant of a few hundred crores of rupees. Normally, the spare part planning is on the basis of about three per cent of the cost. There are certain spares which are ordered along with the equipment and it can happen that some of them may not be required even for the life time but they are ordered and they remain unmoved. That type of spares costing Rs. 2½ crores for all these plants put together is not very high. In fact, what made us feel that there was need for restructuring was not the amount but proper availability of the required type of spares in requisite number all the time. In other words, something may be available which is not required and something which is required may not be available. This needs a proper system of management and of codification of the spare parts—making it simpler by having computerisation which was done in a couple of power stations.

The DVC is studying to follow that very system. That gap is there in the materials management which we are trying to fill."

5.19. Asked if the new system had been introduced in DVC, it was stated "not yet". The witness informed the Committee that the new system would be started in the near future and that the total implementation of the system would be done within a year.

E. Sundry Debtors

5.20. Table below indicates the party-wise details of outstanding dues against power consumers as on 31-3-1980 as furnished by the DVC:

		(figures in lakhs)	
S.No.	Particulars	Outstandings as on 31-3-1980	Outstandings for more than 2 years
1	2	3	4
1.	Bihar State Elect. Board.	1959.37	1301.01
2.	West Bengal State Elect. Board	323.02	114.46
3.	Durgapur Project Ltd.	35.73	1.97
4.	Railways	112.84	..
5.	Durgapur Steel Project	101.06	1.52
6.	Alloy Steel Project.	63.56	9.39
7.	Bokaro Steel Project	335.04	120.79
8.	Tata Iron & Steel	57.22	
9.	Indian Iron & Steel	46.99	
10.	Fertilizer Corporation	21.98	0.65
11.	Bihar Alloy Steel	57.30	8.04
12.	Hindustan Steel Works	2.66	0.99
13.	Calcutta Elec. Supply Corporation	118.06	0.65
14.	Coal Fields	61.69	0.09
15.	Andrew Yule	151.41	..
16.	Bihar Foundry & Castings	41.31	11.94
17.	Hindustan Cables	4.06	
18.	Associate Cement Co.	9.41	0.21

1	2	3	4
19.	Durgapur Cement	10.08	
20.	Hindustan Melleble	4.72	0.90
21.	Rajan Steel	2.51	
22.	Alluminium Corporation.	124.56	121.80
	Refund of Fuel Surcharges	(-69.29)	
	Rental charges (B.S.E.B.) .	17.14	15.95
	Central Excise Duty .	195.98	
		3788.43	1710.47

5.21. In evidence the Chairman, DVC stated (December, 1980) that the biggest defaulter was the Bihar State Electricity Board. About the steps taken to recover the arrears, he stated:—

“I had taken up the matter with the Bihar Government personally. I had a talk with the Chief Minister and the Chief Secretary. They promised to give Rs. 7 crores this month, of which they have paid Rs. 3.5 crores and about the remaining Rs. 3.5 crores they said they would pay as and when their ways and means position improved. So, the position has improved by Rs. 3.5 crores as a result of the dialogue which I had with the Chief Minister and the Chief Secretary. We have to pursue recovery from other parties with vigour.”

5.22. In regard to outstandings against Bokaro Steel Plant the witness stated:—

“We will pursue this also. There has been lack of vigour in getting after the sundry debtors. We have put a spurt on this now.”

About the Aluminium Corporation he stated:

“I am told the Corporation has closed down. Our claim against them is pending in the court. We will pursue these cases vigorously.”

5.23. The Committee enquired if interest was also being recovered along with the outstanding amount.

The Chairman, DVC stated:—

“I wish we could get interest. But I think we would be lucky if we get the capital without interest. We are pursuing it.”

5.24. Asked why these things were delayed, the witness admitted “it is true that not enough attention has been paid to them in the past.” He added that they had started imposing penalties for delayed payments. With this, the rate of recovery had picked up. He, however, admitted that the penalty was less than the rate of interest and it was beneficial for the parties to pay the penalty.

5.25. In evidence of Department of Power the Secretary stated (December, 1980) that as much as Rs. 32 crores were due from Government organisations, including State Governments. He added nobody would appreciate if we give the notice saying “if you do not deposit the money within one month, we will switch it off”.

He added:—

“The problem is that the financial position of some of the State Governments is so bad that they are defaulting. We are trying to tackle the problem. In one case we have gone even to the court—in the case of Aluminium Corporation. Here the State Government itself is a shareholder. This is a question of financial discipline. Unless that improves, one does not know where the solution lies.”

5.26 Asked about the steps being taken to tighten up the whole thing, the witness stated “we are going to take up this matter in the Power Minister’s Conference”.

He added:

“We are thinking in this particular case of calling on the power organisations of these two States by the Central Minister and emphasizing on them that this is something which has to be liquidated slowly—if not immediately, over a period of time.”

5.27. About charging the interest, the Secretary stated that that had not been a part of the agreement. He, however, agreed in principle that interest should be charged. To the suggestion that if bills were not paid in time then the power should be disconnected, the

witness stated: "In principle I agree with you but today, as the practice stands, these provisions are not there."

5.28. The transmission losses of the DVC are somewhat erratic. These were as high as 4.04% in 1974-75 and came down to 1.92% in 1978-79. In monetary terms the losses aggregated Rs. 13.71 crores for the period 1971—79. There has to be some norm to control these losses as admitted by the Chairman, DVC, in evidence before the Committee.

5.29. The extent to which the working capital of the DVC is blocked up can be seen from its inventory holding and outstanding recoveries. The inventory holding of the 3 thermal stations at the end of March 1980 was of the order of Rs. 9.64 crores. Of the inventory holding, general stores worth Rs. 63 lakhs did not move for more than a year and spares worth Rs. 2.99 crores did not move for more than 3 years. Though the Committee agree that some high priced insurance spares will have to be maintained irrespective of actual use, what is deplorable is that there is no system of analysing the inventory to identify such spares and ascertain the extent of obsolescent and unserviceable stores and spares which require disposal or writing off of their value. Admittedly, materials management in general did not receive the attention that it deserved. The Committee have, however, been assured that the Government have addressed themselves to the task of improving the materials management. They would await the outcome.

5.30. The sundry debtor position revealed outstanding dues of the order of Rs 37.88 crores. Of these, Rs. 17.12 crores were outstanding for more than 2 years. The bulk of the outstanding payments are due from Government organisations, including State Governments. Although the DVC is imposing penalty for delayed payments, it is at the rate less than the rate of commercial interest leaving no incentive to the parties to pay their dues. Th Committee feel that the DVC ought to function as a commercial organisation and pursue the recoveries with vigour which has not been in evidence so far. If for speeding up the recoveries it becomes necessary to charge commercial rate of interest and in extreme cases even to disconnect power supply, these should be resorted to.

General

5.31. Besides the issues dealt with in this Report, a number of outstanding points arising out of Audit Reports were also brought to

the notice of the Committee by the Comptroller & Auditor General of India. These were taken up by the Committee with the Government and the Corporation. The Committee trust that suitable action, as may be necessary, will be taken in consultation with the C&AG. In future this should be a continuous arrangement and action on Audit Reports should be monitored by the Board of the Corporation as well as the Government.

NEW DELHI;
March 31, 1981

Chaitra 10, 1903 (S)

BANSI LAL,
Chairman,
Committee on Public Undertaking.

APPENDIX

SUMMARY OF CONCLUSIONS/RECOMMENDATIONS OF THE COMMITTEE ON PUBLIC UNDERTAKINGS CONTAINED IN THE REPORT.

S. No.	Reference to Para No. in the Report	Summary of Conclusions/Recommendations
1	2	3
1	1.32	The DVC is a unique public undertaking having participation of Central Government and State Governments of Bihar and West Bengal, created in 1948 by an Act of the then Dominion Legislature on resolutions having been passed by all the Chambers of Provincial Legislatures of the then provinces of Bihar and West Bengal to the effect that certain matters which were enumerated in the provincial legislative list should be regulated in those provinces by an Act of the Dominion Legislature. Although the Committee had mainly taken up the power portion of the DVC for examination, in view of the unique features of the Corporation, they also went into the structure of the DVC Act, 1948, and the control mechanism.
2	1.33	The structure of the DVC Act envisaged a control board for the Corporation to formulate policies and exercise supervision leaving the execution to the Secretary, who should be the Chief Executive Officer. Unfortunately it is not the position in actual practice. The Chairman of the Board has become the <i>de facto</i> Chief Executive Officer which, besides being legally untenable, this has led to blurring of executive responsibility and dilution of the Board's control over the Corporation. This assumes

1

2

3

seriousness especially since the degree of autonomy enjoyed by the DVC that is uncommon among public undertakings. The Government seen to think that restructuring of the Corporation is necessary in order to remove certain anomalies and improve the control mechanism. The Committee are, however, unable to resist a feeling that the anomalies are largely the creation of the Corporation in which the Government acquiesced.

- 3 1.34 It follows from Section 51 of the DVC Act that the Central Government should satisfy themselves from time to time that the Corporation carried out its functions properly. It is, therefore, surprising that no systematic performance appraisal of the Corporation was made by the Government periodically. No cognisance seems to have been taken of the reports of the Comptroller & Auditor General of India on the Corporation. Even in the Corporation, the Audit Reports were not formally placed before the Board. The Committee were, however, assured that it would be done in future. Though the Annual Reports of the DVC are presented to Parliament alongwith a review by the Government, the review hardly adds to the Annual Reports and what is worse there was no review for the year 1975-76.

- 4 1.35 Investment control in respect of the DVC is also weak. Prior to 1977, though clearance of the Central Electricity Authority and the Planning Commission was obtained for various projects undertaken by the Corporation, there was no expenditure control as such by Government. Since 1977, major investment proposals are approved by Cabinet after a scrutiny by the Public Investment Board also and specific expenditure sanction accorded by the Ministry as in the case

1	2	3
		of other public undertakings. However, there is still no control over the actual expenditure for the revised estimates do not come before the Government irrespective of the extent of excess over original estimates.
5	1.36	Capital expenditure of the Corporation is to be met from its internal resources and the capital provided by the participating governments, who share the profits of the Corporation. However, the governments did not make any capital contribution since 1969-70 and the investment needs of the Corporation are met entirely by internal resources and borrowings. The total borrowings as at the end of March 1980 stood at Rs. 53.51 crores. Secretary, Department of Power, explained that the two participating State Governments refused to contribute to the capital investments on account of their not-so-good ways and means position whereupon the Centre also decided to stop its contribution. According to the Chairman, DVC, though certain advantages flow to the State Governments, the necessary obligations are not being fulfilled by them. The Committee are not clear as to how the liability for meeting the capital requirements through borrowing is shared by the participating Governments. They desire that the financial arrangements obtaining now should be examined with reference to the provisions of the Act in consultation with the Comptroller & Auditor General of India to ensure that the liabilities of the participating Governments for raising resources are fully discharged.
6	1.37	The Committee agree that the participating Governments having made no capital contribution for the last more than 10 years, the structure with which the arc was set up in 1948 seems to have lost its reluctance. Any restruc-

1

2

3

turing of the Corporation should, however, carry conviction with the participating State Governments and whatever form the restructured might take, it should provide for effective control over the Corporation and in this respect the Committee's observations in the foregoing paragraphs should be taken note of. The Committee would await the outcome of the examination by the Government on the restructuring of the Corporation.

7

1.44

It appears to the Committee that the DVC Act contemplated the constitution of advisory committees in the nature of consumer consultative councils. But the rules that the Central Government framed in May 1949 on the appointment of an advisory committee did not give it such a character. It was in the nature of a governing advisory council. The advisory committee formed as per the rules, which functioned for a brief period of about 6 years, but was rightly regarded extra legal and wound up. The relevant rules were also rescinded. The Corporation thus has gone without any advisory committee for 25 years now, and the mechanism that the Act envisaged for making the Corporation continuously responsive to consumer interests has not been in existence for all these years. In this connection, the Secretary, Department of Power, in evidence took protection under the strict letter of the law saying that the Corporation had discretionary power as the Act provided that the Corporation "may" appoint an advisory committee. Clearly, the spirit of the Act would demand the constitution of advisory committee(s) consisting of representatives of the various interests to be served by the Corporation in order to advise the Corporation and

1	2	3
		<p>make it responsive to their needs. The Committee would, therefore, urge the government to formulate rules suitably and see that advisory committees are appointed as early as possible.</p>
8	2.22	<p>There were four projects (Chandrapura units IV, V and VI and Durgapur unit IV) each costing Rs. 20 crores and above, commissioned/expected to be commissioned during the 5-year period 1974-79. In all these cases delay in commissioning was more than two years and one period 1974—79. In all these cases delay in completed. Though the delay was mainly due to slippage in the schedule of delivery of equipments by BHEL, the DVC cannot be absolved of the blame altogether. The result was that there was considerable shortfall in the creation of capacity for power generation during the 5-year period. Admittedly, consumer demand had to be restricted and production in vital sectors did suffer even after staggering of loads at the consumers' end.</p>
9	2.23	<p>Cost escalation, which was largely due to price rise and increased establishment cost consequent upon the prolongation of the construction period, was as high as nearly 100 per cent as against the original estimated overall cost of Rs. 85.88 crores in all these projects. In the case of Chandrapura units IV & V, the project estimates underwent revision thrice. The project estimates of Chandrapura unit VI were revised in May 1975, but the actual cost exceeded the revised estimates by more than Rs. 10 crores. Yet sanction for the excess has not been obtained so far. The Committee were surprised to hear from the Financial Adviser and the Chairman, DVC, that it has become the usual practice in the Corporation in such cases</p>

1	2	3
		<p>to await the completion report and seek sanction ex post facto. What is even more curious is that in the case of Durgapur unit IV, though expenditure of Rs. 61.37 crores has been incurred upto March, 1980, expenditure sanction as such had not been obtained on the basis of detailed estimates. Strangely clearance was the Planning Commission was construed as sanction by the Corporation. It is obvious that the Financial Adviser did not consider the continued expenditure without proper sanction an irregularity and failed to bring it to the notice of the Government or the Board of the Corporation.</p>
10	2.24	<p>It is not clear to the Committee whether the successive revised estimates of projects went before the Planning Commission so that they could be reappraised to see whether the initial anticipations held good and if not, whether there was any scope for economy. Although original project reports envisaged a financial return of more than 8 per cent in the case of Chandrapura units IV & V, the average actual annual return after commissioning of these projects was much less upto 1978-79. Though the Committee desired to have data on the economic/social cost benefits in respect of these projects, no such data was forthcoming.</p>
11	2.25	<p>It appears that the DVC has not yet brought out completion reports for virtually arms of the projects undertaken by it so far. In respect of a number of old projects, the Corporation has now pleaded that the preparation of completion reports at this late stage would not serve any useful purpose. As the detailed completion reports are expected to give a comparison and explanation of differences between quantity, rate and cost of the work executed and those entered in the estimates and the object is to enable the superior authorities to scrutinise the</p>

1	2	3
		<p>excess, it is really a serious lapse on the part of the Corporation that it has not attended to this work with any sense of responsibility so far.</p>
12	2.26	<p>The observations of the Committee in the foregoing paragraphs of this section would unmistakably show that the system of project planning and coordinated implementation and control over cost is anything but satisfactory. In view of the serious implications of the kind of laxity that have become almost built-in, the Committee recommend that these aspects should be gone into by Government in consultation with the Planning Commission, Central Electricity Authority and Comptroller and Auditor General of India with a view to putting matters on a sound footing without loss of time.</p>
13	3.30	<p>The Committee consider the position of demand and supply of power very disheartening. As per 10th Annual Power Survey, the forecast on system demand for DVC was put at 1027 MW for the year 1978-79. However, maximum demand recorded during the period 1974-79 was stated to be 856 MW. As against this, the installed capacity for power generation was 1317 MW which has been derated to 1257.5 MW and the firm capacity adopting a ratio of 59 per cent of peaking requirement to the installed capacity as fixed by the Planning Commission for the eastern region worked out to 741 MW. This brings out the extent of shortfall in the creation of firm capacity to meet the demand. Further, the maximum demand allocated to all DVC consumers was only to the extent of 680 MW since October 1977. This was less than the firm capacity. The actual average generation of power was 504 MW during the year 1979-80. This shows the extent to which there has been under-utilisation of the capacity already available as well as the gap between the demand and supply.</p>

- | 1 | 2 | 3 |
|----|------|--|
| 14 | 3.31 | <p>Judging by prescribed norms the performance of the DVC in regard to power generation has been poor during the period 1976-77 to 1979-80. The percentage of average generation to the derated installed capacity ranged from 42.9 to 56.3 compared to the norm of 59 per cent. The plant load factor attained by the DVC was throughout falling behind the all India average except in one year, 1978-79, and it ranged from 40.1 per cent to 52.3 per cent as against the norm of 58 per cent. The performance by any standard touched an all-time low during the period of 18 months, April 1979 to September 1980. That this should have been so inspite of the fact that a 120 MW unit was installed at Chandra-pura in March 1979 at a cost of Rs. 46.12 crores speaks volumes about the unsatisfactory way the DVC has been discharging its responsibilities of power generation and distribution.</p> |
| 15 | 3.32 | <p>The disappointing performance of the DVC, especially during the 18 months period, referred to in the foregoing paragraph, was attributed by the Chairman, DVC, primarily to the lack of the necessary climate of motivation, discipline and accountability in the Corporation. However, it was conceded both by him, and the Secretary, Department of Power, that the position could well be attributed to the general failure of management. In this connection, the Committee note that the management has not been professionally structured. There was no department of personnel management nor a proper system of material management. It is also evident that no proper system of monitoring and reviewing of the performance of the DVC has been evolved as yet. The Committee have, however, been assured by the Secretary, Department of Power, that these deficiencies are now being looked into for remedy. It is unfortunate that such</p> |

1

2

3

basic deficiencies and their deleterious consequences did not attract the attention of the Government so long and no directive was issued to the DVC. This can only be regarded as gross negligence on the part of the Government in the discharge of the responsibilities vested in them under the DVC Act. The Committee desire that immediate attention should be given to improve particularly the industrial relations in the DVC.

16

3.33

As stated earlier, the norm of 59 per cent for the ratio of peaking requirements to the installed capacity to be reached by the power system in eastern region has been adopted, although the Planning Commission have fixed the ratio for all the regions as 64 per cent for the purpose of planning for power production in the country. The Chairman, Central Electricity Authority, explained the lower ratio for the eastern region as due to the absence of adequate hydro support unlike in other regions. The Secretary, Department of Power, however, stated that the lower norm for the eastern sector was predominantly on account of industrial relations problems. According to him, the performance, of late having been slightly better than that of the southern region, there was already a case for a second look at the norm fixed for the eastern region. The Committee desire that the matter should be taken up with the Planning Commission and a reasonable norm fixed, so that the efficiency of the DVC could be properly assessed.

17

3.34

One of the parameters for measuring the efficiency of power system is to see how far the norm of generation of the power in terms of KWh per KW of capacity has been reached. Applying this norm, the Chandrapura power station fared consistently badly during the

period 1976-77 to 1979-80 and all the 3 thermal stations, Chandrapura, Durgapur and Bokaro, fared poorly during 1979-80. According to the DVC, the shortfall in generation of power was mainly attributable to unsatisfactory performance of 2 BHEL generating sets, besides the poor quality of coal and increase in down-time for maintenance due to frequent breakdown of auxiliaries and boiler tube leakages. The Committee have dealt with these problems in the succeeding chapter of this Report.

18

3.35

As the generation of power was always short of demand, load restrictions and load shedding had to be imposed almost regularly. This affected production in vital sectors of industry in the country. The Committee were informed by Coal India that the power supply which was unsatisfactory since 1977 took the worst shape during 1979-80 and that the loss of production in that year alone was of the order of 6.927 million tonnes on account of lack of power. As regards steel plants, though the contract demand was 426.3 MVA, the actual supply during October 1979 to September 1980 ranged from 137.8 to 201.55 MVA. The Committee were, however, told in evidence by the Secretary, Department of Power, that lately in an unrestricted supply position, the steel plants were able to draw not more than 220 MVA. They were informed earlier by the Bokaro Steel Plant in October 1980 that the matter had been taken up at all levels to ensure increased supply of power from DVC to their contractual level with no improvement. The Secretary held out a promise before the Committee that by February 1981 things would stabilise when all the problems of steel requirements and coal requirements could be sorted out. In view of the serious implications of uncertain power supply, the Committee wish to caution government that sorting out of such problems cannot be a one-time affair, but should

get built into the system. In this connection, they would urge that the advisory committee, which should be set up without delay, should also include in it the representatives of consumers in core sectors like steel and coal.

- 19 4.27 A major cause of lower generation of power by the DVC is unforeseen outages of generating units caused by a variety of factors. The details of forced outages furnished to the Committee revealed that during the years 1979-80, 7 out of 13 thermal units were down for more than a third of the total available time. The position in this regard is indeed alarming in respect of Chandrapura units IV & V which were installed with BHEL generating sets in March 1974 and March 1975 respectively. The forced outages of these units ranged from 37 per cent to 97 per cent and 51 per cent to 86 per cent respectively since 1976. As against the norm of 5000 KWHs of power generation per KW of capacity, the BHEL units generated between 1100 and 3391 KW during the period 1976-80, which was very poor compared to the imported GE and MAN units, though MAN units also seem to have developed some problems during the year 1979-80. The Committee agree that some price has to be paid for indigenisation of power equipments, but they feel that the country has already paid a heavy price and that the time has come for the indigenous power units to stabilise and give a good account of themselves.

- 20 4.28 The Committee note that the BHEL equipments of units IV & V of Chandrapura station, which started giving trouble since installation, were rectified recently by the BHEL bearing the cost of their services and spare parts. However, the expenditure incurred by the DVC on the extraordinary repairs carried out has not been identified, which ought to be done. In this context the Committee recommend that the DVC's

-
- | 1 | 2 | 3 |
|---|---|---|
|---|---|---|
-
- system of determining cost centres and costing should be gone into for suitable refinement.
- 21 4.29 Even after the major rectification carried out by the BHEL, problems arose mainly on account of turbine key failures with consequential damages in unit V. The BHEL had claimed a sum of Rs. 88 lakhs for further rectification carried out. As this claim is considered to be very high and in view of repeated failures of turbine keys, the DVC is considering the advisability of filing a counter claim after taking the opinion of the Ministry of Law. Incidentally, the BHEL units are yet to stabilise in order to reduce oil consumption in flame support and start/stop operations, which is high at present.
- 22 4.30 Even as the DVC's performance has to be judged with reference to its capacity to meet contractual demands for power and not with reference to financial profits that it may have made, the performance of the BHEL has to be judged on the basis of the consumer satisfaction, both in regard to timely deliveries of equipments and their trouble-free service. In this connection, the Committee have been informed that the Government are working alongwith the Central Electricity Authority on a model contract to be entered into by the purchasers with the BHEL in order to provide for clearly quality test, delivery schedules and penalties, defining responsibilities and obligations of both the parties to the contract. The Committee desire that this should be finalised early and the contracts in future should provide for a satisfactory performance test and guarantee for a sufficiently long period in the light of the past experience.
- 23 4.31 The Committee are clear that all the problems cannot be attributed to the design or manufacture defects of the power equipments. They are conscious of the fact that the maintenance and

1

2

3

operation by the DVC are not quite sound. This requires a critical study in consultation with suppliers of equipments and improvement backed by adequate training to the operatives and engineers on a planned basis.

24

4.46

As pointed out earlier, lack of proper maintenance is also a factor in causing forced outages of generating units. Although the Indian Boiler Act lays down that boiler should be shut down for annual inspection and overhauling on the expiry of 12 months of their last overhaul, the DVC has been very lax. Between 1964 and 1974, boilers were kept in service for extended period varying from 12 to 29 months and a technical advisory committee, while reviewing the working of Chandrapura station, had warned that such long intervals between two overhauls would contribute to uneconomical and inefficient generation of power, increase in forced outages and planned outages and occurrence of certain damages necessitating costly replacement. Evidently this warning went unheeded as even subsequently the position did not improve inasmuch as 33 overhauls out of 46 were delayed during the period 1975—80 and the maximum delay between two overhauls was 80 weeks. The explanation given to the Committee that "owing to acute power crisis, the DVC had to continue steaming of the boilers beyond the scheduled date in many cases in order to ensure maximum supply" of power does not impress the Committee, as this practice is counter-productive. The Committee are, therefore, of the view that the relevant provision of the Boilers Act should be adhered to not only for proper maintenance of boilers but also for safety reasons, and that delay with approval of competent authorities, if at all should be an exception rather than the rule that it has come to be in the DVC.

1

2

3

- 25 4.47 The position in regard to the time taken on overhaul of boilers and turbines is also not satisfactory. A committee called 'Vij Committee', appointed in 1967, had recommended a period of 8 weeks for overhaul of boilers and 12 weeks for overhaul of turbines. An analysis by Audit has revealed that the time taken was on an average more than twice as much as it should have been during the period of about 8-9 years upto March, 1974. Though the Corporation had intimated Audit in 1975 that they were endeavouring to limit the period of overhaul to 4 to 8 weeks, the position did not improve. Out of 46 overhauls, 22 took longer than 8 weeks and the maximum time taken was 24 weeks. That this should be so inspite of the fact that double shift for the work was introduced in 1975 is indeed disappointing. Further, out of 8 turbine overhauls during the period 1975—80, 5 took longer than 12 weeks and the maximum time taken was 32 weeks. The Committee note that recently two shifts have been introduced for the turbines overhaul also. They hope that the time taken on overhaul will now be reduced. They need hardly point out that if the boilers and turbines are maintained properly and the time taken on the overhauls reduced, the power generation in DVC would certainly be better than what it is today.
- 26 5.7 In the earlier chapters of this Report, the Committee have dealt with the lack of control over the management of the DVC, the delay in implementation of major projects and their cost escalation, under-utilisation of the capacity for power generation and the forced outages of generating units. In the concluding section of this Report they have also dealt with the transmission losses, sundry debtors and inventory holding of the Corporation. It is no wonder that the cost of generation of power per unit jumped from 9.75 p. in 1975-76 to 16.31 p. in 1979-80. Although the

1

2

3

power tariff of the Corporation has been fixed keeping in view the required rate of return of 9.5 per cent on capital plus internal resources as per a directive of the Government of India, the actual rate of return fell short of this in all the years during 1975—80 except in one year, 1976-77. The total shortfall is stated to be of the order of Rs. 40 crores during the last 6 years. The Committee have no doubt that granting good management and effective cost control, the working results of the Corporation would be much better even with the existing tariff structure.

- 27 5.8 Since the DVC has to mainly depend upon the internal resources for investment during Sixth Plan period, the Planning Commission has suggested that there could be a 5 paise increase in the tariff of the Corporation. The DVC sells power to bulk consumers and the Committee note that the Electricity Boards of West Bengal and Bihar are given a rebate of 10 per cent on the power tariff. In view of the fact that the profits of the Corporation are shared by the participating State Governments, there does not appear to be strictly any need for subsidising their Electricity Boards alone in the matter of supply of power, leaving out the bulk consumers in the Central sector. The property of this practice should, therefore, be gone into. Incidentally, the rates charges by the Electricity Boards from their consumers are much higher compared to the rate at which they get power from the DVC.
- 28 5.28 The transmission losses of the DVC are somewhat erratic. These were as high as 4.04 per cent in 1974-75 and came down to 1.92 per cent in 1978-79. In monetary terms the losses aggregated Rs. 13.71 crores for the period 1971—79. There has to be some norms to control these losses as admitted by the Chairman, DVC, in evidence before the Committee.

1	2	3
29	5.29	<p>The extent to which the working capital of the DVC is blocked up can be seen from its inventory holding and outstanding recoveries. The inventory holding of the 3 thermal stations at the end of March 1980 was of the order of Rs. 9.64 crores. Of the inventory holding, general stores worth Rs. 63 lakhs did not move for more than a year and spares worth Rs. 2.99 crores did not move for more than 3 years. Though the Committee agree that some high priced insurance spares will have to be maintained irrespective of actual use, what is deplorable is that there is no system of analysing the inventory to identify such spares and ascertain the extent of obsolescent and unserviceable stores and spares which require disposal or writing off of their value. Admittedly, materials management in general did not receive the attention that it deserved. The Committee have, however, been assured that the government have addressed themselves to the task of improving the materials management. They would await the outcome.</p>
30	5.30	<p>The sundry debtor position revealed outstanding dues of the order of Rs. 37.88 crores. Of these, Rs. 17.12 crores were outstanding for more than 2 years. The bulk of the outstanding payments are due from government organisations, including State Governments. Although the DVC is imposing penalty for delayed payments, it is at a rate less than the rate of commercial interest leaving no incentive to the parties to pay their dues. The Committee feel that the DVC ought to function as a commercial organisation and pursue the recoveries with vigour which has not been in evidence so far. If for speeding up the recoveries it becomes necessary to charge commercial rate of interest and in extreme cases even to disconnect power supply, these should be resorted to.</p>

1**2****3**

GENERAL

- 31** **5.31** Besides the issues dealt with in this Report, a number of outstanding points arising out of Audit Reports were also brought to the notice of the Committee by the Comptroller & Auditor general of India. These were taken up by the Committee with the Government and the Corporation. The Committee trust that suitable action, as may be necessary, will be taken in consultation with the C&AG. In future this should be a continuous arrangement and action on Audit Reports should be monitored by the Board of the Corporation as well as the Government.
-