सत्यमेव जयते

Report of the
Comptroller and Auditor General of India

Compliance Audit
(Public Sector Undertakings)
for the year ended 31 March 2022

SUPREME AUDIT INSTITUTION OF INDIA

लोकहितार्थ सत्यनिष्ठा

Dedicated to Truth in Public Interest

Government of Madhya Pradesh

Report No. 3 of the year 2024

Report of the
Comptroller and Auditor General of India

Compliance Audit
(Public Sector Undertakings)
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Preface

This Report of the Comptroller and Auditor General of India for the year ended 31 March 2022 has been prepared for submission to the Governor of Madhya Pradesh under Article 151 of the Constitution of India for being laid in the State Legislature.

This Report contains significant findings of audit of expenditure of State Public Sector Undertakings of Government of Madhya Pradesh. The audit has been conducted under the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971.

The instances mentioned in this Report are those, which came to notice in the course of test audit for the period 2021-22 as well as those which came to notice in earlier years, but could not be reported in the previous Audit Reports; instances relating to the period subsequent to 2021-22 have also been included, wherever necessary.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

EXECUTIVE SUMMARY

Executive Summary

I General

• About this Report

As on 31 March 2022, in the State of Madhya Pradesh, there were 65 State Public Sector Undertaking (PSUs) under the audit jurisdiction of the Office of the Accountant General (Audit-II), Bhopal. This Report of the CAG contains matters arising from the compliance audit of transactions and review of the performance of the PSUs of the GoMP coming under the administrative control of three departments falling under three clusters. This report contains four Compliance Audits on "Construction of Roads by Madhya Pradesh Road Development Corporation Limited under Asian Development Bank Funding", "Sanction and Recovery of Loans and Management of Non-Performing Assets by Madhya Pradesh Financial Corporation", "Operation & Maintenance of Powerhouses of Madhya Pradesh Power Generating Company Limited" and "Construction of Lines and Sub-stations by Madhya Pradesh Power Transmission Company Limited". The aggregate value of the audit observations of the Report is ₹ 1,876.32 crore.

(Paragraphs 1.1 and 1.3)

• Response to previous Inspection Reports

Heads of offices and their reporting authorities are required to respond to the observations contained in Inspection Reports (IRs) and take appropriate corrective action. As of 31 March 2022, a total of 409 IRs containing 2,502 Paragraphs pertaining to previous years were pending for settlement. Of these, the first replies have not been received in respect of 1,168 Paragraphs of 168 IRs of PSUs.

(Paragraph 1.4.1)

• Follow up action on Audit Report

As of 31 March 2022, out of 49 Performance Audits (PAs) and 246 Paragraphs featured in CAG Reports on PSUs audited by this office, Explanatory Notes (ENs) to 10 Paragraphs were awaited. Out of the 49 PAs and 246 Paragraphs relating to PSUs, 48 PAs and 240 Paragraphs were discussed by CoPU.

(Paragraphs 1.4.2 and 1.4.3)

• Compliance with Reports of CoPU

Action Taken Notes (ATNs) in respect of 258 Recommendations pertaining to 45 CoPU Reports on PSUs pertaining to 12 departments, were not received till 31 March 2022.

(Paragraph 1.4.4)

II Madhya Pradesh Road Development Corporation Limited (MPRDC)

"Construction of Roads by Madhya Pradesh Road Development Corporation Limited under Asian Development Bank (ADB) Funding"

- **Irregular inclusion of State Highways (SH) under ADB V projects in violation of selection criteria**

As per Para 2 of Attachment-5 of Project Administration Manual (ADB V) of Madhya Pradesh District Roads-II Sector Project, a road would be eligible for financing under the Project, if it improves the existing Major District Roads (MDRs) or Other District Roads (ODRs). Audit observed that despite having 82 eligible MDRs requiring urgent reconstruction, the MPRDC included ineligible 11 SHs under this ADB V project in clear violation of ADB funding criteria. This resulted in an irregular expenditure of ₹ 652.21 crore.

(Paragraph 2.5.2)

- **Extra burden on the exchequer due to execution of unwarranted item of dowel bar**

As per Clause 6.2.5 of IRC: 58-2015, dowel bars are not needed for traffic less than 450 Commercial Vehicles Per Day (CVPD). Audit noticed that in six packages out of test checked 18 packages that the execution of dowel bar was unwarranted which resulted in extra expenditure of ₹ 13.35 crore.

(Paragraph 2.6.1)

- **Extra cost due to non-inclusion of fly ash in the execution of PQC and Dry Lean Concrete (DLC) items of work**

As per the notification (January 2016) of the MoEF&CC, it is mandatory to use fly ash in the construction of PQC and DLC within a radius of 300 km of a Thermal Power Plant. Audit observed that in 10 packages of ADB V, the MPRDC did not include the mandatory provision of fly ash in the items of PQC and DLC in DPR, this resulted in extra cost of ₹ 18.06 crore in execution of PQC and DLC without fly ash.

(Paragraph 2.9.2)

- **Undue benefit to the contractors due to non-imposition of penalty for delay**

As per Clause 8.7 of the General Conditions of the Contract if the contractor fails to comply with the scheduled time of completion, then the contractor shall pay the damages for delay at the rate of 1/20 *per cent* of the contact price per day limited to a maximum of 10 *per cent* of the contract price. Audit observed in five packages out of 14 test-checked packages of ADB V, the contractors failed to achieve the prescribed milestones. Therefore, a penalty of ₹ 30.11 crore was required to be imposed and deducted from the Interim Payment Certificates (IPCs) of the contractors, however, no penalty was recovered (December 2022) by the MPRDC.

(Paragraph 2.9.9)

- **Inflated payment to the contractors**

As per Clause 12.2 of the General Conditions of the Contract and Clause F of Section 7 (TOR), except as otherwise stated in the contract and notwithstanding local practices, measurement shall be made of the net actual quantity of each item of the permanent works in the Measurement Book (MB). Audit observed that in IPCs of the five projects of the 14 test-checked projects being executed under ADB V, there were negative measurement entered against various items executed in the projects. It clearly indicated that despite clear evidence of fraudulent practices, no action was found to be initiated against CSC. Thus, extending undue benefit amounting to ₹ 10.20 crore in the execution of 28 items.

(Paragraph 2.9.14)

- **Extra liability on Exchequer due to deployment of Consultancy Services beyond the scheduled period**

As per Clause 8.7.1 of Particular Condition of Contract, if the contractor fails to complete the work within the stipulated time for completion or extended period (without delay damages), the expenses incurred on Consultants beyond the stipulated time for completion or extended period (without delay damages) will be payable by the Contractor to the Employer (MPRDC) in addition to the delay damages imposed as above. Audit observed that MPRDC extended the Consultancy Contracts by providing additional 34 months to 41 months due to poor progress of work by various contractors deployed for construction contracts. During this extended period, the MPRDC paid ₹ 39.68 crore towards the Consultancy Services.

(Paragraph 2.10.1)

III Madhya Pradesh Financial Corporation (MPFC)

"Sanction and Recovery of Loans and Management of Non-performing Assets by Madhya Pradesh Financial Corporation."

- **Disbursement of loan without additional security deposit**

As per the loan sanction conditions, the units must furnish additional security before disbursement of the loans. The Corporation sanctioned ₹ 15.20 crore as loan to three units that were required to furnish additional security of ₹ 3.35 crore. Against this, the units furnished additional security of ₹ 2.56 crore only. Despite this, the Corporation disbursed ₹ 12.18 crore as loan to these three units during February 2018 to January 2022.

(Paragraph 3.6.2.2)

- **Disbursement of loan for other purposes**

As per the condition of the sanction letter, the loan shall be utilised for specific purposes for which it has been sanctioned. The Corporation disbursed loan of ₹ 16.80 crore during February 2018 to March 2021 to five units. It was noticed that out of this amount, ₹ 1.60 crore had been adjusted by the Corporation against the payment of defaulted old dues pertaining to these five units.

(Paragraph 3.6.2.4)

- **Non-availing of the requisite power connections**

As per the loan disbursement conditions, every unit must obtain the sanction of necessary power connection for the operation of the unit, otherwise the disbursement shall be restricted to 75 *per cent* till the sanction of power connection. The Corporation sanctioned term loan of ₹ 56.05 crore to eight units from January 2014 to September 2020. These units did not obtain the necessary power connection after the loans were sanctioned and as such, the loan disbursement was to be restricted to ₹ 42.02 crore, being 75 *per cent* of the sanctioned amount. The Corporation, however, in violation of the sanctioning guidelines, disbursed ₹ 51.99 crore, resulting in excess disbursement of loan by ₹ 9.97 crore to these eight units.

(Paragraph 3.6.3.1)

- **Failure to raise the requisite share capital**

The units were required to raise the share capital as per the terms of the sanction. Further, the loan was to be released in proportion to the capital raised and invested. The Corporation sanctioned term loan of ₹ 19.80 crore to four units during January 2017 to March 2019. It was observed that these units raised only ₹ 1.76 crore share capital against the required ₹ 4.39 crore. As such, the units were eligible to receive loan of ₹ 6.70 crore but the Corporation disbursed ₹ 18.05 crore, resulting in excess disbursement of ₹ 11.35 crore.

(Paragraph 3.6.3.2)

- **Non-compliance of provision regarding raising/retention of un-secured loans**

The units were required to raise and invest the interest free un-secured loan as per the terms of loan sanction. The loan was to be released proportionately and the same was to be retained till the currency of the loan. The Corporation sanctioned loan of ₹ 7.00 crore to two units and disbursed ₹ 6.90 crore to them. Audit observed that the unit could raise the unsecured loan of only ₹ 4.74 crore against ₹ 5.50 crore. As such, the units were eligible to receive loan of ₹ 5.93 crore. However, the Corporation disbursed ₹ 6.90 crore resulting in excess disbursement of ₹ 0.97 crore.

(Paragraph 3.6.4.2)

- **Poor implementation of OTS Scheme**

The Corporation adopted a One Time Settlement (OTS) scheme whereby it was agreed upon by the borrowers to pay up a portion of the outstanding amount at the time of settlement. As against the outstanding amount of ₹ 168.62 crore agreed for repayment by the OTS beneficiaries, the actual amount received was only ₹ 80.98 crore. The percentage of recovery, which was 48 *per cent* in 2019-20, increased to 60 *per cent* in 2020-21 and thereafter decreased to 29 *per cent* in 2021-22. Further, out of the 116 units under OTS Scheme, 54 units settled their loan accounts amounting to ₹ 28.02 crore whereas ₹ 87.64 crore remained outstanding from the 62 units. For non-fulfilment of the terms of the OTS Scheme, the Corporation cancelled the OTS Scheme in respect of six units.

(Paragraph 3.7.1)

- **Non-disposal/ delay in disposal of assets**

The Corporation is empowered to take over the management or possession or both of the defaulting industrial concerns and realise the property pledged, mortgaged, hypothecated or assigned to the Corporation. The Corporation took possession of 17 units but did not dispose of the assets of any of these units. An amount of ₹ 34.75 crore was outstanding from these 17 units as on 31 March 2022. Out of these 17 units, the Corporation only retained possession of one unit and the possession of the remaining 16 units (with outstanding loan amount of ₹ 33.83 crore) had been given back.

(Paragraph 3.7.2)

- **Management of Non-performing Assets**

The percentage of Non-performing Assets (NPA) to the total outstanding of the Corporation was 56 *per cent* in the year 2019-20 which was increased to 89 *per cent* in 2021-22. Further, the 'doubtful' loans, which were ₹ 233.73 crore in 2019-20 increased by 134 *per cent* (including interest) to ₹ 546.21 crore in 2020-21 and then further increased to ₹ 552.99 crore as of March 2022. As on 31 March 2022, the total NPA of the Corporation, including interest in the 503 different accounts, was aggregating to ₹ 603.48 crore.

(Paragraph 3.7.4)

IV Madhya Pradesh Power Generating Company Limited (MPPGCL)

"Operation & Maintenance of Powerhouses of Madhya Pradesh Power Generating Company Limited"

- **Non-achievement of target relating to Plant Availability Factor (PAF)**

The Sanjay Gandhi Thermal Power Station (SGTPS), Birsinghpur, Powerhouse-III failed to achieve PAF target (85 *per cent*) fixed by Madhya Pradesh Electricity Regulatory Commission (MPERC), in the years 2019-20 and 2021-22, except 2020-21 due to excessive forced and planned outages of AOH and COH. This resulted in under-recovery of the fixed cost to the extent of ₹ 106.57 crore during the aforesaid period.

(Paragraph 4.7.2)

- **High Gross Station Heat Rate (GSHR)**

The SGTPS, Birsingpur, Powerhouse-III and Satpura Thermal Power Station (STPS), Sarni, Powerhouse-IV failed to maintain the Gross Station Heat Rate norms set by MPERC during 2019-20 to 2021-22, resulting in excess consumption of coal of 1,16,041.76 MT valuing ₹ 32.12 crore.

(Paragraphs 4.7.3 and 4.8.3)

- **Excess Auxiliary Power Consumption (APC)**

MPERC has fixed Auxiliary consumption norms for each Powerhouse of the Company. The SGTPS, Birsingpur, Powerhouse-III, STPS, Sarni, Powerhouse-IV and Amarkantak Thermal Power Station (ATPS), Chachai failed to restrict the Auxiliary Power Consumption within the norms set by MPERC during 2019-20 to 2021-22 resulting in excess consumption of power 74.78 MU valuing ₹ 14.30 crore.

(Paragraphs 4.7.5, 4.8.2 and 4.9.2)

- **Loss of generation due to frequent Boiler Tube Leakages (BTL)**

The Best Practices compiled (2018) by NTPC *inter alia* provides that Boiler Tube failure plays a major chunk of total forced outages in coal-fired units and recommended methods of preventive maintenance. The SGTPS, Birsinghpur PH-III and STPS, Sarni PH-IV failed to follow these Best practices which resulted in tripping of these plants 13 times and 18 times, respectively due to BTL. Thus, the Powerhouses suffered a generation loss of 538.77 MU worth ₹ 106.19 crore.

(Paragraphs 4.7.6 and 4.8.4)

- **Capital overhauling**

The SGTPS, Powerhouse-III took 61 days (19 July 2021 to 18 September 2021) against the scheduled 40 days for Capital overhauling (COH) through Original Equipment Manufacturer i.e BHEL. Further, after COH, high vibration in the turbine was noticed and the plant remained shut from 21 October 2021 to 14 November 2021. The extra shutdowns of plant resulted in a generation loss of 536.48 MU valuing ₹ 99.46 crore. However, the issue/ problem of vibration could not be rectified till date (March 2022).

(Paragraph 4.7.7)

- **Reduction in Gross Calorific Value (GCV) of coal from the loading end to the unloading end**

GCV of coal decreased from the 'as billed' stage to the 'as received' stage, though as per Central Electricity Authority (CEA), the GCV values, i.e., GCV 'as billed', 'as received' should be approximately same. During 2019-20 to 2021-22, there was drop in GCV up to 3,129 kcal/kg valuing ₹ 546.88 crore.

(Paragraph 4.11.2)

- **Delay in swapping of coal linkage resulted in higher generation costs**

The STPS, Sarni had coal linkage from Western Coal Limited (WCL) for its PH-II & III and South Eastern Coalfields Limited (SECL) for PH-IV. The coal sourced from WCL was economical compared to that sourced from SECL due to lower landing rates. The company did not take timely action (2019) for swapping coal at a cheaper rate considering decommissioning and lower PLF of PH-II and III. It incurred an extra expenditure of ₹ 50.79 crore, resulting in higher generation cost.

(Paragraph 4.11.4)

V Madhya Pradesh Power Transmission Company Limited (MPPTCL)

"Construction of Lines and Sub-stations by Madhya Pradesh Power Transmission Company Limited"

- **High incidence of tower collapse, improper investigation and non-reporting**

During 2019-22, a total of 104 towers collapsed in 29 incidents, resulting in interruption of power supply ranging between 4,555 hours and 30,789 hours. The Company investigated only seven incidents with a delay of 80 to 227 days. As per Central Electricity Authority (CEA) regulation, of the 29 incidents, 18 incidents (220 kV and above) were reportable to CEA but the Company reported only seven incidents. In addition, the Company failed to analyse wind zone-wise designing and quality of towers for quality and safety assurance and to avoid collapse.

(Paragraph 5.9.2)

- **Procurement of material without synchronising erection activities**

In 45 cases, the material valued ₹ 197.63 crores was received by the Company much before its projected utilisation and remained idle for a long period. This resulted in an avoidable financial burden of interest of ₹ 7.98 crore.

(Paragraph 5.10.1)

- **Procurement of transformers from Turnkey Contractors (TKCs)**

The para 5(i) of BPITS notified by MoP, GoI stipulates that sub-station (SS) may be packaged under turnkey contracts except transformers/reactors, which may be procured separately. The Company packaged nine turnkey contracts, including the supply of 27 transformers. It was noticed that cost of supply of transformers supplied by the TKCs was comparatively higher than the transformers of the same capacity procured by the Company directly during the same period. This resulted in an extra payment of ₹ 8.75 crore.

(Paragraph 5.10.2)

- **Non levy of Liquidated Damages (LD)**

According to the Liquidated Damage clause (clause 11.2 of the Contract agreement) of the TKC, if work is not completed within the scheduled time, the LD shall be levied at the rate of 0.5 *per cent* of the contract price of each work per week or part thereof subject to maximum 10 *per cent*. In the ten works of construction of sub-station and lines under eight TKCs the actual completion of the work was delayed ranging between one month to 30 months but the Company did not levy an amount of ₹ 69.96 crore as LD upon Contractors.

(Paragraph 5.11.1.2)

- **Non-synchronisation of works**

All the construction activities of three components of transmission projects viz. the Sub-stations, the feeder lines of SS and the outgoing lines to feed other transmission/ distribution SSs, should be synchronised in such a way that the works should be completed together in time. Audit observed ten instances where the works were not synchronised, as some components (for ₹ 109.49 crore) were completed and remained idle for five to 49 months pending completion of associated works. It also resulted in loss of interest of ₹ 7.11 crore on the blocked fund.

(Paragraph 5.11.2)

CHAPTER – I
GENERAL

CHAPTER-I
GENERAL

1.1 About this Report

This Report of Comptroller and Auditor General of India (CAG) contains matters arising from Compliance Audit of four out of 65 State Public Sector Undertakings (PSUs)[1] of the Government of Madhya Pradesh (GoMP) under the purview of the Office of Accountant General (Audit–II), Bhopal.

The primary purpose of this Report is to bring to the notice of the State Legislature significant results of Compliance Audit of the above PSUs. The findings of Audit are expected to enable the Executive to take corrective action, to frame appropriate policies as well as issue directives, that will lead to improved financial management of organisations, and contribute to better governance.

PSUs of the State Government

As on 31 March 2022, in the State of Madhya Pradesh there were 65 State Public Sector Undertakings (PSUs) under the audit jurisdiction of the Office of the Accountant General (Audit-II), Bhopal. These included 10 Government Companies and one Autonomous body in power sector, 39 Government Companies, nine Other Companies[2] controlled by the Government, two Statutory Corporations[3] and four Autonomous Bodies in the non-power sector. Out of these 65 PSUs, 55 were working and 10 were inactive[4]. During the year, no Government Company was dissolved/ merged, whereas, two PSUs (one Government Company[5] and one Government Controlled other Company[6]) were incorporated, which are under the audit jurisdiction of the Comptroller and Auditor General.

1.2 Audit Mandate

The authority for audit by the CAG is derived from Articles 149 and 151 of the Constitution of India and Section 19 and 19A of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 (DPC Act). The CAG also conducts supplementary audit of accounts of the PSUs under Section 143 of the Companies Act, 2013. Audit of Statutory Corporations is governed by their respective legislations. Out of the two Statutory Corporations, CAG is the sole auditor for Madhya Pradesh State Road Transport Corporation.

Principles and methodologies for various audits are prescribed in Auditing Standards and Regulations on Audit and Accounts, as well as other guidelines, manuals and instructions issued by the CAG.

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1 Including five Autonomous Bodies.
2 PSUs appearing at Sl. No. 6, 7, 8, 9, 13, 15, 16, 17 and 18 of **Appendix 1.1**.
3 Madhya Pradesh State Road Transport Corporation and Madhya Pradesh Financial Corporation.
4 Either defunct or under liquidation. (PSUs appearing at Sl. No. 28 to 37 of **Appendix 1.1**).
5 Madhya Pradesh State Assets Management Company Limited (Incorporated on 18 February 2022).
6 Indore Idea Factory Foundation (Incorporated on 11 January 2022).

1.3 Coverage of this Report

The summary of financial performance of the PSUs of Government of Madhya Pradesh (GoMP) as revealed from their accounts/ information furnished by them and results of oversight role of the CAG is reported separately as part of the CAG's State Finances Audit Report.

This Report of the CAG contains matters arising from the compliance audit of transactions and review of performance of the PSUs of the GoMP coming under the administrative control of three departments[7]. The cluster wise list of Departments and the PSUs under their jurisdiction is given in **Appendix 1.1**.

In this Report, four detailed Compliance Audit on "Construction of Roads by Madhya Pradesh Road Development Corporation Limited under Asian Development Bank funding", "Sanction and recovery of loans and management of non-performing assets by Madhya Pradesh Financial Corporation", "Operation & Maintenance of Powerhouses of Madhya Pradesh Power Generating Company Limited" and "Construction of Lines and Sub-stations by Madhya Pradesh Power Transmission Company Limited" are included and these were issued to the Chief Secretary/ Principal Secretaries of the concerned Departments with a request to furnish reply within four to six weeks. Government replies and the views expressed by the State Government during the Exit Conference on the Compliance Audit Reports are suitably incorporated in this Report.

The primary purpose of this Report is to bring to the notice of the State Legislature, significant results of audit on PSUs. The findings of audit are expected to enable the Executive to take corrective action, to frame appropriate policies as well as to issue directives that will lead to improved financial management of the PSUs and contribute to better governance.

1.4 Response of PSUs/ Government to audit findings

1.4.1 Response to previous Inspection Reports

Inspection Reports (IRs) are issued to the Head of the auditee unit with a copy to next higher authority for necessary action. They are required to respond to the audit observations within four weeks. As of 31 March 2022, 409 IRs containing 2,502 Paragraphs pertaining to previous years were pending settlement. Of these, the first replies have not been received in respect of 1,168 Paragraphs (168 IRs) as detailed in **Table 1.1**. PSU wise and Department wise details are given in **Appendix 1.2**.

Table 1.1: IRs/ Paragraphs for which first replies were not received as of 31 March 2022

Year	Number of IRs/ Paragraphs pending settlement		IRs/ Paragraphs for which even first replies were not received	
	IRs	Paragraphs	IRs	Paragraphs
2017-18 & earlier years	275	1,036	128	544
2018-19	51	474	8	113
2019-20	46	379	16	203

7 MPFC under Finance Department, MPRDC under the Public Works Department and MPPGCL & MPPTCL under the Energy Department.

Year	Number of IRs/ Paragraphs pending settlement		IRs/ Paragraphs for which even first replies were not received	
	IRs	Paragraphs	IRs	Paragraphs
2020-21	23	302	6	71
2021-22	14	311	10	237
Total	**409**	**2,502**	**168**	**1,168**

*(**Source:** Records maintained by the O/o AG (Audit-II), Bhopal.)*

Lack of action on IRs and Audit paragraphs is fraught with the risk of perpetuating serious financial irregularities as pointed out in these reports. It may also result in dilution of internal controls in the governance process, inefficient and ineffective delivery of public goods/ services, fraud, corruption and loss to public exchequer.

1.4.2 Follow up action on Audit Reports

The Reports of the CAG are products of audit scrutiny. It is, therefore, necessary that they elicit appropriate and timely response from the executive. As per the instructions issued by Finance Department of Government of Madhya Pradesh (GoMP), all Administrative Departments are required to submit replies/explanatory Notes to Paragraphs/ Reviews included in Audit Reports of the CAG of India within a period of three months of their presentation in the Legislature in the prescribed format, without waiting for any questionnaires from the Committee on Public Undertakings (CoPU).

As of 31 March 2022, out of 49 Performance Audits (PAs) and 246 Paragraphs featured in CAG Reports on PSUs audited under this office, Explanatory Notes (ENs) to 10 Paragraphs were awaited. Details are given in **Table 1.2.**

Table 1.2: Status of receipt of Explanatory Notes

Year of the Audit Report	Date of Placement of Audit Report in the State Legislature	Total PAs and Paragraphs in the Audit Report		Number of PAs/ Paragraphs for which ENs were not received	
		PAs	Paragraphs	PAs	Paragraphs
Up to 2014-15		**43**	**211**	**-**	**-**
2015-16	24 March 2017	03	15	-	-
2016-17	10 January 2019	02	11	-	02 (3.1, 3.9)
2017-18	21 September 2020	01	04	-	03 (2.1, 2.3, 5.1)
2018-19	21 December 2021	-	05	-	05 (4.1 to 4.5)
Total		**49**	**246**	**-**	**10**[8]

*(**Source:** Compiled by Office of the Accountant General (Audit-II), Bhopal.)*

1.4.3 Discussion of Audit Reports by the Committee on Public Undertakings (CoPU)

The status of PAs and Paragraphs featured in CAG Audit Reports on PSUs audited by this office and discussed by the CoPU as on 31 March 2022 is given in **Table 1.3**.

[8] Out of these, explanatory notes to all the paragraphs except one i.e. paragraph 4.3 of CAG's AR (PSUs) 2018-19, GoMP has been received during 2022-23/ 2023-24.

Table 1.3: PAs/ Paragraphs discussed vis-à-vis featured in Audit Reports

Year of the Audit Report (Commercial/ PSU)	Total PAs and Paragraphs in the Audit Report		Number of PAs/ Paragraphs Discussed	
	PAs	Paragraphs	PAs	Paragraphs
Up to 2014-15	**43**	**211**	**43**	**211**
2015-16	03	15	03	15
2016-17	02	11	02	11
2017-18	01	04	-	03
2018-19	-	05	-	-
Total	**49**	**246**	**48**	**240**[9]

*(**Source:** Compiled by Office of the Accountant General (Audit-II), Bhopal.)*

Out of 49 PAs and 246 Paragraphs relating to PSUs, 48 PAs and 240 Paragraphs were discussed by CoPU. However, CoPU recommendations in respect of 79 Paragraphs which have been discussed by CoPU are awaited.

1.4.4 Compliance with Reports of CoPU

Action Taken Notes (ATNs) in respect of 258 recommendations pertaining to 45 CoPU Reports on PSUs had not been received from 12 administrative departments (March 2022) as detailed in **Table 1.4**.

Table 1.4: Compliance to CoPU Reports

Name of the Department	Total number of CoPU Reports	Total No. of recommendations in CoPU Reports	Period (range) of Audit Report
Food processing and horticulture	04	48	1981-82 to 2008-09
Finance	05	32	1973-74 to 2010-11
Department of Industry Policy & Investment Promotion	16	70	1999-00 to 2015-16
Mineral Resources	01	01	2011-12
Transport	01	01	2010-11
Energy	10	52	2000-01 to 2011-12
Food and Civil Supplies and Consumer Protection	02	32	2002-03 to 2006-07
Backward Classes and Minority Welfare Department	02	12	2002-03 to 2005-06
Urban Development & Housing	01	01	2010-11
Scheduled Caste Welfare	01	06	2004-05
Home	01	01	2010-11
Science & Technology	01	02	2014-15
Total	**45**	**258**	

*(**Source:** Compiled by Office of the Accountant General (Audit-II), Bhopal.)*

9 Out of these, three paragraphs of AR (2017-18) and one paragraphs of AR (2016-17) were discussed during 2022-23.

Lack of remedial action on Performance Audits/ Paragraphs that featured in CAG Audit Reports and lack of discussion by CoPU on these Reports coupled with absence of follow up action by the Government are fraught with the risk of perpetuating serious financial irregularities as pointed out in the earlier Reports. It may also result in dilution of internal controls in the governance process, inefficient and ineffective delivery of public goods/ services, fraud, corruption, and loss to public exchequer.

CHAPTER – II
MADHYA PRADESH ROAD DEVELOPMENT CORPORATION LIMITED

CHAPTER-II
MADHYA PRADESH ROAD DEVELOPMENT CORPORATION LIMITED

Compliance Audit on "Construction of Roads by Madhya Pradesh Road Development Corporation Limited under Asian Development Bank Funding"

Summary

Audit scrutinised the records relating to 'Construction of Roads by Madhya Pradesh Road Development Corporation Limited under Asian Development Bank Funding' covering the period 2019-22 and the details of projects awarded and executed by the contractors/concessionaires and audit findings are based on the Guidelines issued by National Institution for Transforming India (NITI Aayog), Government of India, Ministry of Road Transport & Highways and Government of Madhya Pradesh related to ADB Road Projects. The Audit involved an examination of Concession Agreements of 18 selected ADB Road Packages, consultancy contracts out of 57 projects. Total 18 packages in ADB V and ADB VI were selected based on Random Sampling Methodology using IDEA software. Further, 10 roads (out of 10 packages) were also physically verified between June 2022 and October 2022.

During the scrutiny of records, Audit noticed the following irregularities:

- *Irregular inclusion of State Highways under ADB V projects in violation of selection criteria, avoidable payment of Commitment Charges to ADB, failure in claiming reimbursement of Retention Money from ADB, and irregular refund of retention money.*
- *Extra burden on the exchequer due to execution of unwarranted item of dowel bar, and Application of richer specifications of pavement design restricting the intended target of the road network under ADB V.*
- *Lack of coordination between Water Resources Department and Public Works Department resulted in unfruitful expenditure on the construction of road.*
- *Irregular award of works without due tendering.*
- *Excess payment due to fraudulent misrepresentation of facts, extra cost due to non-inclusion of fly ash in the execution of item of PQC and DLC, excess payment to Contractors for various reasons resulting in undue benefits; and*
- *Extra liability on Exchequer due to deployment of Consultancy Services beyond the scheduled period, irregular revocation of blacklisted Consultancy Services, and payment for work not done due to delay in deployment of Independent Engineers.*

These instances of shortcomings have an overall impact of ₹ 612.96 crore.

2.1 Introduction

Madhya Pradesh Road Development Corporation Limited (MPRDC) is a wholly-owned government company, entrusted with the responsibility for implementation of all State Highways (SH) and assigned with the maintenance of National Highways (NH) and Major District Roads (MDRs) including construction, reconstruction, widening, repair and maintenance. Apart from the projects being operated in the Build, Operate and Transfer (BOT) and Engineering Procurement & Construction (EPC) mode, regular contract schemes are also operated. Presently a number of projects are funded by External Funding Agencies viz. Asian Development Bank (ADB) which are managed by MPRDC on Regular Item Rate Contract and the Hybrid Annuity Mode (HAM) for ADB V[1] and ADB VI[2], respectively.

Table 2.1: Description of Modes of ADB Contracts

Mode	Description
Regular Item Rate Contract	An item rate contract is the type of contract in which the payment is made entirely on the basis of measurements of work done and payment is made at the unit price tendered for each item of work by the contractor in the bill of quantity.
Hybrid Annuity	Concessionaire executes the work and GoMP pays the project cost partially 60 *per cent* from a loan and 40 *per cent* in the form of six-monthly annuities for the predefined time period of 10 years.

The details of projects awarded and executed during 2019-22 by the contractors/ concessionaires[3] are given in **Appendix 2.1**.

2.2 Audit Objectives

The Audit was conducted to ascertain whether:

- Planning and funding for road projects were adequate and the utilisation of ADB funds was judicious as per the applicable guidelines.
- Design, estimation, tendering, execution and quality control for implementation of road projects were reasonable, and as per applicable guidelines/ provisions of contracts.

2.3 Audit Criteria

The audit findings are based on the criteria derived from the following:

- Guidelines issued by National Institution for Transforming India (NITI Aayog), Government of India (GoI), Ministry of Road Transport & Highways (MoRT&H) and Government of Madhya Pradesh (GoMP) related to ADB road projects;
- Provisions contained in model documents of Request for Proposal (RFP), Request for Qualification (RFQ) and Concession Agreements (CA) governed by International Federation of Consulting Engineers commonly known as FIDIC;

[1] Madhya Pradesh District Road II Sector Project (MPDRSP) is the road project being executed under ADB V funding.

[2] Promoting Public-Private Partnership in Madhya Pradesh Road Sector Project (MPRSP) for execution of road project under ADB VI.

[3] Agency being deployed for execution of project under ADB VI funding.

- Provisions of Madhya Pradesh Financial Code and Madhya Pradesh Works Department Manual (MPWD) and instructions issued by Finance Department, GoMP for implementation of road projects;
- Provisions of Indian Road Congress (IRC) Codes issued by MoRT&H, GoI and relevant Indian Standards (IS) Code; and
- Provisions of Institutional Mechanism for monitoring of projects issued by ADB.

2.4 Audit Scope and Methodology

The audit involved an examination of 14 contract agreements based on Item Rate Contracts under ADB V road packages and four Concession Agreements based on HAM mode under ADB VI road packages, and consultancy contracts out of 57 projects for the period 2019-22. Total 18 packages in ADB V and ADB VI were selected on the basis of Random Sampling Methodology using IDEA software. Further, 10 roads (out of 10 packages) were also physically verified between June 2022 and October 2022. The details of selected packages are given in **Appendix 2.2**.

Audit findings

The roads under ADB projects were to be constructed under item rate and Promoting Public Private Partnership in Madhya Pradesh Road Sector Project (MPRSP) arrangement on Hybrid Annuity Mode (HAM) contracts between the MPRDC, Contractor[4]/ Concessionaire[5] for development of road projects, including the designing of ADB Projects, pre-project activities, estimation, tendering, awarding of contracts, execution of projects, and monitoring thereof.

Audit observations *vis-a-vis* the Audit Objectives are discussed in the following paragraphs.

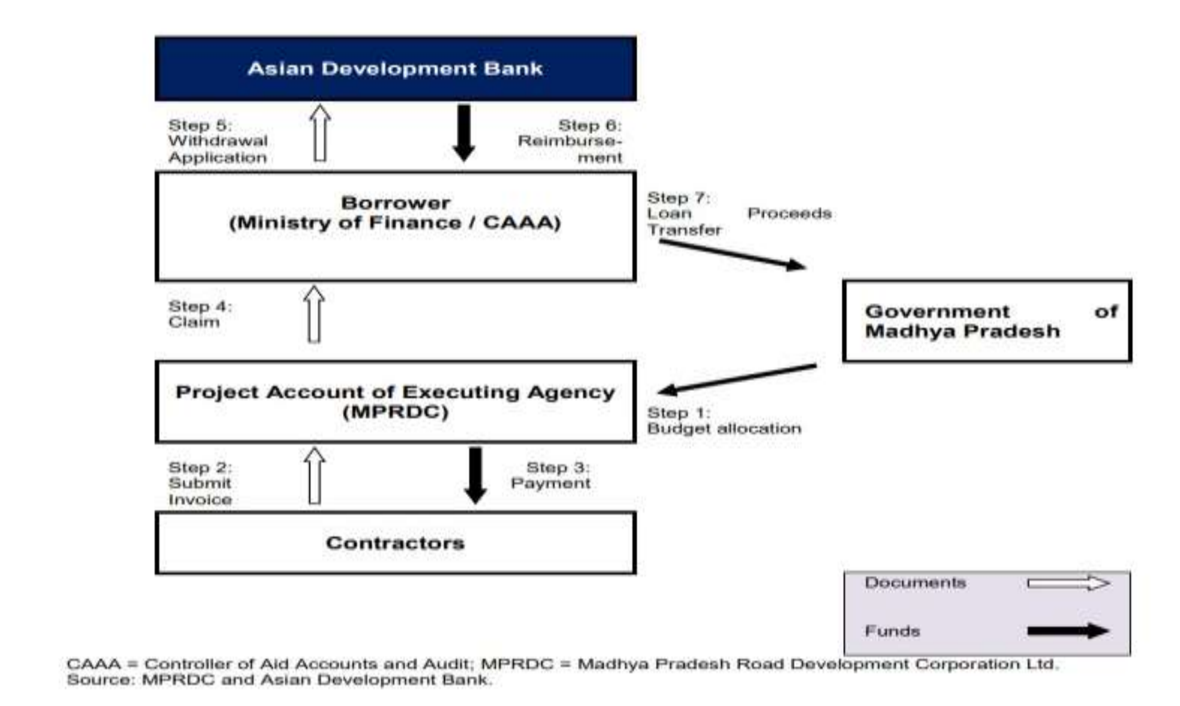
2.5 Funding and Planning of ADB Projects

2.5.1 Funding of ADB Projects

Part-IV 'Costs and Financing' of the Project Administration Manual issued (September 2016) by ADB provided that the loan would adopt the reimbursement method for payments. Under this method, MPRDC, GoMP would submit claims for reimbursement of expenditure incurred, to the GoI by way of Withdrawal Applications (WAs) and the GoI would then obtain the ADB loan and provide the counterpart funds to MPRDC for project implementation as shown below:

4 In ADB V.
5 In ADB VI.

Chart 2.1: Fund Flow Diagram



*(**Source:** Project Administrative Manual of ADB V.)*

The share of loan and the State share are in ratio of 70:30 for both ADB V and ADB VI projects. The status of budget and expenditure are given in the **Table 2.2** below:

Table 2.2: Budget Provision and Expenditure

(₹ in crore)

Name of Scheme and Code	MP Road Development Programme-ADB Funded ADB V				MP Road Development Programme-ADB Funded ADB VI			
Year	Budget	Actual Exp.	Unutilised fund	Shortfall in utilisation (*per cent*)	Budget	Actual Exp.	Unutilised fund	Shortfall in utilisation (*per cent*)
2019-20	1,017.00	786.72	230.28	22.64	350.00	0.00	350.00	100
2020-21	600.00	600.00	0	0	272.52	272.52	0	0
2021-22	600.00	529.00	71.00	11.83	357.00	701.00	(+) 344.00	(+) 96.36
Total	**2,217.00**	**1,915.72**	**301.28**	**13.59**	**979.52**	**973.52**	**6.00**	**0.01**

*(**Source:** VLC data of Annual Budget and Expenditure.)*
(Note: (+) denotes excess)

There was a recurring shortfall in utilisation of funds ranging between 11.83 *per cent* and 22.64 *per cent* during 2019 to 2022 in ADB V, whereas in ADB VI, there was shortfall of 100 *per cent* in the year 2019-20 and excess utilisation of 96.36 *per cent* in 2021-22.

Further, it was also seen that during 2019-20, 73 *per cent* (₹ 740.76 crore) of the total budget provision in ADB V was disbursed at the fag end (19.03.2020) of the year. In the other two years (2020-21 and 2021-22), though the funds were provided by the GoMP in time, MPRDC failed to utilise the funds and achieve the intended benefits due to slow progress by the contractors/ concessionaires as discussed in **Para 2.5.3**.

In reply, the Government stated (June 2023) that progress of works achieved in last three years were seriously affected due to the effect of pandemic and termination of two contracts due to slow progress of the contract.

2.5.2 Irregular inclusion of State Highways under ADB V projects in violation of selection criteria

As per Para 2 of Attachment-5 of Project Administration Manual (ADB V) of Madhya Pradesh District Roads-II Sector Project (MPDRSP), a road would be eligible for financing under the Project, if it improves the existing Major District Roads (MDRs) or Other District Roads (ODRs). Further, as per Attachment-4 of Project Administration Manual of MPDRSP, the roads will be widened to 5.5 metre carriageway (intermediate lane) and 7 metre (two lane), if warranted, due to future traffic growth.

Audit noticed (April 2022) that initially the GoMP accorded (April 2016) Administrative Approval (AA) for upgradation[6] of 54 MDRs of 1532 kms out of 130 eligible MDRs (under category B which require urgent reconstruction) costing 500 million US Dollar (USD), of which 150 million USD was to be provided by GoMP and 350 million USD by ADB. However, MPRDC implemented 57 roads of 1,469.91 kms under ADB V MPDRSP on Cement Concrete Pavement as detailed in **Table 2.3** below:

Table 2.3: Irregular inclusion of State Highways in ADB V

Category of roads	No. of roads	Total length in kms	Amount (₹ in crore)
MDRs	46*	1139.17	2597.79
State Highways	11	330.74	652.21

*(*Out of 48 MDRs, two MDRs were converted to SHs i.e., Mharajpur-Sahajpur road and Kotma-Jaithari-Rajendragram road.)*

Thus, despite having 82[7] eligible MDRs requiring urgent reconstruction, the MPRDC included 11 ineligible SHs under this ADB V project in clear violation of ADB funding criteria. This resulted in irregular expenditure of ₹ 652.21 crore.

This included 11 roads[8] of 330.74 kms which were already in-principle approved (December 2015) to be converted into State Highway by the GoMP. Besides, the agreements of these roads were executed on width of intermediate lane[9] whereas all State Highways in Madhya Pradesh are constructed on minimum two-lane basis. The DPRs of all the above 11 roads were prepared on Intermediate Lane (5.5 metre) basis and accordingly awarded (February 2017 to January 2018) on the same width. Subsequently, award of all these 11 roads were widened to two lanes, at an additional cost of ₹ 99.84 crore.

6 The work of upgradation covers the work of widening and strengthening the road surface to withstand the designed load and traffic volume by providing an adequate crust, including the execution of embankment/sub-grade, construction of sub-base and surfacing course in the case of bituminous road.

7 Total eligible MDRs under Category B-130, No. of roads included in the ADB V- 48, Balance MDRs left for reconstruction – 82.

8 Khatakia to Suthaliya via NH-3, Kumbhraj, Barod, Mragwas, Batawda, Chanchoda, Binaganj, Teligaon road, Sirsod-Pichhore, Maharajpur-Sahajpur, Rampayali-Garra Chouki, Laalbarra-Samnapur, Chourai-Panjara-Chand, Chand-Bichhua-Khamarpani, Raymond Chowk-Sai Kheda Road, Kotma Jaithari Rajendragram road, Bariya Choki-Lugasi-Garhi Malhara road and Rajnagar-Bachhon road.

9 The prescribed width for the MDRs.

In reply, the Government stated (June 2023) that all the 11 roads were MDRs at the time of preparation of Detailed Project Reports (DPR) for externally aided projects and during the currency of loan, these roads were upgraded to SH.

The reply is not acceptable because the inclusion of roads which were already approved in-principle as SHs under ADB V defeated the objective of completion of core network of MDRs as mandated in the Project Administration Manual. Thus, the SHs should not have been considered for reconstruction under ADB V, because many eligible MDRs were in bad condition and required urgent reconstruction.

2.5.3 Avoidable liability of Commitment Charges to ADB

2.5.3.1 As per Section 1.01 (a) of the Loan Agreement for ADB V (March 2017) & ADB VI (December 2019), the Borrower (GoI) shall pay a commitment charge on the unwithdrawn amount of the Loan. Further, Section 2.03 of the Loan Agreement for ADB provided that the Borrower shall pay a commitment charge of 0.15 *per cent* per annum on the full amount of the loan less amounts withdrawn from time to time, commencing from 60th day after the date of the Loan Agreement. The commitment charges were to be borne by GoMP.

Schedule-1 of the Loan Agreement for ADB V provided for the completion of the projects by 30 September 2020 whereas as per Section 3.04, the closing date of the loan was 31 March 2021. As per Project Administration Manual for the ADB-V loan, the disbursement of the entire loan amount of 350 MUSD was to be completed by 31 March 2021.

Audit noticed (May 2022) that due to delay in implementation of the projects by MPRDC and non-execution of components like cashless accident victim treatment facility and improvement of the accident response system, the Loan Agreement for ADB V was extended (December 2021) by Asian Development Bank (ADB) by 15 months i.e., up to 30 June 2022. However, due to the contractors' tardy progress, the loan disbursement was reduced between 2019 and 2020. This ultimately led to the avoidable liability of commitment charges of ₹ 1.00 crore on GoMP.

In reply, Government stated (June 2023) that the progress of the works was hampered due to labour crisis and material transport issues due to Covid-19 lockdown. Further, commitment charges are applicable on undisbursed loan amounts, hence are unavoidable.

The explanation provided for the slow progress on the work is not acceptable. The reasons given, such as labour shortages and material transportation issues, cannot be considered valid. Even after taking into account the four-month lockdown due to Covid-19 as *Force Majeure*, MPRDC did not avoid the commitment charges liability of ₹ 1.00 crore by not withdrawing the entire loan amount of 350 MUSD by the extended deadline of June 2022.

2.5.3.2 Schedule-1 of the Loan Agreement for ADB VI provided for the completion of the projects by 31 May 2024 whereas as per Section 3.04, the closing date of the loan was 30 November 2024. As per Project Administration Manual of the ADB-VI, disbursement of the entire loan amount of 490 MUSD was to be completed by 31 March 2024.

Audit noticed (September 2022) that due to delay in awarding and execution of works by MPRDC, non-execution of other components such as development of Accident Management System and imparting training to Contractors, Consultants, etc., the MPRDC could not avail the disbursement as per schedule since commencement. This resulted in an avoidable liability of commitment charges of ₹ 4.63 crore on GoMP.

The Government stated (June 2023) that the progress of work achieved in the last three years was seriously affected due to the effect of COVID-19 pandemic and the termination of two contracts due to slow progress of the contract.

The reply indicates failure of the CE, ADB in monitoring the progress, resulting in delays.

2.5.4 Failure in claiming reimbursement of Retention Money from ADB

As per Clause 14.3(c) of Particular Condition of Contract (PCC) of Contract Agreement, the amount of six *per cent* should be deducted from every Interim Payment Certificate (IPC) of the contractor limited to five *per cent* of the cost of the contract and to be claimed by the MPRDC from the ADB.

Schedule-1 of the Loan Agreement for ADB V provided for completion of the projects by 30 September 2020. As per Project Administration Manual for the ADB-V, the disbursement of the entire loan amount of 350 MUSD was to be completed by 31 March 2021. However, the period was extended (December 2021) by ADB up to 30 June 2022 (15 months).

As per Clause 4.27 of the Loan Disbursement Handbook, ADB may reimburse the amount of retention money to the contractors after the loan closing date, against an unconditional Bank Guarantee or through other financial arrangements acceptable to ADB.

Audit noticed (May 2022) that as on 30 June 2022, MPRDC withheld ₹ 161.43 crore retention money from the bills of the contractors of which only ₹ 115.54 crore was released to the contractors and ₹ 45.89 crore was pending with MPRDC on account of payment of retention money to the Contractors.

The grace period of the loan expired on 30 October 2022, hence there is least possibility of obtaining reimbursement claim of retention money of ₹ 33.50 crore[10] from the ADB because MPRDC failed to submit the guarantee of the equivalent amount to the ADB for claiming the reimbursement. Failure of the MPRDC to ensure timely withdrawal of ADB funds by submitting Unconditional Bank Guarantee as stipulated in ADB Loan Disbursement Handbook, resulted in non-reimbursement of funds amounting to ₹ 33.50 crore, besides, creation of liability in the shape of commitment charges on undisbursed loan amount.

The Government stated (June 2023) that reimbursement of retention money from ADB has been taken, and except for the 2nd half (road package 1), rest of the retention money has already been reimbursed by ADB.

The fact however remains that there were delays in seeking reimbursement from ADB and hence undue liability towards commitment charges had been created, which would ultimately have to be paid by the Government.

2.5.5 Irregular refund of retention money

Clause 14.9 of the PCC of Contract Agreement read with Section 8 (Clause 7.8) of PCC of Concession Agreement provided that the first half (50 *per cent*) of the retention money shall

[10] 73 *per cent* of the Retention Money of ₹ 45.89 crore is payable back to the Contractors.

be released to the contractor at the time of completion and the remaining second half (50 *per cent*) after the expiry of 365 days from the date of issue of TOC (Taking Over Certificate) or on receipt of royalty clearance certificate from the contractor whichever is later.

Audit noticed (between April 2022 and November 2022) in nine packages of the 14 test checked packages valuing ₹ 1030.13 crore that the second half of the retention money was released to the contractors three to 11 months before expiry of 365 days from the date of issuance of TOC by obtaining only royalty clearance certificates from the contractors. Thus, irregular refund of retention money not only absolved the contractors from the obligation during the free maintenance period but also extended undue benefit to the contractors to the tune of ₹ 29.39[11] crore through premature release of funds.

The Government stated (June 2023) that as per Clause 14.9 of PCC, performance security is 10 *per cent*, which is available up to the end of the Defect Liability Period. Thus, there is no requirement to withhold retention money till the completion.

The reply is unacceptable because the retention money (5 *per cent* of the contract value) was an additional guarantee for performance and was to be retained in addition to the performance security.

2.5.6 Delay in submission of claims to ADB resulted in loss of interest

As per Part V B (16) of Project Administration Manual (ADB V), MPRDC will be responsible for preparing and sending Withdrawal Applications (WAs) to ADB to ensure the timely reimbursement of claims and loan proceeds transfer to GoMP since the loan from ADB was in the form of reimbursement.

Audit noticed (May 2022) that in case of 17 WAs (sent during July 2017 to November 2020) amounting to ₹ 683.83 crore, MPRDC delayed the submission of claims by 32 to 102 days and consequently, GoMP bore avoidable loss of interest earning of ₹ 3.14 crore[12] due to utilisation of its own funds. The details are given in **Appendix 2.3**.

The Government stated (June 2023) that expenditure incurred was scrutinized and after verification, it was sent for reimbursement to ADB.

The fact remains that there were delays in submission of claims, resulting in loss of interest.

2.5.7 Deficient planning in fixing road alignment without getting clearance from Forest Department

Clause 2.111 of MPWD Manual states that in compliance of the Forest (Conservation) Act 1980, all proposals for the diversion of forest land to any non-forest purpose would require the prior approval of the Central Government.

As per GoI, NITI Aayog's instructions[13] (January 2017), the State Government shall ensure that the project should be awarded only after getting all requisite statutory clearances, including land acquisition.

11 Retention money deducted ₹ 60.16 crore, 50 *per cent* of that was to be released ₹30.08 crore however, the MPRDC released ₹ 59.47 crore.

12 Calculated on the lowest interest rate on Fixed Deposit i.e. 3 *per cent* per annum.

13 Office Memorandum No.14070/24/2016-PPPAU (20 January 2017).

Further, Clause 3.1(x) of the Consultancy Agreement provided that the Consultant is responsible for the preparation of the proposal for the diversion of forest land, as per Forest Conservation Act and also for obtaining clearance from the Ministry of Environment, Forest and Climate Change (MoEF&CC).

Audit noticed (between September 2022 and November 2022) that the Department awarded the three packages (December 2019) of total road length of 108.27 km to three concessionaires. These packages were to be completed between July 2022 and October 2022.

Scrutiny of records revealed that 8.53 km of combined road length in three packages (Package 3, 4 and 19 of ADB-VI) were passing through forest area and hence MPRDC was responsible for seeking requisite clearance from MoEF&CC, GoI. In the absence of forest clearance, MPRDC de-scoped the aforesaid stretch of road from upgradation and reconstruction. Consequently, the items of works were executed with reduced scope and accordingly payments were released.

Audit noticed that an expenditure of ₹ 242.87 crore on upgradation of roads totalling 8.53 km remained unexecuted despite heavy traffic of three Million Standard Axle[14] (MSA) to six MSA plying on these roads. Thus, even after incurring such a huge expenditure, the purpose of creation of uniform carriage width for uninterrupted traffic movement remained unachieved. The expenditure incurred by MPRDC was unfruitful and defeated the objective of providing uninterrupted passage for aforesaid traffic.

The Government stated (June 2023) that there were some delays in obtaining Forest clearance, but the progress of the projects was not affected as the road works were being done in the remaining portions.

The reply is not acceptable because the stretches of road passing through the forest area could not be constructed under the above packages in the absence of clearance from the MoEF&CC.

Design, Estimation, Tendering, Execution and Quality Control for implementation of ADB Road Projects

2.6 Design

2.6.1 Extra burden on the exchequer due to execution of unwarranted item of dowel bar

As per Clause 6.2.5 of IRC: 58-2015, for heavy traffic conditions more than 450 CVPD, dowel bars are usually provided across transverse joints for load transfer, however, for traffic less than 450 CVPD dowels need not be provided. In this regard, MPRDC also issued (May and June 2018)[15] directions to all the Consultants to ensure adherence to provisions of IRC and provide dowel bars wherever applicable, as per the *ibid* IRC provisions.

Audit noticed (between July 2022 and November 2022) that in six packages out of test-checked 18 packages that despite clear provisions and instructions of MPRDC as well as IRC, 2994.864 MT of dowel bar was provided on the roads where traffic was less than 450 CVPD.

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[14] MSA is used for designing of the pavement. In the Indian context, the standard axle is considered as an axle having two/four wheels, one/two on either side having tyre pressure of approximately 0.56 MPa and carrying a total load of 80 KN.

[15] Vide letter no. 3832 dated 28.06.2018.

Moreover, for the entire safe design life of 30 years, PQC design computation was done without providing dowel bars. Hence the execution of dowel bar was unwarranted. This resulted in extra expenditure of ₹ 13.35 crore.

The Government stated (June 2023) that as per the recommendation of the consultants, the dowel bars were provisioned in the Bills of Quantity (BOQ) and provided as per the approved drawing considering projected traffic. The dowel bars are used as per the decision of competent authority of MPRDC (May and June 2018).

The reply is not acceptable because the roads that received dowel bars under the ADB-V packages didn't have CVPD levels higher than 450, which is the required standard. Thus, the execution of dowel bars was unwarranted.

2.6.2 Application of richer specifications of pavement design restricting the intended target of the road network under ADB V

Concrete/ Rigid Pavements are used as an alternative to flexible pavements, especially where the soil strength is poor, the aggregates are costly and drainage conditions are bad. The choice of pavement type depends on the above factors along with life-cycle cost[16].

MPRDC proposed (October 2015) to upgrade 2,045 kms of 72 MDRs with flexible pavement under Madhya Pradesh District Roads-II Sector Project (MPDRSP) at an estimated cost of 500 million USD with the financial assistance from ADB V. Subsequently, it was decided[17] (October 2015) to construct 54 MDRs of 1,532 kms with the rigid pavement, thereby, increasing the cost of road construction by 20 to 30 *per cent*.

Based on the condition of roads, Madhya Pradesh Public Works Department (MPPWD) has categorised Major District Roads (MDRs) into five categories, as detailed in **Table 2.4** below:

Table 2.4: Details of Categorization of Roads

Category	Details of categorization
A	Recently constructed roads, which are in good condition and do not require any work.
B	Condition is very bad, and reconstruction is required to be done urgently.
C	Condition is fair but needs to be augmented by next financial year.
D	Do not require any reconstruction work
E	Under construction

Hence, the MDRs under 'B' Category were to be taken up on priority. However, the status of proposal and execution are given in **Table 2.5** below:

16 Life cycle cost is the total cost of owning the facility or running a project.

17 By MPRDC on the basis of discussion with Engineer-in-Chief, Madhya Pradesh Public Works Department, owing to benefits of low maintenance cost without considering the life cycle cost of the project.

Table 2.5: Status of MDRs proposed and executed

(₹ in crore)

Particulars	Number of roads	Length of roads in km	Cost of roads
B category urgently required reconstruction	130	2973.59	NA
Roads proposed for construction as Flexible Pavement (Bituminous Road)	72	2045.11	3338.50[18]
Rigid Pavement Proposed to be taken for construction (Concrete Road)	54	1532.00	3338.50
Number of flexible roads dropped. (Including urgently required B category roads)	18 (4)	513.00 (137.50)	687.93[19]
Number of roads finally executed	57	1469.91	3250.00 (on current price)

It has been seen from the table above that due to the adoption of costlier richer specification of PQC, MPRDC dropped 18 MDRs of 513 km road length in eight Districts[20] under ADB V which deprived 124.85 lakh habitations from intended benefits of all-weather roads. It is worth mentioning that it also included four MDRs[21] having road length of 137.50 kms. (Under category B) which actually required urgent reconstruction. Even no justification with respect to the construction of road with PQC was found available in the records.

The Government stated (June 2023) that as per the decision taken by GoMP, MDR roads were constructed with rigid pavements on account of their long life and lesser maintenance costs.

The reply is not acceptable as adoption of costlier specifications for road construction in ADB V at 20 *per cent* to 30 *per cent* higher cost, resulted in a situation where the Department had to exclude the 18 MDRs from the original proposal on account of paucity of funds.

2.7 Estimation

2.7.1 Lack of coordination between Water Resources Department and Public Works Department resulted in an unfruitful expenditure on the construction of roads

The Administrative Approval (AA) for the construction of the Banda Irrigation Project[22] on Dhasan River in Sagar District was accorded (June 2018) by GoMP, and the dam execution commenced in August 2019. The project is still in progress (May 2022). A portion of 3.19 km of Garpehera- Dhamoni Road[23] of the total 35.33 km of road under Package-8 of ADB V, was falling under the submergence area of Banda Irrigation Project.

Audit noticed that even after the approval of the Banda Irrigation Project by GoMP, MPRDC completed (May 2019) the construction of road work at an approximate cost of

[18] Exchange Rate one USD = ₹ 66.77 as per Project Administrative Manual.

[19] Based on per Km cost of flexible pavement ₹ 1.341 crore per km provided by the MPRDC.

[20] Khargone, Gwalior, Rajgarh, Sehore, Hoshangabad, Mandla, Chhindwara and Mandsaur Districts having total population of 1,24,85,140.

[21] Shivpuri loop Marg to Shitla Mata–Chinor 53.20 km, Bankhedi–Umardha- Mayani-Sardha Road 35 km, Paudi Bakauri Babeha road 18.20 km and Khamarpaani- sawani-Lodhikheda to Raymonds Chauk road 31.10 km.

[22] The project expected to be completed by December 2023 envisaged submergence of 28 villages of Sagar District, including Kulla and Bahrol villages.

[23] Passing through Kulla and Bahrol villages and included 3.190 kms length (chainage 17+230 km to 20+420 km) of submerged road.

₹ 58.17 crore[24], including 3.19 km of the submerged portion of the road. Thus, the expenditure incurred on road portion in submergence area of 3.19 km amounting to ₹ 5.25 crore[25] will become wasteful, as after completion of the Banda Irrigation Project (estimated to be completed by June 2025), the submerged road will not be able to cater to the traffic. Audit observed that the Water Resources Department, Bina, PMU, Sagar had called a tender for ₹ 12.44 crore (February 2023) for the construction of diversion due to shifting of alignment in submergence of Banda Project.

Thus, lack of interdepartmental co-ordination (between MPPWD and MPWRD), resulted in non-functionality of the 3.19 km of the road and subsequent wasteful expenditure of ₹ 5.25 crore.

The Government stated (June 2023) that most of the structural works of that portion were already completed and some other works like electrical line shifting, earthwork *etc.*, at that stretch have been completed before approval (June 2018) of Banda Irrigation Project. Therefore, the Public Work Department was at no fault.

The reply is factually incorrect as no work had been executed in the respective stretch till November 2018 as detailed in the Progress Report (for November 2018).

2.7.2 Extra cost due to execution of excess thickness of Dry Lean Concrete in road pavement

Specifications of IRC SP: 49-2014 (Guidelines for use of dry lean concrete as sub-base for rigid pavement) vide Clause 2 provides that thickness of Dry Lean Concrete (DLC) Sub-base will be minimum 150 mm for all major projects of State Highways and National Highways whereas 100 mm thickness of DLC Sub-base is required to be adopted for all the other roads except the State Highways and National Highways. Further, no other IRC guidelines have been specified for the use of DLC.

Audit noticed (October 2022) that in five road works of the 11 roads in five packages of ADB-V it was seen that the thickness of DLC crust was considered 150 mm (150 mm in four MDR and 120 mm in one MDR) instead of a recommended thickness of 100 mm. Thus, provisions and execution of excess thickness led to extra cost of ₹ 10.25 crore which could have been avoided. The details are given in **Appendix 2.4**.

In reply, the Government stated (June 2023) that DLC in a thickness of 120 mm was adopted as per the design based on IRC:58-2015.

The reply is not acceptable as the IRC: 58-2015 standard is specifically for verifying the thickness of the PQC slab. However, when it comes to executing DLC for different categories of roads, the provision of IRC:49-2014 should be followed. This recommends a minimum thickness of 150 mm for all major State and National Highway projects, while a thickness of 100 mm is required for DLC Sub-base on all other roads.

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[24] Total cost of construction: ₹ 145.59 crore × length of Garpehera-Dhamoni road: 35.33 kms/ total length of Package-08- 88.953 km.

[25] ₹ 58.17 crore× 3.19 km/ 35.33 km.

2.8 Tendering

2.8.1 Irregular award of works without tendering

As per Clause 2.6 of ADB's Guidelines, ADB will list all loan projects requiring consulting services on ADB's website and also to attract Expression of Interest[26] (EOI) from consulting firms, the borrower (GoI), may also advertise in an appropriate national journal, newspaper, or website.

Further, as per Rule 183 (ii) of General Financial Rules (GFR) 2017, where the estimated cost of the consulting services is above ₹ 25 lakhs, an enquiry for seeking EOI from Consultants should be published on Public Procurement Portal.

Audit noticed (between October 2022 and December 2022) that Consultancy Agreements (January 2017 and November 2021) for ADB Projects were executed by MPRDC with two different Consultants M/s Intercontinental Consultants and M/s Technocrats Pvt. Ltd. India on contract cost of ₹ 26.34 crore + 0.95 million USD for six packages and M/s Bloom Companies LLC Pvt. Ltd. on contract cost of ₹ 19.99 crore for 11 packages respectively. However, MPRDC, without following due tendering process, awarded consultancy contracts to these same two firms for additional work of four packages (work value ₹ 412.59 crore) and nine packages (work value ₹ 781.43 crore) respectively. For these additional contracts, the two firms were paid consultancy charges of ₹ 21.96 crore as detailed in the **Table 2.6** below:

Table 2.6: Details of irregular award of additional work

Sl. No.	Consultancy	No. of additional packages/ Total cost of additional package	Irregular consultancy charges paid
1.	M/s Intercontinental Consultants and M/s Technocrats Pvt. Ltd. India	Four packages/ ₹ 412.59 crore	₹ 8.47 crore
2.	M/s Bloom Companies LLC Pvt. Ltd.	Nine packages/ ₹ 781.43 crore	₹ 13.49 crore
Total		**13 packages/ ₹ 1194.02 crore**	**₹ 21.96 crore**

For awarding additional work, MPRDC neither issued any advertisement nor called for EOI. This was in total violation of financial rules, other codal provisions and canons of financial propriety, resulting in irregular payment to that extent.

The Government did not furnish any reply in this regard (July 2023).

The Government may investigate the reasons resulting in awarding of works without EOI and fix responsibility on the concerned MPRDC officials.

2.8.2 Non-Adherence to project network analysis

Project network analysis techniques are used for planning, scheduling and controlling of projects. The commonly used techniques of Critical Path Method (CPM) and Programme Evaluation and reviewing technique (PERT) are needed to evaluate planning, scheduling and controlling of projects.

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[26] A document containing the details of qualification criteria, submission requirement, brief objective & scope of work and evaluation criteria etc.

Audit noticed (November 2022) in two packages of ADB VI (for execution of single road each)[27], the scheduled completion time of 24 months was uniformly allowed for the works without considering the Project Management Tool (CPM and PERT) and also irrespective of the scope, quantum, bottleneck in execution of the project, *etc*. Both the works were in progress (March 2023). These two packages were compared with two roads[28] executed under Package 26. The details are given in the **Table 2.7** below:

Table 2.7: Disproportionate scheduling of time for project completion

Particular	Package 26	Package 19	Package No. 3
Road length	89.40 km (two roads)	30 km (single road)	21.60 km (single road)
Estimated cost (in ₹)	261.00 crore	90.51 crore	64.46 crore
Nos. of structure	111 nos.	105 nos.	30 nos.
Forest area	4.23 km (4.73 *per cent*)	2.8 km (9.33 *per cent*)	1.080 km (5 *per cent*)
Area passes through habitation	14.476 km (16.19 *per cent*)	3.361 km (11.20 *per cent*)	2.150 km (9.95 *per cent*)
Time allowed	**24 months**	**24 months**	**24 months**

In the absence of adequate controls and monitoring, disproportionate time beyond the optimal requirement (as per CPM and PERT) was allowed by the Department in respect of the two packages which created the liability of unnecessary extra payment made to the Independent Engineer (IE) and undue escalation for the extended period over the optimal time required.

The Government did not furnish any reply in this regard (March 2024).

2.9 Execution

Execution of Pavement Quality Concrete and Dry Lean Concrete

As per the notification (January 2016) of the MoEF&CC, it is mandatory to use fly ash in the construction of Pavement Quality Concrete (PQC) and Dry Lean Concrete (DLC) within a radius of 300 km of a Thermal Power Plant. Further, it shall be the responsibility of the State Authorities approving various construction projects to ensure the use of fly ash and accordingly, the Schedule of Rates (SOR) 2016 of PWD also enforced rates for PQC and DLC with and without fly ash as detailed in **Table 2.8** below:

Table 2.8: SOR Rates of items having component of fly ash

(Amount in ₹)

SOR Item No.	BOQ Item No.	Particulars of Item	Rate as per SOR 2016 (per Cu. M.)
6.3	5.07 A	PQC without fly ash	5726
6.10	5.07 B	PQC with fly ash	5381
Difference in rate of Item of PQC with and without fly ash			**345 (6.03 *per cent*)**
6.1	5.06 A	DLC without fly ash	2443
6.8	5.06 B	DLC with fly ash	2344
Difference in rate of item of DLC with and without fly ash			**99 (4.05 *per cent*)**

27 1st Road: Maharashtra Border–Kukuru Khamla- Bhaisadehi road (Package 19 under ADB VI, length 30 km and the estimated cost ₹ 90.51 crore), 2nd Road: Jobat- Nanpur (Package 3 under ADB VI, length 21.60 km and the estimated cost ₹ 64.46 crore) and allowed time period for completion was given 24 months in both cases.

28 Porsa-Mehgaon-Mau-Sevda Road and Jamna-Bilav Road (Package 26 under ADB VI, total length 89.40 km and the total estimated cost ₹ 261.00 crore).

It can be seen that the rates for execution of PQC and DLC with fly ash are lower than execution without fly ash, however structural integrity remains unaffected. The following issues were noticed:

2.9.1 Excess payment due to misrepresentation of facts

Audit noticed (between July 2022 and November 2022) that in seven packages under ADB-V, the contractors utilised fly ash from Thermal Power Plants as per the provision of approved designs mix for PQC and DLC. Therefore, the contractors were entitled to payment for items "PQC and DLC with fly-ash", however to the contrary, incorrect payments were made by adopting rates of the PQC and DLC without fly-ash.

Further, MPRDC stated that only in four out of seven packages the fly ash was used but scrutiny of records revealed that fly ash was used in all seven packages. Thus, the MPRDC misrepresented the facts and allowed the contractors the benefit of higher rates for execution of PQC and DLC without fly ash, thus resulting in excess payment of ₹ 27.62 crore and ₹ 2.74 crore respectively.

In reply, the Government stated (June 2023) that the rate of PQC and DLC are based on the ingredients of material, but it will not affect the rate until it is a part of the Concession Agreement. The effect of fly ash on the rate is also not specified. The SOR is only a reference, not the part of Concession Agreement.

The reply is not acceptable as the rates to be paid to the contractors should have been based on 'PQC/DLC with fly ash' as these are non BOQ items and are also specified items in the SOR and hence lower rates as per SOR were applicable. However, MPRDC despite being aware that the contractors had utilised lower rate items, made payment at the higher rates of PQC/DLC, resulting in excess payments. The Construction Supervision Consultants[29] also failed to ensure the payment of correct items of PQC and DLC as per the ingredient materials used in the execution, resulting in excess payments.

The MPRDC may investigate the reasons in the lapses and fix responsibility on the concerned officials and consultants.

2.9.2 Extra cost due to non-inclusion of fly ash in the execution of PQC and DLC items of work

It was observed that in 10 packages of ADB V, in violation of MoEF&CC notification (January 2016), the MPRDC did not include the mandatory provision of fly ash in the items of PQC and DLC in DPR, resulting in extra cost of ₹ 13.70 crore in execution of PQC and ₹ 4.36 crore in execution of DLC without fly ash.

In reply, CE, ADB stated (between July 2022 and December 2022) that Sub-clause 4.9 of General Condition of Contract (GCC) stipulates that the contractors found defects and difficulty in the construction of DLC and PQC with fly ash hence the item of fly ash had not been incorporated. It was further added that the works were awarded on item rate contracts

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[29] **1.** M/s ICT Pvt. Ltd. New Delhi & Rodic Consultants Pvt. Ltd. New Delhi (JV) for PKG no.21,
2. M/s MSV International, Inc. In Association with M/s. Highway Engineering Consultant for PKG no.7, 8, 10A, 11A and 14,
3. URS Scott Wilson India (P) Ltd. With sub-consultant AICONS Engineering (P) Ltd for PKG no.1.

and contractors were free to quote their rates hence it could not be the reason for the change in payment rates.

The reply is not acceptable as the design mix submitted by the Construction Supervision Consultant on behalf of contractors in all other projects where fly ash was used clearly indicated that the compressive strength and Flexural Strength of items of PQC and DLC executed with fly ash were far superior and hence the question of quality and difficulty in execution does not arise.

The Government did not furnish any reply in this regard (July 2023).

2.9.3 Excess payment to the Contractor in execution of earthwork

Clause 12.3 (a) of Section-7 of General Condition of Contract (GCC) read with Clause 12.3 of PCC stipulates that revised rate analysis for item of work executed can be carried out if:

- ➢ Measured quantity of work executed increases by more than 25 *per cent* of the quantity estimated in the Bills of Quantity (BOQ); and
- ➢ The change in the quantity results increase in at least two *per cent* of the contract price.

Further, as per Clause 12.4 of GCC, whenever the omission of any work forms part (or all) of a variation, then for the value of which has not been agreed, the contractor shall give notice to the Engineer accordingly with supporting particulars. Thereafter, the Engineer shall proceed in accordance with Sub-clause 3.5 to agree or determine the cost which shall be included in the Contract Price.

Audit noticed (April 2022) in Package 5 of ADB V that an item of "Construction of Embankment" to be executed was "Construction of Embankment with fly ash". The contractor requested (September 2017) that the item of Construction of Embankment with fly ash may be exempted from scope of work and in lieu of this item, the contractor gave an undertaking to execute the same work with soil obtained from borrow area at the same quoted rate. The MPRDC agreed (March 2018) with the same.

Audit observed that the contractor claimed extra cost towards utilisation of soil in Construction of Embankment in pursuance of Clause 12.3 of GCC and the MPRDC agreed to revise rate analysis of the quantity of item executed (Construction of Embankment) on account of increase in major quantity. Accordingly, the rate was revised (July 2020) from ₹ 110 to ₹ 201 per Cu.M. The contractor claimed payment for quantity of earth work executed at the revised rate and the same was approved by the Department. Audit thus, observed that the contractor claimed extra rate for the item despite giving an undertaking and the Department failed to consider this, resulting in additional burden of ₹ 1.99[30] crore on the exchequer.

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Quantity executed	Rate paid	Rate payable	Rate Difference	Difference (amount in ₹)
218586.832	₹ 161/ Cum	₹ 110/ Cum	₹ 51/Cum	11147928 (already paid)
218586.832	₹ 201/Cum	₹ 110/Cum	₹ 91/Cum	19891401-1114798 (previously paid) = 8743473 (additional liability)
Total				**19891401**

The Government while accepting the facts (June 2023) stated that the rate revision has been rejected[31] and the excess payment will be recovered from the maintenance bills of the contractors.

2.9.4 Excess payment to the concessionaires on account of Utility Shifting

According to Clause 4.1.3 and Clause 1.6 of Technical Schedule-A, forming part of the Concession Agreement, delivery to the Authority or if the Authority so directs, or the entity owning the utility, the detailed estimates and costing and shifting of utilities[32] should be as per the available utility shifting plan. Accordingly, the item of utility shifting was included in the landed cost (estimate) and the NITs[33] were issued on this landed cost.

Bid Document (Volume 1) vide Paragraphs 7.1 and 7.2 of Section-1 provides that Bidder is supposed to personally inspect the site and make full depth assessment of works required to be carried out as per Schedules to the Concession Agreement and its costing before bidding for the Project. Further, Point no. 3 of Chapter-1 of the "Executive summary" of Feasibility Report (FRs) prepared by the Consultant also included the work of Survey and Investigation.

Audit noticed (November 2022) that the concessionaires executing projects under ADB VI were not eligible for the cost of utility shifting as the items of utility shifting were included in the estimates (landing cost) and covered under the scope of work of Concession Agreements. Despite the fact, in Package 3 and Package 4, it was seen that an amount of ₹ 10.17 crore was paid separately to the concessionaires towards the work of utility shifting. The details of payments and work done by the concessionaires are detailed in the **Table 2.9** below:

Table 2.9: Excess payment to concessionaires towards utility shifting

(₹ in crore)

Package no.	Landed estimated cost inclusive of utility shifting	Bid cost	No. of affected utilities for shifting	Technical sanction for utility shifting	Excess payment[34] made to the concessionaires for utility shifting
3	64.46	66.60	140	7.44	6.65
4	187.93	186.0	337	5.54	3.52
Total		**252.60**	**477**	**12.98**	**10.17**

The CE stated (January 2023) that in the HAM projects, tenders are called based on the Feasibility Reports (FRs). As per Bid Document vide Paragraphs 7.1 and 7.2 of Section-1, Bidder is supposed to personally inspect the site and make full depth assessment of works required to be carried out as per Schedules to the Concession Agreement and its costing before bidding for the Project. In Package-3, Schedule- B, there is no mention of "Shifting of Utilities" in the scope of work. Merely inclusion of utility shifting cost in the declared Probable amount of the Contract (PAC) cannot be construed as double payment.

The reply is misleading and factually incorrect on account of the following reasons:

- Feasibility Report is an essential part of DPR and in both packages the DPR already includes the items and cost of shifting of utility.

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31 Vide MPRDC office letter 19817 dt. 06.03.2023.
32 Under ADB VI, upgradation of new work involved utility shifting, this does not apply to ADB V.
33 Notice Inviting Tender.
34 Inclusive of 12 *per cent* GST.

- In Packages 3, Schedule-B, scope of work clearly mentioned that the shifting of utility and the expenditure estimation are inclusive of items "shifting of utility". Therefore, separate payment on account of utility shifting was not only irregular but resulted in double payment.
- In HAM Project, Bid Project Cost quoted by the concessionaire represents the amount due and payable by the Authority to the concessionaire irrespective of the estimated cost. Hence, the concessionaire was solely responsible to complete the work and therefore, not entitled to get any extra payment even for the work found incidental.

The Government did not furnish any reply in this regard (July 2023).

2.9.5 Excess payment to the contractor due to payment of excess quantity of Reinforcement (RCC) Crash Barrier

With a view to reducing accidents and increasing safety on roads, RCC crash barrier was proposed by MPRDC in place of RCC railings.

Audit noticed (July 2022) that DPR for Package 8 of ADB V provided for utilisation of 1,341 metre of RCC railing and 232 metre of RCC crash barrier under Bill of Quantity (BoQ). However, it was found that though the contractor executed 1,364.95 metre of RCC crash barrier but the payment for this item was made for 2,597.08 metre and consequently, the MPRDC reduced the quantity of RCC railing under BoQ by 633.10 metre[35]. Thus, the payment was made to the contractor for 1,232.13 metre in excess of the actually executed quantity. This led to an excess payment of ₹ 0.62 crore to the contractor[36].

In reply, the Government stated (June 2023) that the excess payment pointed out by Audit has been recovered.

2.9.6 Excess payment of Non-BoQ item of Groove Cutting in PQC

Item of groove cutting in 4 mm to 6 mm up to one third depth of PQC is integral part of the execution of PQC at contraction, expansion and longitudinal joints. Therefore, separate payment for the item of groove cutting is not allowed.

Audit noticed (November 2022) in Packages 10A and 11A of ADB V, there was a non-BoQ item of Groove cutting of width of 4-6 mm, for which MPRDC had paid ₹ 0.62[37] crore for 64754.83 metre Groove cutting. This resulted in an excess payment of ₹ 0.62 crore to the contractors.

In reply the Government stated (June 2023) that Package 10A & 11A were the balance work. Groove cutting of 4-6 mm was left by the contractors of Package 10 & 11, hence new item as a Non-BoQ item was derived by the contractors and was approved.

The reply is not acceptable as groove cutting is required to be executed within 24 hours of laying the PQC. However, in the instant cases, the earlier agency did not execute this item and the contracts were terminated after a lapse of about 10 months of abandoning the works, thereafter the leftover works were awarded to the new agencies. It clearly indicated that the

35 From 1,341 metre to 707.90 metre.
36 1232.13 metre × ₹ 5,001 per metre.
37 43810.83 metre at the rate of ₹ 97 per meter and 20,944 metre at the rate of ₹ 92 per meter.

item of Groove cutting was paid after the expiry of more than a year, which was not acceptable. Hence, the payment of full rate of PQC to the earlier contractors without executing the item of Groove cutting not only led to excess payment, but also the item of Groove cutting by the later contractors will not have any value addition on the concrete.

2.9.7 Excess payment to the contractors due to non-recovery of excavated Hard Rock

As per Clause 24 of General notes (Road works) of MPPWD SOR 2016, the rubbles available from the excavation of hard rock, shall be used in the construction and shall be issued to the contractor.

Audit noticed (between July 2022 and October 2022) in three packages[38] that hard rock of 111675.75 Cu.M. obtained during the excavation was required to be issued to the contractors and recovery at the specified rate of ₹ 150 per Cu.M. amounting to ₹ 1.68 crore was to be effected. However, the MPRDC neither issued the excavated hard rock to the contractors nor did it recover the amount of ₹ 1.68 crore from the contractors.

Further, Audit also observed that the quantity of hard rock had not been accounted for by the MPRDC and therefore the possibility of theft and mis-utilisation by the contractors cannot be ruled out. Besides, un-utilised hard rock also resulted in non-recovery of royalty of ₹ 1.34 crore[39].

The Government stated (June 2023) that the Hard Rock excavation rate includes salvage value.

The reply is unacceptable because the rates mentioned in the SOR do not include the salvage value. Besides, the reply is silent on the non-recovery of royalty from the contractors.

2.9.8 Incorrect booking of penalty levied against delay in financial closure

MP Financial Code Rule 10 provides, each Head of the Department is responsible for enforcing financial order and strict economy at every step, besides observance and implementing all relevant financial rules and regulations.

Clause 22.1.1 of the Concession Agreement further provides, concessionaire has to complete financial closure[40] within 120 days from the date of signing of the agreement. In the event of a delay, payment of damages to the authority in a sum calculated at the rate of 0.05 *per cent* of the performance security for each day of delay is to be levied.

Further, as per Clause 4.3 of the Concession Agreement, in the event that the concessionaire does not ensure fulfilment of any or all of the conditions precedent set forth in Clause 4.1.3 within the period specified in respect thereof, the concessionaire shall pay to the Authority damages in an amount calculated at the rate of 0.3 *per cent* of performance security for each day's delay, until the fulfilment of such Conditions Precedent set forth in the Agreement within the period specified.

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38 Package 8, Package 15 B and 18 A.

39 Royalty on hard rock 111675.75 × ₹ 120/ Cu.M.= ₹ 1,34,01,090.

40 Defined as a stage when all the conditions of a financing agreement are fulfilled prior to the initial availability of funds.

Audit noticed (November 2022) that in three packages of ADB VI, as against the provisions, the financial closure was done with delays and the concessionaires failed to fulfil the conditions. This attracted a levy and recovery of damages of ₹ 4.91 crore. However, it was found that the MPRDC instead of remitting this amount into the final head of account 'penalty' as a Revenue Receipt, withheld an amount of ₹ 4.49 crore from the total recovered amount as shown in **Table 2.10** below:

Table 2.10: Misclassification of penalty levied against delay

(₹ in crore)

Pack-age no. of ADB VI	Date of financial closure	Delay in financial closure (in days)	Damage for delay in financial closure (Clause 22.1.1)	Damage for non-compliance of conditions (Clause 4.3/4.1.3)	Actual recovery for non-compliance	Short-fall due to error	Amount booking under head "withheld"
26	1/9/ 2020	23	0.15	2.61	2.16	0.45	2.31 (0.15+2.16)
19	30/9/2020	83	0.30	-	0.30	-	0.30
4	22/5/2020	196	2.45	-	2.45	-	1.88
Total					**4.91**		**4.49**

Thus, withholding the amount of penalty of ₹ 4.49 crore instead of remitting into final head not only deprived the Government exchequer from earning revenue, but also the chances of reversal of the amount to the concessionaires could not be ruled out.

In reply, the CE, ADB stated (January 2023) that the amount was initially kept withheld and will be transferred to the penalty account during the finalisation of accounts. At the instance of Audit, the penalty would be transferred to the correct head. Further reply is awaited (July 2023).

2.9.9 Undue benefit to the contractors due to non-imposition of penalty for delay

As per Clause 8.4 of the General Condition of Contract (GCC), the contractor shall be entitled to an extension of time for completion, if there is variation or substantial change in the quantity, exceptionally adverse climatic conditions, unforeseeable shortages in the availability of personnel or goods caused by epidemic or governmental actions, or any delay, impediment or prevention caused by or attributable to the Employer. However, Clause 8.7 stipulates that if the contractor fails to comply with the scheduled time of completion, then the contractor shall pay the damages for delay at the rate of 1/20 *per cent* of the contact price per day limited to a maximum of 10 *per cent* of the contract price.

Audit noticed (between August 2022 and October 2022) in five packages[41] out of 14 test-checked packages of ADB V, the contractors failed to achieve the prescribed milestones as per the scheduled programme and time extension was granted on the ground of shifting of water pipeline, unseasonal/ abnormal rainfall, working restriction in forest area and delay in electrical utility shifting.

The delay on the above ground was not admissible for the reasons elaborated in **Appendix 2.5**, wherein the causes of delay are mainly due to abnormal rain and utility shifting. The contracts are inclusive of the rainy season and also utility shifting is part of the

41 Package 1, 4, 8, 18A and 18B.

contract, thus the delays were solely attributable to the contractors. Therefore, a penalty of ₹ 30.11 crore was required to be imposed and deducted from the IPCs of the contractors, however, no penalty was recovered (December 2022) by the MPRDC.

In reply, the Government reiterated (June 2023) the aforesaid reasons for the grant of time extension and non-recovery of penalty.

The reply is unacceptable because the delays were solely attributable to the contractors and hence, the penalty is leviable.

2.9.10 Undue financial benefit to the contractors due to delay in termination of the Agreement and re-awarding the balance work

As per Clause 15.2 of the Agreement (ADB V), MPRDC was required to terminate the agreement, in case the contractor abandons the work or not demonstrating the intention in performing the contractual obligations. As per Clause 8.2 of the Agreement, the contractor was required to complete the whole work as per three Milestones[42]. Further, Clause 8.7.1 of the Agreement provides, in case the contractor fails to achieve the milestones, the contractor was liable to pay the damages to the Employer at the rate of 1/20th *per cent* of the contract price per day, subject to a maximum of 10 *per cent* of the contract price.

Audit noticed (between July 2022 and November 2022) that:

2.9.10.1 In case of Packages 10[43] and 11[44], the progress of the work by the contractor (M/s IL&FS Transportation Networks Limited and M/s IL&FS Engineering and Construction Company JV) was very slow and even after the lapse of stipulated period of completion, the contractor could hardly complete 24.48 *per cent* and 17.65 *per cent* of work respectively. Despite the slow progress, the MPRDC failed to recover the delay damages of ₹ 37.47 crore from the respective IPC against slippage in all three milestones. Besides, there was a time overrun of 1,254 days and 1,166 days, respectively. Meanwhile, the contractors closed (September 2018) both the packages and demobilised all the plants, equipment and manpower from the site. Consequently, MPRDC finally terminated (July 2019) both the packages after the lapse of 10 months from the closure of the works by the contractor.

2.9.10.2 In respect of package 10, MPRDC released (January 2018 to October 2018) Material Advance[45] of ₹ 10.92 crore against material brought to site by the contractor. A sum of ₹ 1.02 crore was injudiciously paid (October 2018) to the contractor towards Material Advance even after abandonment (September 2018) of the work. It was also seen that after termination (July 2019), the total Material Advance due for recovery from the contractor was ₹ 5.34 crore, whereas the value of materials during the assessment of materials at site was only ₹ 1.66 crore. There was a possibility of injudicious payment of Material Advance of

[42] **First Milestone:** Completion of works amounting to minimum 30 *per cent* of accepted contract amount by the end of 50 *per cent* of the time for completion, **Second Milestone:** Completion of works amounting to minimum 50 *per cent* of accepted contract amount by the end of 70 *per cent* of the time for completion and **Third Milestone:** Completion of whole works (100 *per cent*) by the end of complete time for completion.

[43] Package 10: commencement date 26/04/2017, date of schedule completion 25/04/2019 (730 days).

[44] Package 11: commencement date 26/04/2017, date of schedule completion 25/10/2018 (548 days).

[45] Clause 14.5 of the Agreement provides MRDC to pay Material Advance for bringing to site cement, steel, bitumen, RCC spun pipes and the course aggregates for incorporation in the Permanent Works and deduction was made as and when the same is utilised in the work.

₹ 3.68[46] crore on the quantities actually not brought to the site. Further, this also indicates failure of the Construction Supervision Consultant[47] in discharging his duty. However, there was no penal clause in the Consultancy Agreement to penalise the Construction Supervision Consultant for such dereliction of duties.

2.9.10.3 The contractor closed (September 2018) both the packages and demobilized all the plants, equipment and manpower from the site. Consequently, MPRDC terminated (July 2019) both the packages after the lapse of 10 months from the closure of the works by the contractor. Even after termination of the packages, the consultancy services remained deployed. During the idle period (September 2018 to July 2019), avoidable payment was made to the consultant against the packages (further discussed in Para 2.10.1)

Thus, the Construction Supervision Consultant failed to monitor the progress of the works and also the payment and recovery of advances paid to the contractor. Moreover, it was seen that there was no penal clause in the Consultancy Agreement to penalise the Construction Supervision Consultant for such dereliction of duties. Further, MPRDC also failed to recover ₹ 3.68 crore towards Material Advance, while idle payment of ₹ 83.26 lakh made to the consultant against Package 10 and also, extended undue benefit by way of non-recovery of liquidated damages to the tune of ₹ 37.47 crore for time overrun of 1,254 days and 1,166 days in Package 10 & 11 respectively as detailed in **Appendix 2.6**. The chances of recoveries and encashment of BGs available with MPRDC seems to be remote as the matter is under consideration with the National Company Law Tribunal (NCLT) and also, the contractor went (October 2018) under liquidation.

In reply, the Government stated (June 2023) that Material Advance has been given to the contractor as per contract agreement Clause 14.5. The contractor has executed the work slowly. MPRDC had taken legal opinion before taking any action against Contractor IL&FS. After that termination has been done on 25.07.2019. The employer's claim of MPRDC has been admitted by the claim settlement department of IL&FS.

The reply is not acceptable as the MPRDC failed to impose penalties, recover the dues, and penalise the Construction Supervision Consultant (CSC) in the absence of enabling clause in the Consultancy Agreement. Needless to say, the MPRDC continued to pay idle charges to the Consultant and Material Advance to the contractor even after the abandonment of the work. Moreover, the discrepancy in the material available at the site indicates that either the materials were unaccounted for or MPRDC released the Material Advance in fictitious quantity.

2.9.11 Unauthorised sub-contracting of the works

As per Clause 4.4 of the agreement, the contractor was authorised to sub-let up to a maximum quantum of 50 *per cent* of the total work of the package to the sub-contractor with the prior consent of the CSC/ MPRDC but in the absence of the consent, Clause 15.2 provided for termination of the agreement by MPRDC. The bid capacity of the sub-contractors was to be

[46] ₹ 5.34 crore - ₹ 1.66 crore = ₹ 3.68 crore.

[47] M/s MSV International, Inc. In Association with M/s. Highway Engineering Consultant for PKG no.10 & 11.

assessed before sub-contracting on the basis of the lowest Road Construction Experience[48] and an average turnover of the last three years.

Audit noticed (July-August 2022) instances of unauthorized sub-letting as given below:

2.9.11.1 In Package-11 (ADB V), 49.74 *per cent* of the total work (₹ 161.71 crore) under this package amounting to ₹ 80.44 crore was sub-contracted[49] (December 2017) with due consent of CSC[50]/ MPRDC. However, the records relating to the execution of the works revealed that the work (49.74 *per cent*) was again sub-contracted by the sub-contractor, to five other sub-contractors[51] without getting consent from CSC or MPRDC. Consequently, MPRDC could not assess the eligibility of sub-contractors, which further resulted in substandard work and delay in execution of the work and ultimately the MPRDC terminated (July 2019) the package although the progress was only 17.65 *per cent* of the work.

In reply, the Government stated (June 2023) that M/s Elsamex Maintenance Services Ltd., Gandhinagar was only one sub-contractor and others were the labour contractors of M/s Elsamex, who were not officially approved sub-contractors of the project. The main contractor executed his part with delay due to hindrances. Hence, to complete the project in time, additional work had been subcontracted.

The reply is not acceptable because the contract was not a labour contract. Also, the reply confirms that even though MPRDC was aware of the unauthorised re-subcontracting of the works, it failed to act against the contractor and CSC for poor monitoring.

2.9.11.2 In package- 18 A (ADB V), as against the contractor's request to sublet 48.98 *per cent* (₹ 31.07 crore) of the work, MPRDC consented (December 2018) for sub-letting[52] 35.73 *per cent* of the total contract price (₹ 63.32 crore) amounting to ₹ 22.63 crore on the basis of the Road Construction Experience and average turnover. It was found that the contractor's proposal to again (April 2019) sub-contract 13.20 *per cent* of additional work amounting to ₹ 8.36 crore to the same sub-contractor, based on revised Road Construction Experience and Average Turnover was accepted by the MPRDC. The contractor increased the bid capacity of the sub-contractor by submitting a project which was more than five years old[53] and hence was not qualifiable for assessing bid capacity.

Moreover, the CE, MPRDC also stated (July 2019) that additional work cannot be sub-contracted in the same work until the completion of already sub-contracted work subject to furnishing the completion certificate. Further, up to May 2019, the financial progress of the sub-contracted work was only 50.50 *per cent*. Therefore, the contractor was ineligible (November 2019) for further sub-contracting the work.

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48 Maximum value of single road project executed in last five years.
49 M/s Elsamex Maintenance Services Limited.
50 M/s MSV International, Inc. In Association with M/s. Highway Engineering Consultant.
51 M/s Shahid Infra Group, M/s White House Buildcon-Nagpur, M/s Santosh Kumar Asati-Balaghat, M/s Sanjay Kumar Patel, Barghat and M/s Tiwari Construction and Transport, Seoni.
52 To M/s Baghel Infrastructures Pvt. Ltd., Singrauli.
53 Construction of Plant to Mine for Reliance Sasan Power plant, which was actually constructed (15 June 2014) before the required five years.

Hence, the deficient evaluation of bid capacity by MPRDC and awarding of additional work of ₹ 8.36 crore to an ineligible sub-contractor, contributed to undue delay in project completion by 187 days[54] since the capacity of the sub-contractor was not properly ascertained.

The Government did not furnish any reply in this regard (July 2023).

2.9.12 Non-recovery of mobilisation advance

Clause 14.2 of Particular Condition of Contract (PCC) provided that if the contractor fails to initially execute 10 *per cent* of the accepted contract amount within 30 *per cent* of the time for completion, the Employer shall have the right to recover the total advance amount paid to the contractor along with interest by forfeiting the guarantees and from the amount due for payment in IPC.

Audit noticed (June 2022 to November 2022) in 11 packages[55] of the total 14 test checked packages under ADB V that despite payment of huge mobilisation advances, the contractors in seven cases failed to even commence the work after expiry of 30 *per cent* of scheduled period while in another cases the contractors executed the work ranging between 1.03 *per cent* and 5.56 *per cent* of the total work after expiry of 30 *per cent* of the scheduled period. Thus, as per contractual provisions, the entire amount of mobilisation advances amounting to ₹ 120 crore along with the interest thereon attracted recovery. However, MPRDC failed to initiate action and extended undue advantage to the contractors for almost 180 days by only recovering an amount of ₹ 1.60 crore from four packages.

The Government stated (June 2023) that the works of some projects were delayed due to abnormal rainfall, conversion of SH, increase of structure width and other reasons due to which contractors failed to achieve their scheduled milestone in time. Hence, the time for projects was extended and accordingly, the mobilization advances were recovered.

The reply is incorrect because fulfilling the conditions of the agreement was solely the contractor's responsibility. The fact remains that on the one hand, MPRDC is availing interest-bearing loans from ADB whereas on the other hand, the MPRDC is giving interest-free loans to the contractors, even when the contractors failed to achieve the milestones. Thus, releasing subsequent instalments of advances without ensuring the progress of the work clearly indicated MPRDC's lackadaisical and irresponsible contract management.

2.9.13 Irregular release of Mobilisation Advance against conditional Bank Guarantee

As per Clause 14.2 of the Agreement, MPRDC was required to make Advance Payment to the contractor for mobilisation of resources (Mobilisation Advance), equivalent to 10 *per cent* of the accepted contract amount. Mobilisation Advance was payable subject to furnishing of unconditional Bank Guarantee (BG) and in the event of a Joint Venture firm (JV), Bank Guarantee should be in the name of the JV.

Audit noticed (May-October 2022) that MPRDC released three instalments of Mobilisation Advance of ₹ 16.17 crore to a JV Firm - JV of M/s IL and FS Transportation Networks Ltd. and M/s IL&FS Engineering and Construction Company Ltd contractor in package 11

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54 Package was completed on 07/02/2020 whereas the scheduled completion date of 04/08/2019.

55 Package 1,3,4,5,7,8,10,11,12,14 and 18-B of ADB V.

(ADB V) against Bank Guaranties. For the 3rd instalment, a conditional Bank Guarantee of ₹ 4.04 crore was issued by the Axis Bank, Bandra Branch, Mumbai with a condition that mobilization advance should be deposited only in the concerned branch.

Audit observed that:

- The total Bank Guarantee submitted by the lead partner (M/s IL&FS Transportation Networks Limited) was ₹ 16.17 crore, which includes ₹ 4.04 crore conditional BG issued by Axis bank which was rendered invalid due to erroneous action of the MPRDC in depositing mobilization advance in another branch account and not in the concerned Axis Bank branch (as per the condition of BG).
- Out of the balance amount of ₹ 12.13 crore, the MPRDC had realised ₹ 10.39 crore from the contractor as the contractor had abandoned the work since September 2018 and is on the verge of bankruptcy.

Thus, failure of the MPRDC to monitor the activity of the contractor and ensure timely recovery, therefore resulted into non-recovery of ₹ 5.78 crore. Since the case is under consideration of the National Company Law Appellate Tribunal (NCLT), the possibility of recovery appears to be remote.

In reply the Government stated (June 2023) that guarantee was in the name of lead partner of the contract which was accepted as per power of attorney.

The reply is unacceptable because accepting a conditional BG was irregular. Besides, the MPRDC did not act against the responsible officer and the CSC for inadequate financial control.

2.9.14 Inflated payment to the contractors

As per Clause 12.2 of the General Conditions of the Contract, except as otherwise stated in the contract and notwithstanding local practices, measurement shall be made of the net actual quantity of each item of the permanent works in the Measurement Book (MB)[56], on the basis of which payment should be released to the contractor. Clause F of Section 7 (TOR) also clearly stipulated that recording of detailed measurements in the measurement book is necessary even when software is used by the Construction Supervision Consultant.

Audit noticed (July 2022 to November 2022) that in Interim Payment Certificates (IPCs) of the five packages[57] of the 14 test-checked packages being executed under ADB V, there were negative measurement[58] entered against various items executed in the projects. Previous payments were made based on fraudulent measurements wherein excess measurements were incorrectly recorded. It clearly indicated that despite clear evidence of fraudulent practices, no action was found to be initiated against CSC.

[56] Measurement Book means a book used for recording measurement of items of the various work done for the purpose of payment against such work.

[57] Package 4,5,7,8 and 10A of ADB V.

[58] The quantity of item measure earlier was comparatively more than the quantity measured later.

Thus, due to payment for inflated and unrealistic quantities, undue benefit amounting to ₹ 10.20 crore in the execution of 28 items was extended to the contractors. The details are given in **Appendix 2.7**.

In reply, the Government stated (June 2023) that the negative quantities were due to reconciliation of measurement of completed work. These were calculated correctly after the preparation of "as-built" drawing and accordingly, positive, and negative corrections have been made.

The reply is not acceptable because the practice of making payments on the basis of incorrect measurements is irregular in the first place. In addition, the MPRDC failed to take action against the Construction Supervision Consultants[59] and concerned officers of MPRDC for recording incorrect measurements and releasing payments on the incorrect measurements.

2.9.15 Avoidable payment of bonus

As per clause 23 of the Agreement, if the contractor completes the whole of the works before the stipulated time for completion, the contractor shall be paid a bonus at the rate of 1/40 *per cent* of the contract price per day, subject to the maximum of five *per cent* of the contract price.

Further, the commonly used techniques such as Critical Path Method (CPM) developed for planning, scheduling and control of civil works and Programme Evaluation and Reviewing Technique (PERT) are required to be implemented for project scheduling to overcome the complexities and uncertainties during project execution.

Audit noticed (between July 2022 and November 2022) that in two packages, there were instances of avoidable payment of bonus as given below:

In Package-11 A

The leftover Package 11 was renamed as Package 11A and was awarded to a contractor with commencement date of 22.02.2021 and scheduled completion date of 11.06.2022. The contractor completed the work on 03.01.2022 and was paid (June 2022) Early Completion Bonus of ₹ 6.33 crore for 159 days[60] early completion. Audit observed that out of Early Completion Bonus paid for 159 days, ₹ 5.02 crore bonus for 126 days was not admissible as detailed below:

2.9.15.1 The contractor was required to complete the work within 475 days from the commencement date (22.02.2021). However, very surprisingly, it was noticed that the contractor had actually started the work of excavation of the road on 16.01.2021, which was 37 days before the declared date of commencement. However, MPRDC has not reduced the same and paid the Bonus amount to the contractor by including these 37 days also, which resulted in avoidable excess payment of the Early Completion Bonus of ₹ 1.47 crore[61] to the contractor.

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59 **1**. M/s MSV International, Inc. In Association with M/s. Highway Engineering Consultant for PKG no.7,8,10A **2.** URS Scott Wilson India (P) Ltd. With sub-consultant AICONS Engineering (P) Ltd for PKG no. 4 & 5.

60 Scheduled Date of Completion: 11/06/2022 less Actual Date of Completion: 03.01.2022.

61 Revised Contract Price including Price Adjustment: ₹ 159.21 crore × 37 days × 1/40 *per cent*.

The Government stated (June 2023) that no construction activity has been started before the commencement of package-1lA. As per the IPC-2 & Request for Inspection (RFIs), it is clear that the work has been started after the commencement date.

The reply is misleading as records furnished to Audit clearly indicated that the earthwork excavation commenced on 16.01.2021 *i.e.*, 37 days prior to the commencement date and the contractor continued to procure the construction materials up to 10.03.2022 much after the scheduled completion date 03.01.2022.

2.9.15.2 The scheduled date of completion of the original work (Package 11) was 548 Days. The contract was terminated (July 2019) and the contractor achieved only 17.65 *per cent* of the financial target. Therefore, the time required for the completion of balance work (Package 11A) as worked out[62] by the Audit was 453 days. Contrary to this, MPRDC allowed additional 22 days beyond the time needed. Thus, the contractor became entitled to get a benefit of an Early Completion Bonus of ₹ 0.88 crore[63] for these additional 22 days.

The Government stated (June 2023) that the MPRDC has given additional time of 22 days because contractor has to execute the additional width of structure and also take up the damaged work which was executed by the original contractor.

The reply is not acceptable as the changes in the width of structures were already made in the earlier contract of Package 11.

2.9.15.3 Scrutiny of the invoice details of the contractor also revealed that various procurements of materials were invoiced in large quantities[64] even after 67 days of the declared date of completion (03.1.2022) of work under Package 11A, up to 10 March 2022. This clearly indicates that the work had not been completed as on 03 January 2022. However, MPRDC has not reduced the same and paid the Bonus amounting to ₹ 2.67 crore[65] to the contractor for 67 days, which was irregular.

The Government did not furnish any reply (March 2024).

In Package-15 B

The original Package 15 comprised three roads[66] with an allowed completion period of 365 days. As no bidder participated in the first bid, the MPRDC decided to split Package-15 into two parts, Baheradabar-Piparahi-Jadkud road 19.70 km taken as a separate Package and the remaining two roads were placed under Package 15-A. For the construction of Package 15-B, despite the reduction[67] in the scope of works by 59.33 *per cent* (28.74 km), the stipulated period of completion was increased to 457 days, instead of reducing the completion period. The contractor completed the project within 397 days and claimed Early Completion Bonus

62 On pro-rata basis, 548 days × (100-17.26) *per cent.*

63 Revised Contract Price including Price Adjustment: ₹ 159.21 crore × 22 days × 1/40 *per cent*.

64 Which included 4,361.280 MT of Cement, 105.108 MT Steel and 36 nos. of Hume Pipe Culvert 300 mm.

65 Revised Contract Price including Price Adjustment: ₹ 159.21 crore × 67 days × 1/40 *per cent*.

66 Teonthar-Shankarghar road-14.60 km, Baheradabar-Piparahi-Jadkud road 19.70 km and Naigarhi-Garh 14.14 km road.

67 10 structures i.e. culverts, minor bridges etc., which was proposed for reconstruction and widening by DPR consultant, were not constructed by the contractor.

of ₹ 0.71 crore. Thus, the injudicious allowance of additional three months (92 days) without applying any analytical tools was not only incorrect but also allowed the contractor to entertain the undue benefit in the shape of an Early Completion Bonus.

In reply, the Government stated (June 2023) that initially NIT for Package 15 was called two-three times. Thereafter Package 15 had to be split into two parts, Package 15A and 15B to attract small contractors for bidding. In this package, there were 96 nos. of structures which takes lots of time to construct. Also, one paver could pave an average of 3-4 km PQC length in a month.

The reply is unacceptable, because, as the scope of work has been reduced significantly, the completion period should have been reduced proportionately.

2.9.16 Short deduction of royalty

As per rule 29 (4) of MP Minor minerals Rules 1996, royalty is payable on the quantity of minerals removed and/or consumed in the works. As per SOR of PWD for each compacted quantity of items of Bituminous base and surface course, approximately 1.4 Cu.M. of loose quantity shall be required. According to Civil Engineering Practice, the wet volume of the concrete can be converted to its dry volume by using a factor of 1.54.

As per Clause 20.10.2.2 of the Concession Agreement (ADB VI) the Authority may at its sole discretion levy, collect, retain and appropriate the Fee either by itself or authorize any person (the Authority Contractor) by contract or otherwise to levy, demand, collect, retain and appropriate the same as the Authority may deem fit in its sole discretion and in accordance with the Applicable laws.

Audit noticed (October 2022) that:

2.9.16.1 During the review of the IPC of Package-01 and 08 (ADB V), it was noticed that as per the Certified Material Consumption Statement, the Contractors were liable to pay royalty of ₹ 5.80 crore, against which they had deposited royalty of ₹ 3.10 crore only. This resulted in the short realisation of royalty of ₹ 2.70 crore.

In reply, the Government stated (June 2023) that instructions have been issued to the contractors for submission of NOC from the Mining Department, failing which, due amount would be recovered from their BG available with the MPRDC.

2.9.16.2 During the review of the IPC of Package-03 and 26 (ADB VI), it was noticed that Against royalty on 935093.28[68] Cu.M. of loose aggregates, the MPRDC recovered royalty on 710454.75 Cu.M. at the rate of ₹ 120 per Cu.M. This resulted in short deduction of royalty on 224638.53[69] Cu.M. of aggregates amounting to ₹ 2.69 crore.

The Government did not furnish any reply in this regard (July 2023).

[68] 1.33 times of the loose aggregate.
[69] (935093.28 - 710454.75) Cu.M.

2.10 Quality Assurance

2.10.1 Extra liability on Exchequer due to deployment of Consultancy Services beyond the scheduled period

As per Clause 8.7.1 of Particular Condition of Contract (PCC), if the contractor fails to complete the work within the stipulated time for completion or extended period (without delay damages), the expenses incurred on consultants beyond the stipulated time for completion or extended period (without delay damages) will be payable by the Contractor to the Employer[70] in addition to the delay damages imposed as above.

As per Clause 3 of the Agreements with the Consultants[71] (ADB V) and terms of reference of minutes of contract negotiation[72], the contract periods of the Consultants were 23 months (Package-1) and 26 months[73] (Package-2 and Package-3) from the date of commencement of their work.

Audit noticed (October 2022) that MPRDC extended the Consultancy Contracts by providing additional 34 months to 41 months due to poor progress of work by various contractors responsible for construction. During this extended period, the MPRDC paid ₹ 39.68 crore towards the Consultancy Services, as detailed in **Appendix 2.8**. Further, out of the said amount, ₹ 10.03 crore was paid even after the issuance of TOC of civil packages, as detailed in **Appendix 2.9**.

Thus, MPRDC failed to recover the payment of ₹ 39.68 crore paid to the Consultancy Services during the extended period due to the contractor's default from the civil contractors.

In reply, the Government stated (June 2023) that most of the packages were delayed due to delay in obtaining forest clearance, conversion of MDRs into SH, Contractor was hampered due to GST, the impact of Covid-19 and excess rainfall in some regions. Hence, MPRDC gave extension to consultancy firm as per agreement.

The reply is not acceptable because the contractors were responsible for the delays in completion of the packages as has been pointed out in **Para no. 2.9.9**. The matter of GST cannot be construed as the reason for the delays. By not holding the contractors responsible for the delays the MPRDC provided benefit to both the contractors and the consultants.

2.10.2 Irregular revocation of blacklisted Consultancy Services

Clause 21 of the Concession Agreement provided that the Authority shall appoint a consulting engineering firm substantially in accordance with the selection criteria set forth in Schedule-M, to be the independent consultant under this Agreement.

Further, Clause 5.9 of Concession Agreement, ADB's Anticorruption Policy provided that ADB will impose remedial action on a firm or an individual at any time regarding declaring ineligible, either indefinitely or for stated period of time, to participate in ADB financed

[70] MPRDC will administer the project as "the Employer":
[71] **1.** M/s ICT Pvt. Ltd. New Delhi & Rodic Consultants Pvt. Ltd. New Delhi (JV),
2. M/s MSV International, Inc. In Association with M/s. Highway Engineering Consultant,
3. URS Scott Wilson India (P) Ltd. With sub-consultant AICONS Engineering (P) Ltd
[72] Package-1 on 14/12/2016, Package-2 on 26/11/2016 and Package-3 on 13/12/2016.
[73] Additional 12 months of defect notification period were also provided during which the consultant would require only part time input.

projects, if any time determines that the firm or individual has, directly or indirectly engaged in corrupt, fraudulent, collusive, or obstructive practices or other integrity violations. Further, GoMP categorically stipulated (July 1961) that the revocation can only be on the grounds of clerical or arithmetical errors but not defying the very reasons for which such action was taken against the Contractor. Further, it was instructed (May 2016) that blacklisted Contractors are required to appeal against the action taken against them by the Chief Engineer within 90 days of such action to the Engineer-in-Chief (E-in-C)/ Managing Director/ Head of the Department. All such orders, whether blacklisting or revocation were required to be mandatorily sent to the State Registering Authority (E-in-C, PWD) within three days of such orders, who will in turn upload the same on the official website.

Audit noticed (November 2022) that MPRDC had debarred[74] (April 2018) the Consultant M/s Bloom Companies LLC Pvt. Ltd for three years (up to May 2021) on the grounds of fraudulent and corrupt practices besides poor performance and failure in the timely availability of key experts. However, it was found that the debarment of the Consultant was revoked (March 2020) by MPRDC, subsequent upon his appeal, before the expiry of the debarment period, on the ground of satisfactory performance in the other packages executed by the Consultant which were executed before his debarment.

The reason for revocation by MPRDC was not justified because such serious offences as fraudulency and corruption cannot be justified on the grounds of satisfactory performance. It is pertinent to mention that the revocation happened soon before floating the tenders of civil works of various Packages under ADB VI and subsequently, the tenders of these works were awarded to the Consultant besides, the additional packages were also allotted to the Consultant, without inviting tenders as stated in paragraph 2.8.1 of this Audit Report.

The MPRDC had concealed the above facts by not sending either the blacklisting order or the revocation order to the State Registering Authority (E-in-C, PWD) and thus, it was not made public.

The CE, ADB stated (January 2023) that as per GoMP PWD order (May 2016), the aggrieved Contractor may submit the appeal to the Engineer-in-Chief /Managing Director/ Head of the Department within 90 days. Order for the revocation of debarment of the Consultant w.e.f. 02 March 2020 was accordingly issued with the approval of MD, MPRDC.

The response from CE, ADB is not acceptable. The issue at hand is not the method in which the appeal was submitted, but rather that the grounds for blacklisting were not eligible for reversal. As a result, the decision to revoke the blacklisting was unjustified. In addition to the revocation of the consultant, additional works without inviting tenders were also entrusted upon the consultant inviting serious attention about the probity of the decision. The Consultant's poor performance in the execution of the work is brought out in several paragraphs in the Audit Report.

The Government did not furnish any reply in this regard (July 2023).

[74] By a Committee of E-in-C (MPRDC), Technical Advisor and Chief Engineer (CE), NDB, MPRDC, Bhopal from the supervision of packages no 11 to 24 of NDB.

2.10.3 Payment for work not done due to delay in deployment of Independent Engineers

As per the Clause 21.1 of the Concession Agreement (ADB VI), the Authority shall appoint a consulting Engineering firm called as Independent Engineer (IE) and Schedule M of the clause also provided that no entity which is owned or controlled by the MPRDC shall be eligible for appointment as the Independent Engineer. The appointment shall be made no later than 60 days from the date of the Concession Agreement. Clause 3.1 of Schedule-N of Concession Agreement, the Independent Engineer shall perform the role and function such as review of the Drawings and Documents, review, inspection, and monitoring of construction works, Operation and Maintenance (O &M) etc.

Clause 21.3 of the Concession Agreement forming part of the Notice of Inviting Tender (NIT) also provides, one-half of such remuneration, cost and expenses shall be reimbursed by the concessionaire to the Authority within fifteen days of receiving a statement of expenditure from the Authority and payment in excess thereof shall be borne entirely by the Authority.

Besides, as per Terms of Reference (ToR) vide Section 7 of the agreement (Vol-I) of the Independent Engineer, the Independent Engineer will be appointed for a period of 30 months comprising of three months for the development, 24 months for the construction and three months for the O&M period.

Audit noticed (November 2022) that in all the four test checked packages awarded (December 2019-January 2020) under ADB VI, two[75] quality control Consultancy Services (Independent Engineer) were deployed for the supervision work of all four packages with a delay of 22 months from the commencement of the packages. However, the deployment of IEs was delayed up to 25 months (including three months for deployment) from the commencement of the packages after executing the work valuing ₹ 324.39 crore.

Thus, the MPRDC not only made a payment of ₹ 324.39 crore for unsupervised work but also extended undue benefit to the concessionaires in the shape of payment for work not done amounting to ₹ 2.59 crore (50 *per cent* of payment) due to the failure of the MPRDC in the deployment of the Independent Engineer since the commencement of the project. The details are given in **Appendix 2.10**.

The Government did not furnish any reply in this regard (July 2023).

2.10.4 Non-regulation of the rate of concrete against the cube test not conforming to the specification

Clause 15.2 read with Clause 16 of IS Code 456-2000 provides that the testing of concrete in terms of the requirement of compressive strength of concrete cube as per the relevant standard, should be carried out and the targeted mean strength (after passing 28 days) of concrete is 48.25 N/ mm^2.

[75] M/s L.N. Malviya Infra Projects Pvt. Ltd. for Package no. 26 of ADB VI and M/s Bloom Companies LLP, Pvt. Ltd. for package no. 3, 4 and 19 of ADB VI.

Clause 1718 and 1719 of MoRT&H envisaged, if the concrete is found to be acceptable by the Engineer–in-Charge as a sub-standard work, the Contractor shall be subject to the reduction[76] in the contract unit rate.

Audit noticed (October 2022) in Package Nos. 8 (ADB V) and 4 (ADB VI) that the approved design mix and the tests results appended with the RFI files provided the minimum targeted compressive strength to be achieved for PQC of M 40 grade concrete as 48.25 N/mm^2.

Against this, the results for Package 8 (ADB V), indicated the compressive strength varied between 41.70 N/mm^{2}and 44.39 N/mm^2 (Average 43.04 N/ mm^2) whereas in Package 4 (ADB VI) it was varying between 43.21 N/mm^{2}and 44.82 N/mm^2 (average 44.02) which were not in conformity with the specifications. Thus, the test results indicated that the works were not executed as per the requirement of the approved design mix. If the design mix does not conform to specified acceptable criterion of compressive strength and Flexural Strength, the possibility of not surviving the PQC pavement of roads due to axle load for the entire design period of 30 years cannot be ruled out.

Thus, execution of sub-standard works attracted recovery from the rate of concrete by ₹ 632.70 per Cu.M.[77] and ₹ 452 per Cu.M.[78] aggregating to ₹ 9.37 crore[79] in the execution of PQC, but the MPRDC failed to effect recovery resulting in undue benefit to that extent.

In reply, the Government stated (June 2023) that as per IS Code 456 the minimum required compressive strength is 38 N/mm^2 and as per the test results the strength of M40 is 41.70 N/mm^2 and 44.39 N/mm^2 which are correct.

The reply is factually incorrect because the required minimum compressive strength was 48.25 N/mm^2 as per the approved design mix. Since in the above cases the same had not been achieved, payments should have been made at the reduced rates.

2.11 Conclusion

Audit observed that:

- MPRDC failed to utilise the funds and achieve the intended benefits. Consequently, it also incurred the liability of commitment charges.
- Despite having many eligible MDRs which were in bad condition and required urgent reconstruction, the inclusion of State Highways ultimately defeated the objective of completing the core network of MDRs. Besides, delayed execution also led to avoidable payment of commitment charges.
- Execution of work was deficient as in large number of cases IRC/ MORT&H/ MoEF&CC guidelines were disregarded during the preparation and approval of estimates as well as during execution of projects.

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76 Percentage reduction in rate = design strength - observed strength/ design strength × 100.

77 Percentage reduction in rate = design strength - observed strength/ design strength x100
Percentage reduction in rate = 48.25 – 43.04/ 48.25 × 100 = 10.80 *per cent*.
Recovery = 10.80 *per cent* × ₹ 5700 per Cu.M. × 137280 Cu.M. = ₹ 8,45,09,568.

78 Percentage reduction in rate = 48.25 – 44.02 / 48.25 × 100 = 8.77 *per cent*.
Recovery = 8.77 *per cent* × ₹ 5,153 per Cu.M. × 20236 Cu.M. = ₹ 91,45,015.

79 ₹ 8,45,09,568+ ₹ 91,45,015.

- There were instances of failure in compliance of contract management resulting in undue benefit to the contractors/ concessionaires and extra burden on exchequer.
- Inadequate monitoring of the Construction Supervision Consultants resulted in unwarranted execution of excess or below specifications works.

2.12 Recommendations

The MPRDC should:

- Make sure to follow the terms of the loan agreement carefully. To make the most of the loan amount, it is important to create a solid plan and establish effective internal controls. MPRDC should submit claims promptly and avoid incurring commitment charges.
- Ensure that payments to the contractors/ consultants are limited to the scope of work and actual work done based on the recording of detailed measurements. The departmental officials should be made accountable for any excess or undue payment in the relaxation of contractual provisions.
- Ensure adherence to the terms & conditions of the agreements by the contractors/ consultants. Penal clauses should be incorporated in the agreements with the consultants for non-compliance with the terms & conditions of the agreements. The consultants should be held responsible for dereliction of their duties.
- Improve the supervision mechanism to avoid substandard work and delays in the execution of work. All the works of the below specification should be examined from a vigilance angle in all the projects.

CHAPTER – III
MADHYA PRADESH FINANCIAL CORPORATION

CHAPTER-III
MADHYA PRADESH FINANCIAL CORPORATION

Compliance Audit on "Sanction and recovery of loans and management of Non-Performing Assets by Madhya Pradesh Financial Corporation"

Summary

The Compliance Audit of the Madhya Pradesh Financial Corporation was taken up during April 2022 to July 2022 for scrutinising the records pertaining to the period 2019-20 to 2021-22 at the Head office of the Corporation at Indore and at all the 11 implementing units.

Audit scrutinised the files pertaining to the seven loan-sanctioned cases and 53 loan disbursement cases during the period under audit. Further, management of non-performing assets, in the cases where the units have made default either of principal or interest or both (total 321 loan accounts) during the period 2019-20 to 2021-22 were also reviewed.

The broad categories of audit observation are detailed below:

- *Decrease in sanction and disbursement of loans due to non-availability of funds for onward lending;*
- *Irregularities in disbursement process viz. disbursement without prior consent, disbursement without additional security deposit etc;*
- *Excess disbursement to units despite non-fulfilment of the conditions of the sanctions;*
- *Non-compliance with the terms and conditions of the sanctions;*
- *Deficiencies in recovery process of loans viz. poor implementation of OTS scheme, delay in disposal of asset etc; and*
- *Monitoring and Internal audit/control deficiencies.*

These instances of shortcomings have an overall impact of ₹ 121.97 crore.

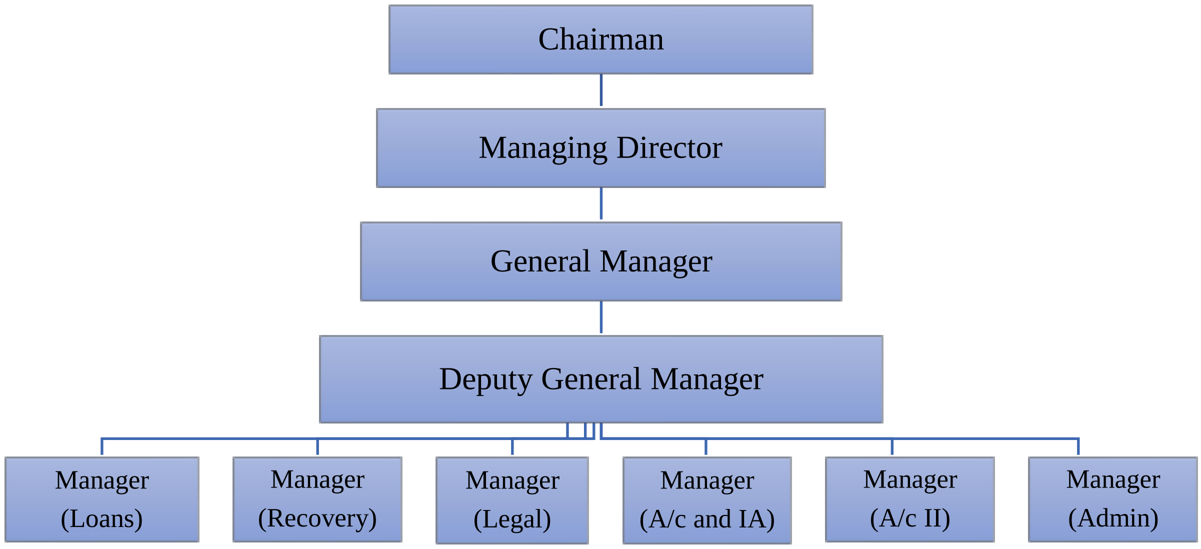
3.1 Introduction

Madhya Pradesh Financial Corporation (Corporation) was established on 30 June 1955 under Section 3 (1) of the State Financial Corporations Act, 1951 (SFC Act) for promoting industrial development in the State. The basic objective of the Corporation is term lending, to support sustained industrial growth in the State with special attention to Micro, Small and Medium Enterprises sector. As on 31st March 2022, the total share capital of the Corporation stood at ₹ 406.10 crore, with the State Government holding shares worth ₹ 383.70 crore (94.48 *per cent)*, Small Industries Development Bank of India (SIDBI) ₹ 22.22 crore (5.47 *per cent*), and others (scheduled banks, Life Insurance Corporation of India, Investment Trust & Co-operative Bank, and individuals) holding ₹ 0.18 crore (0.05 *per cent*).

3.2 Organisational Set-up

The Corporation is functioning under the administrative control of Finance Department of Government of Madhya Pradesh. The operations of the Corporation are managed by a Board of Directors (BoD) headed by the Chairman[1] who is assisted by a Managing Director (MD) and five functional Directors. The flow chart given in **Chart 3.1** shows the hierarchy in the Management (under the Managing Director):

Chart 3.1: Organogram of Management



The Board of Directors have representatives from State Government, SIDBI, Reserve Bank of India (RBI) and Insurance Companies. As on 31 March 2022, there were seven directors in the Corporation, including the Managing Director and the Chairman.

3.3 Audit Objectives

The Audit was conducted with a view to ascertaining whether:

- Sanction and disbursement of financial assistance was in accordance with the policies, procedures, terms of sanction and system devised by the Corporation; and
- There existed an effective mechanism to ensure timely recovery of dues, to resort speedy legal action in case of default and to reduce the NPA.

3.4 Audit Criteria

The audit findings are based on the criteria derived from the following:

- State Financial Corporation Act, 1951 and its Amendment Act, 2000;
- Guidelines and instructions issued by the RBI, SIDBI and the Central/State Government regarding financing, utilisation of loans, recovery of loan and follow up and management of NPA;

[1] Presently Additional Chief Secretary, Finance Department is the Chairman of the Corporation.

- Decisions taken in meetings of Board of Directors and various committees regarding recovery and follow up of dues and one time settlement of loans;
- Terms and conditions mentioned in the sanction letter;
- Annual Target of recovery and settlement of loans and their follow up; and
- Follow up procedure undertaken by the Corporation for recovery of dues.

3.5 Audit Scope and Methodology

The Compliance Audit of the Corporation was taken up during April 2022 to July 2022 for scrutinising the records pertaining to the period 2019-20 to 2021-22 at the Head office of the Corporation at Indore and all the 11[2] implementing units. The entry conference was held on 25 April 2022 wherein the audit objectives were discussed with the Management. Audit scrutinised the files pertaining to the loan sanctioned (seven cases) and disbursement cases (53 cases) during the period under audit. Further, management of non-performing assets[3] (NPA) in the cases where the units have made default of either principal or interest or both (total 322 loan accounts) during the period 2019-20 to 2021-22 has also been reviewed. The Government did not convene the Exit conference despite requests (April 2023 and May 2023), however, its reply, as received in May 2023, has been incorporated wherever found necessary.

Audit Findings

3.6 Deficiencies in sanction and disbursement of loans

The various deficiencies relating to sanction, disbursement, and recovery of loans and in the management of Non-Performing Assets (NPAs) are discussed in the ensuing paragraphs.

3.6.1 Decrease in sanction and disbursement of loans due to non-availability of funds for onward lending

The borrowers intending to avail the loan from the Corporation, apply to the Corporation in the forms prescribed for various types of loans such as small loans, working capital loans, medium term and long-term loans. The applications are accompanied by the project report and required documents. The Corporation prepares appraisal based on the documents submitted by the borrowers. Further, the Corporation follows industry practices in analysing and appraisal of loan applications. The loans are sanctioned as per the delegation of power of sanctioning committees and disbursed after the appraisal of viability of the schemes. The details of sanction and disbursement made by the Corporation during the period from 2019-20 to 2021-22 is given in the **Table 3.1**.

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2 Indore Zone I, Indore Zone II. Indore Urban I and II, Dewas, Ujjain, Ratlam, Bhopal, Jabalpur, Sagar, Satna and Gwalior. The three units i.e., Khandwa, Jhabua and Chhindwara were merged with Indore II, Ratlam and Jabalpur respectively.

3 NPA include sub-standard assets and doubtful assets which is categorized as A, B, and C.

Table 3.1: Details of loans applied, loans sanctioned, and loan disbursed by the Corporation during the last three years ending 2021-22

(₹ in crore)

Sl. No.	Year	No of applications	Amount applied	No of Applications Sanctioned	Loan Sanctioned Amount	Loan Disbursed Amount		Total
						Current period	Previous period	
1.	2019-20	5	2.75	5	2.75	2.00	35.20	37.20[4]
2.	2020-21	2	1.50	2	1.30	0.30	7.62	7.92[5]
3.	2021-22	0	0	0	0	0.70	1.78	2.48[6]
Total						**3.00**	**44.60**	**47.60**

The amount of ₹ 44.60 crore, disbursed during 2019-20 to 2021-22 pertains to loan sanctioned in previous years. This was due to delay in implementation of projects by the units. Further, the main reason for the decrease in sanction/disbursement of the loans was due to non-availability of funds for onward lending from financial institutions like SIDBI, HUDCO *etc*. As a result of this the Corporation was not able to disburse the funds and take up the fresh businesses. Audit also noticed that as of March 2022 an amount of ₹ 678.46 crore was outstanding from 633 accounts, out of which an amount of ₹ 462.08 crore in respect of 508 accounts (68.11 *per cent*) was in default.

On this being pointed out (June 2022), the Government stated (May 2023) that it has no comments to make. The Government did not furnish any replies in this regard (July 2023).

3.6.2 Irregularities in disbursement process

The main aspects of the appraisal process are use of database and ratings, technical feasibility, commercial viability and financial appraisal. Further, the loans are to be sanctioned based on past performance of unit in field and the Corporation's experience of financing similar portfolio. The disbursement of loan is to be made after compliance with terms and conditions of pre disbursement and during disbursement such as raising of share capital and unsecured loans, security, additional security deposit and other special conditions. Audit noticed that the loans were disbursed arbitrarily, and the deficiencies pointed out are discussed in the succeeding paragraphs.

3.6.2.1 Failure to obtain the consent prior to disbursement of loans

The Corporation sanctioned (January 2014, September 2017 and February 2019) two term loans amounting to ₹ 14.50 crore[7] to M/s Devvrat Agrawal (for setting up multiplex), Harda and M/s Balaji Syndicate (manufacturing of Basmati rice), Bhopal. As per the disbursement conditions in the sanction letter, the disbursement shall be restricted to ₹ 4.00 crore (in each case) till the receipt of consent from SIDBI under section 26 (ii) of the State Financial Corporation (Amendment) Act 2000.

Audit noticed that the Corporation disbursed a total of ₹ 12.63 crore, between October 2014 and January 2022, to the two industrial units (₹ 6.60 crore to M/s Devvrat Agrawal and

[4] Corporation disbursed ₹ 37.20 crore in cases already sanctioned during the previous years.
[5] Includes disbursement of pre-sanctioned loans also.
[6] Disbursement of pre-sanctioned loans.
[7] M/s Devvrat Agrawal, Harda ₹ 7.00 crore and M/s Balaji Syndicate, Bhopal ₹ 7.50 crore.

₹ 6.03 crore to M/s Balaji Syndicate) even though consent from SIDBI has not been received by the Corporation. Thus, the Corporation irregularly disbursed excess loan amount of ₹ 4.63 crore[8] in violation of the terms of the sanction.

It may also be mentioned that both the units have defaulted in repayment of the loan amount and the outstanding loan (along with interest) defaulted amount has accumulated to ₹ 13.84 crore[9] as of March 2022.

On this being pointed out (June 2022), the Government stated (May 2023) that SIDBI directors were present at the time of sanction and that the applications were also forwarded to SIDBI for their consent in August 2018 (for M/s Devvrat Agrawal) and April 2019 (for M/s Balaji Syndicate). The matter is being pursued.

The reply is not acceptable as the Corporation disbursed the loan amount in excess of ₹ 4.00 crore each to the units, without explicit consent from the SIDBI.

3.6.2.2 Disbursement of loan without additional security deposit

As per the condition mentioned in the sanction, the units must furnish additional security as per the mode mentioned in the sanction letter. The additional security is to be deposited before disbursement of the loan.

The Corporation sanctioned ₹ 15.20 crore as loan to three units[10] during January 2017 to February 2019. As per the conditions of sanction, the three units had to furnish additional security of ₹ 3.35 crore. Against which, the units furnished additional security of ₹ 2.56 crore only. Despite non-furnishing of additional security, which was an essential condition of the sanction, the Corporation disbursed ₹ 12.18 crore as loan to these three units during February 2018 to January 2022.

Reasons for disbursement of loans despite non-compliance with the terms and condition of sanction were not on record.

On this being pointed out (June 2022), the Government stated (May 2023) that:

- In case of M/s Shree Radhe Krishna Aluminium, the Corporation is insisting for balance additional security.

  The fact remains that the Corporation failed to comply with the conditions of the sanction letter.

- In case of M/s Balaji Syndicate and M/s Mahishmati Plastics Private Limited, based on the actual disbursement, the offered security was sufficient. The reply was not acceptable as the Corporation should obtain the additional security as mentioned in the sanction letter before disbursement.

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8 Total allowed: ₹ 8 crore. Total disbursed: ₹ 12.63. Excess disbursement: ₹ 4.63 crore.

9 M/s Devvrat Agrawal ₹ 6.16 crore and M/s Balaji Syndicate ₹ 7.68 crore = ₹ 13.84 crore.

10 M/s Shree Radhe Krishna, M/s Balaji Syndicate and M/s Mahishmati Plastics Pvt. Ltd.

3.6.2.3 No provision to recoup adjusted additional security

Audit observed that the Corporation sanctioned ₹ 6.50 crore as loan to M/s Zebra Fashion Pvt. Ltd. in January 2018 and disbursed ₹ 6.50 crore during the period December 2018 to April 2020. As per the conditions of sanction, the unit had to furnish additional security of ₹ 0.65 crore, which was accordingly furnished by the unit. The same was adjusted (March 2020) by the Corporation against unpaid dues of the unit. However, there was no provision in the sanction order for recoupment of the adjusted additional security. Consequently, there was no additional leverage with the Corporation against the unit; as such, they had no means to recover the dues, if any, payable by the unit.

On this being pointed out (June 2022), the Government stated (May 2023) that the additional security of ₹ 0.65 crore was offered and pledged by the unit. However, the same was adjusted by the Corporation against recovery of dues.

The reply is silent on the fact that once the additional security was encashed, no additional means to recover future dues, if any, was available with the Corporation.

3.6.2.4 Disbursement of loan for other purposes

As per the condition of the sanction letter, the loan shall be utilised for specific purposes for which the same has been sanctioned.

The Corporation disbursed loan of ₹ 16.80 crore during February 2018 to March 2021 to five units[11]. Audit noticed that out of this amount, ₹ 1.60 crore **(Appendix 3.1)** had been adjusted by the Corporation against the payment of defaulted old dues pertaining to these five units. Thus, the Corporation effectively sanctioned loans to these units to settle its previous loans, which was not only in violation of the conditions of sanctions, but also indicated lack of seriousness on part of Corporation to recover its dues, as it resorted to diversion of loans to suit its accounting policies which was also misstatement of financial statements.

On this being pointed out (June 2022) the Government stated (May 2023) that the amount was utilised for the payment of dues of the Corporation on the request of the concerned units as the projects were delayed. The reply was not acceptable as the Corporation had violated the conditions of the sanction.

3.6.3 Excess disbursement to units despite non-fulfilment of the conditions of the sanctions

3.6.3.1 Non-availing of the requisite power connections

As per the disbursement conditions mentioned in the sanction letter, every unit has to obtain sanction of necessary power connection for the operation of the unit, otherwise the disbursement shall be restricted to 75 *per cent* till the sanction of power connection by the State Power Distribution Companies.

[11] M/s Radhe Krishna Aluminum, M/s Shivam Enterprises, M/s Sparsun Pharmaceutical, M/s Zebra Fashions and M/s Jaltarang Resorts.

The Corporation sanctioned term loan of ₹ 56.05 crore to eight units[12] during January 2014 to September 2020.

Audit observed that these units have not obtained the necessary power connection after the loans were sanctioned and as such, the loan disbursement was to be restricted to ₹ 42.02 crore, being 75 *per cent* of the sanctioned amount. The Corporation, however, in violation of the sanctioning guidelines, disbursed ₹ 51.99 crore, resulting in excess disbursement of loan by ₹ 9.97 crore to these eight units as detailed in **Appendix 3.2**. Reasons for excess disbursement were not on record.

It may also be mentioned that the units had not obtained the requisite power connections as of March 2022. As such, the units even after having received the loans continued to delay in implementation of the projects leading to default in repayment of loans. The defaulted dues of seven[13] units had accumulated to ₹ 30.19 crore as of 31 March 2022.

The unit wise Government reply along with Audit remarks has been incorporated in **Appendix 3.2**.

3.6.3.2 Failure to raise the requisite share capital

As per the condition mentioned in the sanction letter, the units must raise the share capital as mentioned in the sanction. Further, the loan was to be released in proportion to the capital raised and invested.

The Corporation sanctioned term loan of ₹ 19.80 crore to four units[14] during January 2017 to March 2019.

Audit observed that as per the sanction letters, these units had to raise share capital of ₹ 4.39 crore, against which, the units raised only ₹ 1.76 crore. Although the units were eligible to receive loan of ₹ 6.70 crore, being proportionate to the capital raised, the Corporation disbursed ₹ 18.05 crore (July 2016 to March 2021), resulting in excess disbursement of ₹ 11.35 crore as detailed in the **Appendix 3.3**. This was not only in violation of the terms and conditions of the loan, but also contributed towards piling up of default as in the absence of additional share capital, the units did not have adequate working capital to commence operations and start repayments. The defaulted amount of these units had accumulated to ₹ 4.13 crore as of 31 March 2022.

Reasons for excess disbursement were not on record.

The unit wise Government reply along with Audit remarks has been incorporated in **Appendix 3.3**.

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[12] M/s Shree Radhe Krishna, M/s Mahishmati Plastics, M/s Raounak Drugs, M/s Ambica Big Bags, M/s Devvrat Agrawal, M/s Balaji Syndicate, M/s Oyster Infrastructure and M/s Balaji Steroids and Harmons.

[13] One unit M/s Oyster Infrastructure was not in default as on 31 March 2022.

[14] M/s Shree Radhe Krishna, M/s Oyster Infrastructure, M/s HF India Private Limited and M/s Balaji Steroids and Harmons.

3.6.3.3 Disbursement of loan based on proforma invoice

The Corporation sanctioned (September 2017) loan of ₹ 95.00 lakh to M/s Ambica Bigbags Private Limited for setting up the unit for the manufacturing of polypropylene bags. The Corporation disbursed (July 2020) ₹ 45.00 lakh as first instalment.

Audit observed that the second instalment of ₹ 30.00 lakh was released (March 2021) based on proforma invoices of machinery. The Corporation, while releasing the fund, directed (March 2021) the unit to install the required machines within 15 days. After this no such progress was recorded and the Corporation did not take any measures to verify the operational status of the unit. As per the terms of the loan, the repayment was due with effect from April 2021. However, the unit neither installed the required machines nor repaid the due loan amount.

In a meeting held with the Corporation in February 2022, the unit assured to repay an amount of ₹ 25.00 lakh, against which it paid only ₹ 4.00 lakh (March 2022). The total outstanding against the unit stands at ₹ 83.32 lakh as of 31 March 2022.

Thus, failure of the Corporation to verify the records before disbursal resulted in irregular release of ₹ 30.00 lakh.

On this being pointed out (June 2022) the Government stated (May 2023) that the promoter has dropped the plan to implement the project and recovery action is in progress. The reply was not acceptable as the Corporation had disbursed the funds to the unit on the basis of proforma invoices however the actual invoices raised against the purchases were not found in the records made available to audit. The Government should take action against the concerned officials of Corporation for not carrying out due diligence before award of loans.

3.6.4 Non-compliance with the terms and conditions of the sanctions

3.6.4.1 Non-implementation of the projects by the units resulting in accumulation of defaulted dues

As per the other conditions of the sanction letter, a unit has to avail the loan within the period as stipulated in the sanction letter and the project has to be implemented/completed as per the time schedule mentioned in the project appraisal accordingly.

The Corporation sanctioned a total term loan of ₹ 24.20 crore to seven units[15] during the period March 2016 to September 2020 and also disbursed ₹ 20.15 crore during the period January 2016 to February 2022. Audit noticed that these projects could not be fully implemented/ completed, and the commercial production/services could not be started due to various reasons *i.e.*, delay in completion of factory building, delay in installation of plant and machinery, non-availability of power connections, failure in completion of the project by the promoters, and non-availability/shortage of working capital, *etc*. The delay in implementation ranged between 12 months to 59 months (as of March 2022). Audit also noticed that the Corporation has disbursed loans to units without sanction of working capital as the same is to be sanctioned before the disbursement.

[15] M/s Shree Radhe Krishna, M/s Jal Tarang Resorts, M/s Mahishmati Plastics, M/s Raounak Drugs, M/s Angelique Castings, M/s Hotel Vijay Palace and M/s Ambica Big Bags.

Thus, the units availed loans amounting to ₹ 20.15 crore from Corporation without starting the projects for which the loans were availed and as such, were not in a position to start repayment of the loans. The details along with Government replies are shown in **Appendix 3.4**. Consequently, the units defaulted in repayment of loans, with outstanding dues of ₹ 25.12 crore as of 31 March 2022**.**

The unit wise Government reply has been incorporated in **Appendix 3.4**. Thus, due to delay in implementation of the projects, the outstanding dues were accumulated, which indicates total lack of control in the process of award of loans.

3.6.4.2 Non-compliance of provision regarding raising/retention of un-secured loans

As per condition mentioned in the sanction letter, the units have to raise and invest the interest free un-secured loan. The loan was to be released proportionately and the same was to be retained till the currency of the loan.

The Corporation sanctioned loan of ₹ 7.00 crore to two units[16] in November 2017 and January 2018 and disbursed ₹ 6.90 crore during December 2018 to September 2020.

Audit observed that as per the sanction letters, the units had to raise the unsecured loan of ₹ 5.50 crore, against which the units have raised only ₹ 4.74 crore. Although the units were eligible to receive loan of ₹ 5.93 crore, being proportionate to unsecured loan raised, the Corporation disbursed ₹ 6.90 crore (December 2018 to September 2020) resulting in excess disbursement of ₹ 0.97 crore as detailed in **Appendix 3.5**. This was not only in violation of terms and conditions of the loan but also contributed towards piling up of default as in the absence of additional unsecured loan, the unit did not have working capital to continue operations and start repayments. The defaulted amount of these two units has accumulated to ₹ 2.57 crore as of 31 March 2022.

On this being pointed out (June 2022) Government stated (May 2023) that in case of M/s Zebra Fashions Private Limited, there was no condition stipulated for raising unsecured loans. The reply was not acceptable as there was a condition (point no 23) in the sanction letter for raising unsecured loan by the unit.

In case of M/s Hotel Vijay Palace, the reply was silent on the issues raised by Audit.

3.7 Deficiencies in recovery process of loans

The Loan Policy for the Corporation was approved by the Board of Directors in June 2019. As per Clause 8.2.14 of the Loan Policy, a Recovery Policy should be put in place separately to maximize recovery of dues under the credit portfolio of the Corporation, especially out of Non-Performing Assets (NPAs), by proper application of appropriate recovery tools and to prevent fresh slippage of accounts to the NPA category. Further, the Board[17] has also advised the Corporation to lay emphasis on recovery from NPA accounts by taking all suitable measures to increase the recovery amount.

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16 M/s Hotel Vijay Palace and M/s Zebra Fashion.

17 As per minutes of the Board meetings.

On the disbursement of the loan, a schedule of recovery is intimated to the borrower to ensure timely recovery of the loan. In case of default in the repayment of loans, the basic business objective of the Corporation initiates three kinds of actions as given below:

- One Time Settlement (OTS) whereby the borrower repays a significant portion of the loans and rest of the loan remains unpaid is borne by the Corporation as loss;
- Takeover and sale of the unit and recovery of the loan out of the sale proceeds;
- Filing a civil suit in a court of law or issue of Revenue Recovery Certificate (RRC) through District Collector for initiating recovery action against the assets of the borrower.

The details of recovery effected by the Corporation during the last three years ending 2021-22 is given in **Table 3.2** below:

Table 3.2: Details of recovery effected by the Corporation during the last three years ending 2021-22

(₹ in crore)

Particulars	2019-20	2020-21	2021-22
Amount due for recovery at the beginning of the year	222.97	331.82	405.62
Amount due during the year	341.35	254.54	227.47
Total amount due for recovery	564.32	586.36	633.09
Target fixed for the recovery	-	-	180.00
Amount recovered during the year	232.50	180.74	156.30
Percentage of recovered amount to total amount due for recovery	41.00	31.00	25.00
Amount to be recovered at the end of the year	331.82	405.62	476.79

In this connection audit observed that:

- The Corporation does not have a Recovery Policy in line with the Loan Policy guidelines. As such, the Corporation has not prescribed guidelines to monitor the performance of loans to avoid slippage of loans from standard to NPA category.
- The Corporation did not fix any targets for the recovery in the year 2019-20 and 2020-21. During the year 2019-20 the recovered amount was ₹ 232.50 crore. However, in the subsequent years, the Corporation could recover only ₹ 180.74 crore during 2020-21 and ₹ 156.30 crore during the year 2021-22, indicating a decrease in performance.
- Although the Corporation fixed recovery target of ₹ 180 crore for 2021-22, it could recover only ₹ 156.30 crore, which was 87 *per cent* of the target. The decrease in recovery has resulted in accumulation of defaulted dues.

The reasons for short/ non-recovery of dues were failure of OTS cases and non-disposal of takeover assets as discussed in succeeding paragraphs.

On this being pointed out (June 2022), the Government stated (May 2023) that due to Covid, the NPA increased, and the portfolio of the Corporation is also reducing over the years. The reply was not acceptable as the Corporation does not have a Recovery policy in line with the Loan Policy guidelines to monitor the recovery. Further, the percentage of recovery has also been showing a decreasing trend.

3.7.1 Poor implementation of OTS Scheme

With the objective of realising its overdue loans, the Corporation adopted (April 2004) a One Time Settlement (OTS) scheme whereby it was agreed upon by the borrowers to pay up a portion of the outstanding amount at the time of settlement. The OTS Scheme was adopted by the Corporation as there were several difficulties in materializing the actual recovery through RRC and in the takeover and sale of units.

As per the scheme, the loans categorised as sub-standard and doubtful were to be considered for OTS Scheme. Under the OTS Scheme, the interest amount was to be waived off and the principal amount was to be treated as settled amount, of which, 25 *per cent* of the settled amount payment had to be made upfront and the balance amount was to be paid in regular instalments within a year.

The year wise details of cases settled, amount outstanding, settled amount and amount recovered so far in OTS during the period from 2019-20 to 2021-22 is detailed in the **Table 3.3** below:

Table 3.3: Details of cases settled, amount outstanding, settled amount and amount recovered under OTS during 2019-2022

(₹ in crore)

Year	No of cases under OTS	Actual Amount to be recovered	Amount to be recovered as per OTS	Amount recovered till March 2022	Balance amount to be recovered	Recovery percentage
2019-20	33	76.93	58.68	28.24	30.44	48
2020-21	52	82.87	65.85	39.82	26.03	60
2021-22	31	53.74	44.09	12.92	31.17	29
Total	**116**	**213.54**	**168.62**	**80.98**	**87.64**	

It can be seen from the Table that as against the settled amount of ₹ 168.62 crore, the recovered amount was only ₹ 80.98 crore. The percentage of recovery, which was 48 *per cent* in 2019-20, increased to 60 *per cent* in 2020-21 and thereafter decreased to 29 *per cent* in 2021-22. Further, out of the 116 units under OTS Scheme, 54 units have completely settled their loan accounts (amounting to ₹ 28.02 crore) while ₹ 87.64 crore remains outstanding from the remaining 62 units. For non-fulfilment of the terms of the OTS Scheme, the Corporation cancelled the OTS Scheme in respect of six units. However, in respect of the defaulters, action taken to pursue recovery from the defaulters was not on record.

Thus, it can be concluded that although the OTS Scheme was meant to incentivise the units to clear their pending dues and it even helped in recovery of 48 *per cent* of the amount to be recovered under OTS Scheme, the Department failed to ensure effective implementation of the Scheme through pursuance with the beneficiaries for settlement of their agreed dues.

Further action taken as per the provisions of the State Financial Corporation Act for the recovery of defaulted dues has not been intimated (February 2023).

On this being pointed out (June 2022), the Government stated (May 2023) that due to cancellation of OTS cases, the OTS amount could not be recovered. The reply was not acceptable as the Corporation failed to ensure the effective implementation for the recovery of dues under OTS scheme.

3.7.2 Non-disposal/ delay in disposal of assets

Section 29 of the State Financial Corporation Act, 1951 empowers the Corporation to take over the Management or possession or both of the industrial concerns and realise the property pledged, mortgaged, hypothecated or assigned to the Corporation.

In this regard, audit noticed that 17 units had defaulted in the payment of principal during the period January 2018 to January 2021 and defaulted the payment of interest during March 2019 to March 2022. The Corporation took possession of these 17 units during March 2019 to April 2022. However, the Corporation did not dispose the assets of any of these units in spite of taking the possession. An amount of ₹ 34.75 crore was outstanding from these 17 units as on 31 March 2022.

Out of these 17 units, the Corporation only retained possession of one unit[18] and the possession of the remaining 16 units (with outstanding loan amount of ₹ 33.83 crore) had been given back (as they have promised to repay the defaulted amount and submitted proposal for OTS). One unit[19] has re-paid (October 2022) its dues and an amount of ₹ 32.73 crore as detailed in **Appendix 3.6** was outstanding from 16 units (including the one retained unit) as on 31 March 2022. Thus, there was a huge accumulation of dues against the defaulters due to non-disposal of the hypothecated property.

The unit wise Government reply has been incorporated in **Appendix 3.6**.

As the recovery is still pending, the recovery mechanism of the Corporation seems extremely deficient, and the methods adopted by the Corporation were lax and offered undue benefit to the borrowers. Despite taking possession of the assets, the Corporation failed to dispose the assets to realise its dues, thereby indicating failure of the whole process. Further, in one case where the Corporation has retained possession, it failed to timely dispose the assets, resulting in idling and depreciation in the value of the assets.

3.7.3 Non-recovery from closed/non-operational units and units working in low capacity

As per the repayment schedule mentioned in the loan sanction letter, the unit must pay its dues regularly. For the regular payment of interest and principal, continuity of business is necessary.

Audit observed that seven units[20] were either non-operational or were working in low capacity from August 2016 to November 2021. The total outstanding dues against these industries were ₹ 31.06 crore (as of March 2022). However, despite these units failing to operate as per the terms of the sanction, the Corporation failed to monitor their activities and/or take steps to recover pending dues from these units.

Failure of the Corporation to take timely action against these defaulting units thereby resulted in non-recovery of dues amounting to ₹ 31.06 crore. Since these units are either non-operational

[18] M/s Guruji Packers.
[19] M/s Jagjeet Auto Industries (excluded from the Annexure 3.6 since the amount was repaid).
[20] M/s Shree Krishna Polymers, M/s RR Bio Energy, M/s Sahara Cotton Cloth Weaver, M/s Pios Industries, M/s Seema Plastics, M/s Dev Cow and milk Farms Private limited and M/s Balaji Steroids and Hormones Private Limited.

or scarcely functioning, the chance of recovery of the dues appears to be remote. The details including Government reply are in **Appendix 3.7**.

The fact remains that the Corporation failed to initiate action for the recovery of huge outstanding dues.

3.7.4 Management of Non-performing Assets

The financial institutions need to keep its NPA as low as possible by regularly making recovery of its loan and should keep its portfolio as per the prudential norms set by the RBI, SIDBI. As per the RBI classification, the loans are categorised as give in **Table 3.4** below:

Table 3.4: The classification of loans

Classification of loans	
Standard Assets	Interest and/ or instalment of principal remain overdue for a period of less than 90 days
Sub-standard Assets	Loan remained NPA for a period less than or equal to 12 months and above 90 days
Doubtful Assets A	The loan and interest remained doubtful up to one year
Doubtful Assets B	The loan and interest remained doubtful from one year to three years
Doubtful Assets C	The loan and interest remained doubtful for more than three years

The status of loans which can be classified as NPAs in the various categories for the three years ending as of March 2022 is given in the **Table 3.5** below:

Table 3.5: Details of category-wise loans outstanding for the three years (31 March 2022)

(₹ in crore)

Category of loan A/c	As on March 2020		As on March 2021		As on March 2022	
	No. of accounts	Outstanding including interest	No. of accounts	Outstanding including interest	No. of accounts	Outstanding including interest
Sub-standard	167	222.36	92	62.39	42	50.49
Doubtful						
A	95	120.94	155	171.90	53	53.06
B	68	52.16	185	293.19	219	310.88
C	101	60.63	134	81.12	189	189.05
Total (A+B+C)	264	233.73	474	546.21	461	552.99
Total NPA (Sub-Standard +Doubtful)	**431**	**456.09**	**566**	**608.60**	**503**	**603.48**
Amount recovered during the year		232.50		180.74		156.30

Audit observed that:

- The percentage of NPA to total outstanding was 56 *per cent* in the year 2019-20 which was increased to 89 *per cent* in 2021-22. The main reasons for the increase in NPA was due to non-payment of timely instalments by the units, non-recovery in OTS cases, delay in disposal of take-over assets, failure in regular pursuance for recovery, delay in taking action for the recovery and poor monitoring of critical accounts, delay in implementation/ non-implementation of project by the units *etc*.
- Further, the 'doubtful' loans, which were ₹ 233.73 crore in 2019-20 increased by 134 *per cent* to ₹ 546.21 crore in 2020-21 and then further increased to ₹ 552.99 crore as of March 2022, thereby showing a continuously increasing trend throughout. This

indicated poor monitoring of 'sub-standard' accounts, resulting in their decline into 'doubtful' categories.

- A total of 256 accounts lapsed from standard category to sub-standard/doubtful category in 2020-21 over 2019-20, and thereafter another 66 standard accounts lapsed to sub-standard/doubtful category in 2021-22 over 2020-21. The continuous decline in quality of accounts was a matter of concern, which the Corporation failed to monitor and take corrective actions on the lines of prudent loan recovery system as prevalent in financial institutions.

The Board of Directors in its meeting (March 2019) reviewed the recovery performance and observed that there was a need for further improvement in recovery for which strenuous efforts were required to be made. The Corporation was accordingly instructed to contain the level of the NPA by applying suitable measures. However, even after the Board's directions, the NPA had increased from 56 *per cent* in 2019 to 89 *per cent* of the total outstanding as on 31 March 2022.

On this being pointed out (June 2022) the Corporation stated (July 2022) that all efforts were being made for recovery of dues from sub-standard as well as doubtful portfolio and also taking suitable action for recovery of dues from NPAs which includes legal action and sale of units. Further, it was also stated that the Corporation has a mechanism to monitor the defaults regularly.

The reply is factually incorrect as the Corporation has not taken recourse to suitable recovery measures as pointed out in previous paragraphs. Further, the impact of poor monitoring mechanism has resulted in an increase in NPA assets. Related issues have been discussed in the preceding as well as subsequent paragraphs.

The Government reply was silent on the issue (May 2023).

3.8 Monitoring and Internal audit/ control deficiencies

The Loan Policy of the Corporation specifies credit monitoring objectives which *inter alia* include monitoring of asset quality, ensuring proper utilisation of funds, compliance with the terms of the sanction, detection of early warning signals and preventive NPA management. The lapses in the monitoring system of the Corporation resulted in huge accumulation of NPAs. Deterioration in quality of loan accounts and non-recovery of dues have been discussed in **Table 3.6** below:

Table 3.6: Deficiencies in monitoring methodology

Monitoring Methodology	Audit Observation
Monitoring of compliance of key conditions As per Para 8.2.1 of the Loan Policy, disbursements may be commenced pending compliance with terms and conditions of the loan provided that the borrower complies with the conditions within a stipulated time. The Corporation should monitor these cases closely to ensure compliance.	The Corporation does not have a system in place to monitor the units which have been disbursed loans pending compliance. This has resulted in units availing loans without compliance as has been pointed out in paragraphs 3.6.2.1, 3.6.2.2, 3.6.3.2 and 3.6.4.2.
IT enabled internal monitoring. As per the Para 8.2.4 read with Para 8.2.6 of the Loan Policy, the monitoring of loans was to be made more efficient and effective by use of IT enabled services and continuous	The Corporation has not developed any IT enabled system for the monitoring of its loan accounts and is mainly dependent on the physical files of the borrowers.

Monitoring Methodology	Audit Observation
improvements/developments. The Corporation was supposed to develop an integrated IT platform program through which alerts for over-dues, stressed accounts, insurance policies, security status, *etc*. can be generated. Further, the monitoring was to be done with focus on criticality of the account regarding the broad aspects *i.e.*, status of the implementation of the project, time/cost overrun, periodic visits, interaction with other lenders to the unit, submission of annual accounts/periodic reports, *etc*.	Consequently, the Corporation has no system in place to watch the performance of standard assets and monitor critical accounts which can transform into sub-standard or doubtful accounts thus ending up as NPA. Similarly, the Corporation has no system of identifying closed, below par performing units.
Non-submission of credit information on monthly basis As per the section 17 of the Credit Information Companies (Regulation) Act, 2005 read with the provisions of Regulation 7 of Credit Information Companies Regulation, 2006, the Corporation must submit credit information in respect of the borrowers on the monthly basis.	However, audit observed that the Corporation is submitting credit information on quarterly basis. Thus, the Corporation is not following the compliances of the Credit Information Companies (Regulation) Act, 2005 Consequently, real-time credit worthiness of the units could not be identified, thus making other financial institutions vulnerable to credit risks through lending to these units.
Internal Audit As per Para 8.2.15 of the Loan Policy of the Corporation states that the Corporation has to carry out Internal Audit of its field offices based on guidelines issued time to time. The work of Internal audit is looked after by a Manager, Internal Audit at Head Office of the Corporation who holds the post as an additional charge and reports to the General Manager.	Despite having an Internal Audit Wing, the Internal audit of Head Office and its units had not been carried out during the period 2019-20 to 2021-22 for which no reasons were recorded. The Corporation also did not make any efforts to ensure optimum utilisation of the internal audit branch. Consequently, Audit is unable to comment on the performance of the Internal Audit Wing.

As per Article 44(1) of the General Regulation of MPFC (1955), at least one Board of Directors' (BoD) meeting should be held every quarter in a year. Audit further observed that against the requirement of holding 12 BoD meetings during the three-year period April 2019 to March 2022, seven meetings were held.

As such, there is a significant risk that the Board could not effectively monitor the performance of the Corporation by reviewing the reports being submitted to the Board since meetings were not held periodically/regularly. Consequently, poor performance of the Corporation with respect to takeover of units, sale of stressed assets, performance of OTS Schemes *etc*., was not being monitored effectively at the higher Management level.

On this being pointed out (June 2022), the Corporation stated (July 2022) that all efforts were being made for recovery of dues from standard as well as doubtful portfolio and also taking suitable action for recovery of dues of NPA which include legal action and sale of units. Further, it was also stated that the Corporation has a mechanism to monitor the defaulters regularly.

The reply is not acceptable as poor monitoring by the Board is evident through increase in NPA cases, and/or decrease in recoveries.

The Government reply was silent on the issue (May 2023).

3.9 Conclusion

As brought in the foregoing paragraphs, Audit observed various deficiencies in the sanction and disbursement of loans as may be seen below:

- There were cases of excess disbursement to units despite non-compliance of provisions relating to availing the requisite power connection, failure to raise the requisite share capital, raising/retention of un-secured loans, furnishing of additional security deposit *etc*.
- There was an increasing trend in NPAs year on year due to non-payment of timely instalments by the units, non-recovery in OTS cases, delay in disposal of take over assets *etc*.
- Failure in regular pursuance for recovery, delay in taking action for the recovery and poor monitoring of critical accounts and delay in implementation/non-implementation of project by the units *etc*., were also observed.
- The Corporation did not develop an integrated IT platform by which alerts for over-dues, stressed accounts *etc*., could be obtained. The internal control system was also ineffective. All these led to increased accumulation of dues year on year.

3.10 Recommendations

- The Corporation may ensure effective compliance of terms and conditions of the sanction of loans to ensure the timely recovery of loans by introducing a Recovery policy.
- The Corporation may develop an integrated IT platform to get timely alerts for over-dues, stressed accounts.
- The Corporation may strive for the reduction in the NPA cases by strictly and timely applying the recovery measures as envisaged in the provisions of State Financial Corporation Act, 1951.
- The Corporation may ensure to conduct regular internal audit of branches and Head office for the monitoring of loans as per the provisions mentioned in the Loan policy.

CHAPTER – IV
MADHYA PRADESH POWER GENERATING COMPANY LIMITED

CHAPTER-IV
MADHYA PRADESH POWER GENERATING COMPANY LIMITED

Compliance Audit on "Operation & Maintenance of Powerhouses of Madhya Pradesh Power Generating Company Limited"

Summary

Audit covered the operation and maintenance performance of the three Powerhouses namely Powerhouse PH-III of Sanjay Gandhi Thermal Power Station (SGTPS) (1X500 MW), Birsinghpur, PH-IV of Satpura Thermal Power Station (STPS) (2X250 MW), Sarni, and PH-IV of Amarkantak Thermal Power Station (ATPS) (1X210 MW), Chachai, for the period 2019-20 to 2021-22.

During audit of the three Powerhouses and the Corporate office of the Company at Jabalpur, the following observations were noticed:

- *Excessive planned and forced outages due to delay in rectification of defects /unwarranted tripping, partial loading due to coal shortage problems/poor quality of coal, and excess heat rate etc. led to non-achievement of generation target.*
- *Due to ineffective monitoring, non-upgradation of the system and non-implementation of best practices, the generating station continued to face operational problems and the targets set by MPERC with regard to various operational parameters were not achieved.*
- *Non-preparation of coal plan, non-maintenance of adequate coal stock, delay in finalisation of tender for procurement of coal, not uplifting coal at economical rates, and delay in swapping of coal linkage resulted in higher generation cost.*
- *Reduction in Gross Calorific Value (GCV) between loading end at mines and unloading end at TPS.*
- *Improper power scheduling and execution of water supply agreement for excess quantity of water resulted in avoidable payment; and*
- *Excess stack emission, and non-compliance of ash utilisation norms of MOEF&CC.*

These instances of shortcomings have an overall impact of ₹ 1,041.43 crore.

4.1 Introduction

The Madhya Pradesh Power Generating Company Limited, Jabalpur (Company) was incorporated on 22 November 2001 as a wholly owned Government Company as part of the implementation of the power sector reform initiated by the Government of Madhya Pradesh (GoMP). The Company took over the power generation activities of the erstwhile Madhya Pradesh State Electricity Board and started functioning independently from 01 June 2005. As on 31 March 2022, the Authorized Capital of the Company was ₹ 10,000 crore and the paid-up capital was ₹ 6,520.53 crore.

The Company was operating four Thermal Power Stations (TPSs) with a total installed capacity of 5,400 Mega Watt[1] (MW).

4.2 Organisational Structure of the Company

The Company is under the overall administrative control of the Department of Energy, GoMP, headed by the Additional Chief Secretary (ACS)/ Principal Secretary. The Company's day-to-day management is vested with the Board of Directors (BoD). The Managing Director (MD) is the Chief Executive Officer of the Company, who is assisted by the Director (Technical), Director (Commercial), Chief Financial Officer, Executive Directors (EDs), Chief Engineers (CEs) and Company Secretary. Each TPS, is headed by a CE/ED, who is assisted by Additional CEs (ACEs) and Superintending Engineers (SEs) who look after regular operation and maintenance at respective TPS.

4.3 Audit objective

The Assurance Based Compliance Audit was conducted to assess whether the Thermal Power Stations were operated and maintained as per the norms determined by Madhya Pradesh Electricity Regulatory Commission (MPERC), GoMP and Company to obtain the envisaged output.

4.4 Audit Criteria

The criteria adopted for audit are derived from the following sources:

- Policy and Guidelines issued by the Government of India (GoI) and the Government of Madhya Pradesh (GoMP);
- Policy and Guidelines issued by the Central Electricity Authority (CEA)/ Central Electricity Regulatory Commission (CERC)/ Madhya Pradesh Electricity Regulatory Commission (MPERC);
- Environmental Norms/Guidelines issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC), GoI/ GoMP, Central/ Madhya Pradesh Pollution Control Board (MPPCB) and other Statutory Authorities;
- Feasibility/ Detailed Project Report of the Powerhouses;
- Agenda /Minutes of the meetings of the Board of Directors/ Business Committee, MIS reports of the Company submitted to MPERC/ CEA/ MPPCB; and
- Terms and conditions stipulated in the Tender Documents/ Contract Agreements/ Fuel Supply Agreements/ Power Purchase Agreements, etc.

4.5 Scope and Methodology of Audit

This Compliance Audit covered the operation and maintenance performance of the three Power Houses namely Sanjay Gandhi Thermal Power Station (SGTPS) Birsinghpur (PH-III, 1X500 MW), Satpura Thermal Power Station (STPS) Sarni (PH -IV, 2X250 MW), and Amarkantak Thermal Power Station (ATPS) Chachai, (PH -IV, 1X210 MW) for the period

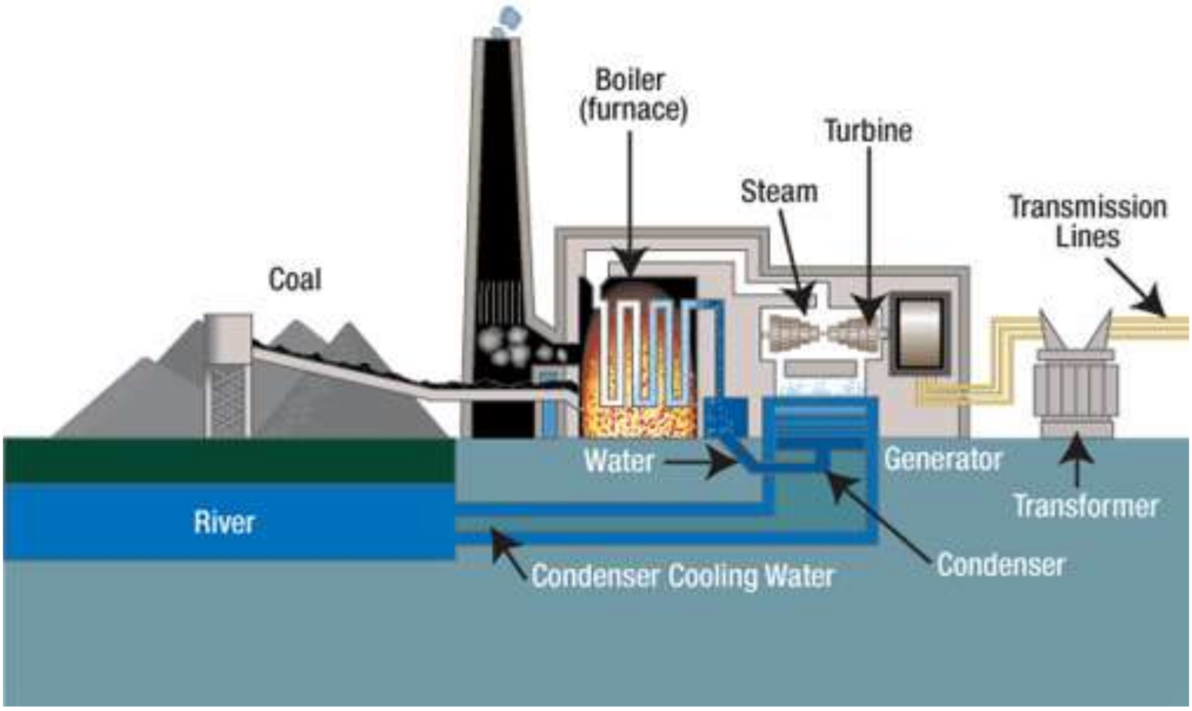
[1] ATPS Chachai 210 MW, SGTPS Birsinghpur 1,340 MW, STPS Sarni 1330 MW and SSTPS Khandwa 2,520 MW.

2019-20 to 2021-22. The Powerhouses selected for audit were within their normal operational life of 25 years.

An Entry conference with the Management was held on 28 March 2022 where in the audit objectives and scope of audit were discussed. During the course of audit, the operational performance of Power Houses (PHs) with regard to the parameters set by MPERC was examined. The operation & maintenance plans prepared and implemented and the environmental compliances were studied. Replies to the audit findings from the Government were received in May 2023 and the same has been considered while finalizing the Report. The Exit meeting was held on 30 May 2023.

4.6 Operational performance and maintenance activities

The schematic diagram and the process of energy generation in a thermal power station is given below:



Madhya Pradesh Electricity Regulatory Commission notified MPERC (Terms & Conditions for determination of Generation Tariff) Regulations, 2020 on 20 February 2020. The Regulation contained norms of operations for PHs for the period 2019-20 to 2023-24. The actual performance of the three powerhouses against its five normative operational parameters prescribed by the Commission for the period 2019-20 to 2021-22 is detailed in **Appendix 4.1**.

Audit Findings

The three Power Houses were given a generation target of 27,451 Million Units (MU)[2] by MPERC during the years 2019-20 to 2021-22 but could generate only 24,674 MU and there

[2] Megawatt (MW) is a unit of power and million unit (MU) is a unit of energy. Generally, capacity of power plant and demand in a specific hour is expressed in MW. 1 Megawatt is equivalent to 1000 units of energy. If the capacity of a plant is 1 MW it means it would generate 1000 units in an hour.

was a shortfall of 2,777 MU (10.12 *per cent*) as detailed in **Appendix 4.2**. This was mainly due to shortcomings on the part of Power Houses to frame and implement action plans to optimise the utilisation of resources for achieving operational parameters, maintain the equipment to run at rated capacity and other reasons as discussed in the succeeding paragraphs.

4.7 Sanjay Gandhi Thermal Power Station, Birsinghpur Powerhouse III (500 MW)

4.7.1 SGTPS Powerhouse III consists of one unit of 500 MW capacity and is in operation since 2008. The PH generated 9,847.399 MU of energy against the target of 11,326 MU during the years 2019-20 to 2021-22. The PH could achieve the target in 2020-21 only and there was a shortage in generation against the target in 2019-20 (11.46 *per cent*) and 2021-22 (29.07 *per cent*) as indicated in **Table 4.1**.

Table 4.1: Target and actual generation of electricity during 2019-20 to 2021-22

SI. No.	Year	MPERC Target (MU)	Actual Generation (MU)	Excess (+) / Shortage (-)	Shortfall /Excess in %
1.	2019-20	3,788	3,354	(-) 434	(-) 11.46
2.	2020-21	3,816	3,853	(+) 37	(+) 0.98
3.	2021-22	3,722	2,640	(-) 1,082	(-) 29.07
Total		**11,326**	**9,847**	**(-)1,479**[3]	**(-) 13.05**

***(Source**: Periodic information submitted by the Company to MPERC.)*

The reasons for the shortfall were excessive planned and forced outages due to delays in the rectification of defects /unwanted tripping, partial loading due to coal shortage problems/ poor quality of coal, and excess heat rate etc., which were controllable.

The Government in its reply (May 2023) stated that Management had fixed internal targets for generation which were achieved except in the year 2019-20. Audit noticed that these targets were on a lower side compared to MPERC targets. Government further stated that other reasons for generation loss were partial loading due to problem of IP stop valve[4] and recurrence of high turbine /shaft vibration in the year 2021-22.

The performance of this PH with regard to operational parameters was below the targets fixed by MPERC. This has been analysed in paragraph numbers 4.7.2 to 4.7.10.

Further, Management in the Exit meeting (May 2023) stated that MPERC does not provide generation targets. The reply is factually incorrect as the Company itself submits the periodic returns of generation targets and actual generation thereagainst to MPERC.

4.7.2 Non-achievement of target relating to Plant Availability Factor (PAF)

Plant Availability Factor (PAF) represents the availability of a generating unit to produce electricity in a given period. The MPERC fixed PAF target of 85 *per cent* for all the Powerhouses under audit for the years 2019-20 to 2021-22.

The generation cost incurred by a PH includes both variable cost and fixed cost. MPERC, after analysis of the elements of the fixed cost submitted by the management, approves the fixed

[3] Having value of ₹ 274.21 crore (1,479 MU x energy charges ₹ 1.854 per unit approved by the MPERC through Multi Year Tariff for the period 2019-20 to 2023-24).

[4] Intermediate Pressure stop valve.

cost that could be recovered in a year through generation tariff. If the actual PAF achieved by a PH was lesser than the targeted PAF then the actual recovery of the fixed cost would be reduced proportionately for that year.

Audit noticed that Sanjay Gandhi Thermal Power Station (SGTPS), Birsinghpur, Powerhouse-III (1x500 MW) could not achieve the targeted PAF during the year 2019-20 to 2021-22, except 2020-21, as depicted in **Table 4.2** below:

Table 4.2: PAF as well as Fixed cost allowed by MPERC and actual claimed by MPPGCL

SI. No.	Year	PAF (*per cent*)		Fixed charges/Capacity charges (₹ in crore)		
		MPERC Norms of PAF (%)	Actual PAF (%)	Maximum Fixed cost allowed by MPERC	claimed by company	Shortfall (₹)
1.	2019-20	85	79.33	391.04	364.96	26.08
2.	2020-21	85	94.28	378.34	378.34	NIL
3.	2021-22	85	63.14	313.15	232.66	80.49
Total				**1,082.53**	**975.96**	**106.57**

(***Source***: *Details collected from Multi Year Tariff, MIS report and information furnished by the Company.)*

The main reason for non-achieving the targeted PAF by the PH was excessive forced and planned outages of Annual Overhauling and Capital Overhauling (AOH and COH) during the above period. This resulted in the under-recovery of the fixed cost to the extent of ₹ 106.57 crore during the aforesaid period.

The Government in its reply (May 2023) clarified other reasons for not achieving PAF such as partial loading, unseen outages, recurrence of high turbine/shaft vibration etc. for non-achievement of PAF. However, the fact remains that the company failed to achieve the PAF norms fixed by MPERC.

4.7.3 High Gross Station Heat Rate (GSHR)

Gross Station Heat Rate (GSHR), a parameter to assess the efficiency of a thermal power station, represents the heat energy required in kilocalories (kCal) to generate one kilowatt hour (kWh) of electrical energy. MPERC has approved GSHR of 2,390 kCal/kWh for 2019-20 to 2023-24 through Multi-Year Tariff (MYT) for SGTPS, Birsinghpur Powerhouse-III (1x500 MW).

Audit noticed that the Actual GSHR in the year 2019-20 to 2021-22 remained at 2,447, 2,409 and 2,444 kCal/kWh against the MPERC norm of 2,390 kCal/kWh. The reasons as noticed by the audit for higher GSHR were frequent tripping; operation on reduced load due to problems in the turbine, shortage of coal/poor quality of coal and backing down of the units as per instruction of State Load Dispatch Centre (SLDC). The company failed to maintain GSHR within the norms prescribed by MPERC resulting in excess consumption of coal of 92,696.76 MT valuing ₹ 23.80 crore during 2019-20 to 2021-22.

The Government in its reply (May 2023) stated that the reasons for high GSHR were factors like imposing of backing down, poor coal quality, coal shortage, and partial loading due to unforeseen auxiliary problems.

However, the fact remains that the Government continues to face the problem of coal shortage and poor coal quality despite having a liaisoner to ensure coal with sufficient quantity and better quality.

4.7.4 Excess Consumption of Secondary Fuel oil

Thermal generating stations use fuel oil (Heavy Fuel Oil and Light Diesel Oil) as secondary fuel to give support for starting the unit and to attain furnace/flame stability. MPERC, through MYT, has fixed Secondary Fuel Oil[5] consumption norms of 0.50 ml/kWh for the period 2019-20 to 2023-24.

Audit noticed that overall annual secondary fuel oil consumption during the year 2019-20 and 2020-21 was within MPERC norms, whereas it exceeded the norms in the year 2021-22 and remained at 1.33 ml/kWh due to excess consumption during eight months[6]. SGTPSS PH-III (1x500 MW) consumed excess fuel oil i.e. 2,035.177 KL amounting to ₹ 12.47 crore. Audit also noticed that operation of units at partial load, tripping due to various reasons and backing down[7] were the main reasons for higher consumption of fuel oil. Thus, due to the failure of the Company, fuel oil consumption could not be restricted within the prescribed limit fixed by MPERC.

The Government in its reply (May 2023) while accepting the audit observation stated that the main reason for excess oil consumption was unforeseen technical problems of COH i.e. high shaft vibration.

The reply is not tenable as apart from high shaft vibration, monthly generation reports clearly state that running the unit at partial load and trippings etc. led to higher consumption of oil.

4.7.5 Excess Auxiliary Power Consumption (APC)

Auxiliary consumption in relation to a period means the quantum of energy consumed by auxiliary equipment of the generating station, including the switch yard and the transformer losses within the generating station. Based on the plant design, specifications and working conditions, MPERC specifies the norm for auxiliary power consumption.

MPERC has fixed Auxiliary consumption norms of 5.75 *per cent* for SGTPS PH-III (1x500 MW) for the period of 2019-20 to 2023-24. Audit noticed that out of 36 months starting from 2019-20 to 2021-22, actual auxiliary consumption of units was more than the MPERC prescribed limit (5.90 to 9.80 *per cent* against the MPERC norms of 5.75 *per cent*) during 23 months. The main reasons ascertained by Audit were units run at partial load due to problems in the turbine, shortage of coal, poor quality of coal, tripping due to various reasons and backing down. Thus, company's failure to restrict the auxiliary consumption within MPERC norms resulted in a loss of 38.88 MU which could have been transmitted to the grid and generated revenue of ₹ 7.21 crore.

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5 Comprises of Furnace Oil (FO) and Light Diesel Oil (LDO) which are used as starting or ignition fuel in thermal power plants.

6 During eight months Secondary fuel oil consumption ranged between 0.52 and 9.15 ml/kWh against the MPERC norms of 0.50 ml/kWh.

7 Backing down means when the power producer is ordered to reduce the output by the grid operator either due to availability of cheaper power from other sources or to maintain the frequency of grid.

The Government in its reply (May 2023) while accepting the audit observation stated that the main reason for excess APC in September 2021 & October 2021 were outages for rectification of TG vibration work and Trim balancing. However, the fact remains that the company failed to restrict the auxiliary consumption within MPERC norms.

4.7.6 Loss of generation due to frequent Boiler Tube Leakages (BTL)

Boiler Tubes are metal tubes located inside the boilers that heat water to produce steam. The steam in turn runs the turbine to generate electricity. As per the Best Practices compiled (2018) by NTPC, Boiler tube failure[8] plays a major chunk of total forced outages in coal-fired units. It also provided for periodical tests and methods of preventive maintenance in the compiled Best Practices.

During the period 2019-22, the plant tripped 13 times due to Boiler Tube Leakage (BTL), of which 6 incidents of BTL occurred during 2021-22. In addition, the planned COH was also preponed due to BTL in July 2021.

The Company sent (19 December 2019 and 02 December 2021) its damaged boiler tubes to Central Power Research Institute (CPRI) for examination, which observed[9] that the structures were highly stressed due to thermal fatigue and long-term overheating and recommended monitoring and control of temperature and pressure fluctuations. It also recommended monitoring of water chemistry to minimise the growth of oxide scales. Audit observed that the Programmable Logic Control (PLC) system for the demineralised plant responsible for removing harmful salts dissolved in water before feeding it to the boiler was outdated and out of order since December 2020.

Due to the high incidence of tripping due to BTL, the GoMP constituted (02 February 2022) a committee to submit a report on BTL in the plant and recommend improvement in existing practices of AOH / COH being followed. The committee found (February 2022) that there was absence of system[10] to prevent erosion failures. The required tests viz. Cold Air Velocity Test (CAVT) for uniform flue gas erosion and Thermal Flow Test for checking of blockages in Waterwall to identify the problem were not being carried out. Preventive measures like Prefab metallic cap on tubes, Application of Zinc Chromate Primer along with steel wire mesh, Chemical cleaning, use of ceramic fibre insulation, establishment of quality assurance department etc. were also not being taken. Audit observed that these preventive measures were already given in the Best Practices compiled by NTPC also before recommendations of the committee, but the Powerhouse failed to follow these. Thus, the Powerhouse suffered a generation loss of 406.51 MU from 2019-20 to 2021-22 worth ₹ 75.37 crore[11] due to frequent BTL.

The Government in its reply (May 2023) stated that the remedial action is under process and due activities shall be carried out in the forthcoming overhaul.

8 The causes of the failure include pitting, erosion, fatigue, creep and stress corrosion etc.
9 Dated 30 December 2019 and 22 March 2022.
10 Compliance Status on the report of February 2022 by BTL committee of GoMP.
11 406.51 MU x energy charges ₹ 1.854 per unit approved by the MPERC through Multi Year Tariff for the period 2019-20 to 2023-24.

4.7.7 Capital overhauling

The Powerhouse carried out major capital overhauling[12] (COH), including the work of the Turbine, through Original Equipment Manufacturers (OEM) i.e. Bharat Heavy Electricals Limited during the year 2021-22. The COH was scheduled from 25 July 2021 to 02 September 2021, but the actual overhauling was prescheduled[13] to 19 July 2021 which continued up to 18 September 2021.

- Audit observed that the overhauling took 61 days against the scheduled 40 days. The delay of 21 days occurred due to delay in the mobilisation of resources[14] by OEM. However, there was no clause in the agreement to bind the contractor to adhere to the timeline. As such no remedial action could be contemplated by the Company. The delay of 21 days resulted in a generation loss of 248.72 MU worth ₹ 46.11[15] crore.
- Further, after COH, high vibration in the turbine was noticed and the plant remained shut from 21 October 2021 to 14 November 2021. However, the issue/ problem of vibration could not be rectified till date (March 2022).

The Company considered the work carried out in COH by OEM as non-satisfactory. The OEM got the work of COH executed through a sub-contractor. Audit observed that in the agreement with OEM for COH, there was no clause for ensuring the engagement of sub-standard contractor by OEM. The PH was not carrying out any quantitative analysis of the improvement in performance (efficiency calculation) pre and post overhaul. Also, the Company did not engage any third party for monitoring and inspection of the work performed by the sub-contractor and there was no Quality Management Cell in the Company to ensure the quality of the work.

It was also observed that in July 2017, the OEM had recommended upgrading the obsolete system '1 server and software for Bentley 3,500 system' to ensure normal vibrations in related shaft components. The Company, however, has not upgraded the obsolete system so far (March 2022).

Thus, due to deficient provisions in the agreement with OEM, not establishing the quality management cell and obsolete system resulted in shut down of the plant causing a generation loss of 287.76 MU valuing ₹ 53.35 crore[16].

The Government in its reply (May 2023) stated that COH was prescheduled due to BTL. M/s BHEL appoints subcontractors from their limited vendor list having experience in overhaul. M/s BHEL is also OEM of TG set[17] and accordingly experts of the respective field

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[12] Major capital overhauling means planned shutdown. It permits detailed inspection and the determination of the condition of all components. All casings are opened.

[13] Due to boiler tube leakage.

[14] Induction heating machine for opening of HP-IP casting studs (delayed by 07 days), Gas tightness test of Rotor and replacement of CC bolts gaskets (delayed by 05 days), delay in synchronisation due to repeated trim balancing of turbine (08 days).

[15] 248.72 MU x energy charges ₹ 1.854 per unit approved by the MPERC through Multi Year Tariff for the period 2019-20 to 2023-24.

[16] 287.76 MU x energy charges ₹ 1.854 per unit approved by the MPERC through Multi Year Tariff for the period 2019-20 to 2023-24).

[17] Turbine Generator set.

were deputed. As per regular practice, no third party was engaged in monitoring and inspection of work performed by the subcontractor. The delay in the upgradation of the Bentley 3500 system was due to COVID-19.

The response is not valid because there was a delay that exceeded the scheduled COH period. Additionally, according to the post-overhauling report, the plant recognized the need for third-party supervision and inspection due to a shortage of official/departmental staff and a desire for a better workforce from M/s BHEL. Despite a recommendation to upgrade the Bentley system in July 2017, the proposal was not initiated until 2019 and has yet to be implemented.

The Audit recommends that Company should consider to include a clause/ timeline in the contract to bind the OEM for timely completion of work.

4.7.8 Delay in completion of work of engine escape line[18]

To smoothen/ease out the movement of coal rakes from the track hopper of phase III, the powerhouse proposed the work of engine escape line in 2011. The Company undertook the work of the engine escape line in August 2015 at an estimated cost of ₹ 18.90 crore (Civil works – ₹ 17.19 crore and OHE & S&T works ₹ 1.71 crore). The Civil work was completed in March 2018 at a cost of ₹ 15.91 crore. However, the Company could not complete the work of the engine escape line by March 2022.

Audit observed that the work was delayed due to delays in preparing proposals and their approval, providing infrastructure to contractors, the release of funds and lack of monitoring etc. Due to the delay, the cost had escalated to ₹ 27.50 crore, as of March 2022. Besides it had to pay demurrage charges of ₹ 5.30 crore during 2018-19 to 2021-22. This put an additional burden of ₹ 13.90 crore (cost escalation ₹ 8.60 crore plus demurrage charges ₹ 5.30 crore).

The Government in its reply (May 2023) stated that the delay was due to late submission of DPRs by M/s RITES, revision of cost, series of challenges and supplementary works. Moreover, the basic motive for constructing Engine Escape Line was only to place the incoming rake directly on NTH and has no relation with demurrage charges.

The reply is not tenable as initiation, approval of revised cost and release of funds took considerable time. In addition, the Company has hired a consultant to handle any unexpected obstacles at work. Additionally, the proposal for constructing the engine escape line emphasizes the need to decrease the time it takes to unload coal rakes/ wagons to avoid incurring hefty demurrages.

4.7.9 Non-installation of Air Washer unit in Ash Handling Plant

The ash handling plant in the PH-III was facing problems due to abnormal erosion of vacuum pumps and thus had to be replaced four times in seven years. This was much higher in comparison with other Powerhouses (I&II) of the plant and the Company was incurring recurring expenditures for the replacement of the vacuum pump.

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[18] A new railway track for transportation of coal was to be laid for new powerhouse without passing through the old power houses.

Audit observed that the problem of vacuum pump erosion was faced by the Powerhouse since the commissioning (2008) of the plant. For rectification of the problem, modification for installation of an Air washer in dry fly ash circuit (near the vacuum pump house) was approved (2012) by OEM. The modification was to safeguard against the huge replacement cost of vacuum spares and environmental norms. Based on the necessity for smooth operations and on recommendation[19] administrative approval was given by Managing Director (MD) on 10 February 2015. The tender for the same was floated on 30 July 2015 and opened on 20 October 2016 at price bid of ₹ 2.37 crore (including taxes and duties) which was considered reasonable but the same was dropped without any justification on records. Thus, due to the non-installation of the system the unit has incurred ₹ 4.31 crore on the replacement of vacuum pumps from April 2015 to March 2022, which could have been saved along with compliance with environmental norms.

In reply, the Government stated (May 2023) that the failure of vacuum pumps was due to the failure of dry ash bags and after examination and contemplation, it was decided that bag of vacuum pumps shall be procured through OEM/OES, which are having more life and their failure is less.

The reply of the Government is not tenable as the user division has already procured and replaced bags from OEM/ OES during 2012-14, but due to not achieving the desired result the decision to install Air washer was taken. Moreover, the consumption pattern also shows no improvement in abnormal erosion of vacuum pumps.

4.7.10 Non-up-keep of plant & machinery resulting in partial generation loss

The generating units should run at full load to achieve optimum operational efficiency. Audit noticed that PH-III was running on partial load resulting in a generation loss of 482.92 MU[20] during 2019-20 to 2021-22. This was arrived after excluding the Backing down and coal shortage of the units under Merit Order Dispatch (MOD[21]) system during the above period.

The reasons responsible for running the units on partial load were frequent operational problems faced, Seal water leakage, Drum Pressure Restriction, ID fan, Tube leakage and Ash handling etc. which were controllable. The partial loss suffered by PH-III due to these reasons is given in **Table 4.3**.

[19] Chief Engineer (CE) (PRG), CE (Engineering), Tender evaluation committee, Director (Commercial) & Director (Technical).

[20] Loss is worked out after deducting the partial loss incurred due to coal shortage (186.02 MU) and backing down (428.32 MU) during the period under audit from the total partial loss of 1,097.26 MU.

[21] Merit Order Dispatch system means under which, scheduling for a generation would be given to generating station based on its cost efficiency. The units with the least generation cost would be given preference and units with high generation cost would be withdrawn from the generation schedule under backing down.

Table 4.3: Details of Partial Losses during the Period 2019-20 to 2021-22

Sl. No.	Partial Losses (in MU)										
	Year	Coal Shortage	Poor Coal	Milling/ Bunker	Backing Down	Boiler	Turbine	Electrical	Grid loss	Other	Total
1.	2019-20	181.96	55.08	0	108.61	25.89	0.50	0.20	18.08	0.11	390.43
2.	2020-21	0	48.96	0	219.33	13.01	4.15	0	14.09	0.60	300.14
3.	2021-22	4.06	45.66	133.20	100.38	11.11	98.65	0.25	13.38	0	406.69
Total		**186.02**	**149.70**	**133.20**	**428.32**	**50.01**	**103.30**	**0.45**	**45.55**	**0.71**	**1,097.26**

***(Source**: Monthly Generation Report of the Company.)*

Audit noticed that PH-III of SGTPS, Birsinghpur had the system of AOH/COH besides the preventive maintenance and regular maintenance contracts etc. worth ₹ 182.12 crore (₹ 106.06 crore for work and ₹ 76.06 crore for purchases) during the period 2019-20 to 2021-22 for up keeping the various equipment of the plant and machinery. Despite having this maintenance mechanism in place, there were frequent problems in various units of the plant compelling to run the units on partial load resulting in a generation loss of 482.92 MU (44.74 *per cent* of total partial losses) valuing ₹ 89.53 crore[22] during 2019-20 to 2021-22.

The Government in its reply (May 2023) stated that partial loss due to coal shortage and poor coal is dependent on external factors and not attributable to MPPGCL. Also, minor technical issues are part and parcel of Unit operation.

The reply is not tenable as for ensuring availability and quality of coal, liaisoner has been appointed and to minimise partial losses on account of technical issues, annual repair and maintenance contracts are being executed apart from AOH/COH.

4.8 Satpura Thermal Power Station, Sarni Powerhouse IV (2x250 MW)

4.8.1 The STPS PH IV consists of two units of 250 MW capacity each which were in operation from the year 2013/2014. The PH generated 10,002 MU of energy against the target of 11,214 MU during the years 2019-20 to 2021-22. The shortage in generation against the target ranged between 0.90 *per cent* and 24.57 *per cent* as indicated in **Table 4.4** below:

Table 4.4: Target and actual generation of electricity during 2019-20 to 2021-22

Sl. No.	Year	MPERC Target (MU)	Actual Generation (MU)	Shortage (MU)	Shortfall in *Per cent*
1.	2019-20	3,748	2,827	921	24.57
2.	2020-21	3,759	3,725	34	0.90
3.	2021-22	3,707	3,450	257	6.93
Total		**11,214**	**10,002**	**1,212**[23]	**10.80**

***(Source**: Periodic information submitted by the Company to MPERC.)*

The reasons for the shortfall were excessive planned and forced outages due to delays in the rectification of defects /unwanted tripping, partial loading due to coal shortage problems/ poor quality of coal, excess heat rate, etc. which were controllable.

The Government in its reply (May 2023) stated that the units were available for generation but due to low system demand, the units were not able to achieve generation target.

[22] 482.92 MU x energy charges ₹ 1.854 per unit approved by the MPERC through Multi Year Tariff for the period 2019-20 to 2023-24.

[23] Having value of ₹ 286.00 crore (worked out at the rate of ₹ 2.33 per unit energy charges approved by the MPERC through Multi Year Tariff for the period 2019-20 to 2023-24).

The reply is incorrect as the monthly generation reports of the Unit attributed the reasons for low generation towards the planned and forced outages, coal shortage, poor coal quality etc. apart from low system demand.

The performance of this PH with regard to operational parameters was below the norms fixed by MPERC. This has been analysed in paragraph numbers 4.8.2 to 4.8.5.

4.8.2 Excess Auxiliary Power Consumption (APC)

Similar to as discussed in para 4.7.5 above, MPERC fixed (February 2020) auxiliary consumption norms of 8.5 *per cent* for 2019-20 to 2023-24. Audit noticed that in 20 out of 36 months under the audit period, the auxiliary consumption of the units was more than MPERC prescribed limit and ranged between 8.65 *per cent* and 15.30 *per cent*. Audit further noticed that the operation of units at partial load due to shortage of coal, poor quality of coal, tripping and backing down, were the main reasons for excess auxiliary consumption. Thus, the Company's failure to restrict the Auxiliary consumption within MPERC norms has resulted in a loss of 22.07 MU, which could have been transmitted to the grid and generated revenue of ₹ 5.14 crore.

The Government in its reply (May 2023) agreed to the audit observation and stated that after some modification in existing system over & above the designed schemes there has been continuous reduction in the APC.

4.8.3 High Gross Station Heat Rate (GSHR)

As discussed in paragraph 4.7.3, MPERC approved the Gross Station Heat Rate (GSHR)[24] of 2,400 kCal/kWh for 2019-20 and onward for the Powerhouse.

Audit noticed that the actual GSHR in the year 2019-20 and remained 2,435 kCal/kWh against the MPERC norm of 2,400 kCal/kWh which resulted in the consumption of excess coal of 23,345 MT valuing ₹ 8.32 crore. Reasons for higher GSHR as noticed by the audit were frequent tripping; operation on reduced load due to shortage of coal/poor quality of coal and Backing down of the units.

As such, the Powerhouse failed to restrict coal consumption within MPERC norms in the year 2019-20.

The Government in its reply (May 2023) agreed to the audit observation and stated that after some modification in existing system over and above designed schemes and adopting best O&M practices there has been continuous reduction in the GSHR.

However, the fact remains that the unit failed to restrict the high GSHR in 2019-20 within the MPERC norms.

4.8.4 Avoidable tube leakages and flame failure causing generation loss

Boiler Tubes are metal tubes located inside the boilers that heat water to produce steam. The steam in turn runs the turbine to generate electricity. As per the Best Practices compiled (2018)

24 Gross Heat Rate of power plant is the amount of chemical energy that must be supplied to produce one unit of electrical energy i.e. heat energy input in Kilocalorie (kCal) required to generate one Kilowatt-hour (kWh) of electrical energy at generator terminal of a generating station.

by NTPC, Boiler tube failure[25] plays a major chunk of total forced outages in coal-fired units. Besides problems like clinker[26] formation & ash build-up also occur in the boilers. The Best Practices also provided for periodical tests and methods of preventive maintenance[27] of the boilers.

During the period 2019-22, the Powerhouse tripped 18 times due to boiler tube leakage and flame failure due to clinker falling. The Company sent its damaged boiler tubes to Central Power Research Institute (CPRI) for examination, which recommended monitoring and controlling temperature fluctuation, hardness measurement and adopting hydrogen damage technique.

Audit observed that though the Powerhouse experienced frequent trippings on account of BTL and flame failure, it did not take preventive measures recommended by NTPC and CPRI to control the trippings. This led to the loss of generation of 132.26 MU valuing ₹ 30.82 crore[28].

The Government in its reply (May 2023) while accepting the audit observation stated that various best practices as recommended in BTL Committee report of Energy Department have been adopted and tube leakages and flame failures have been minimised.

4.8.5 Non-upgradation of MaxDNA system

For real-time supervision and monitoring of the PHs through plant automation, the Company is using the MaxDNA system[29]. The system receives signals from the field, process the signals and generate command to the field auxiliaries as per the associated program. This system carries out all supervision activities and takes care of all protections of the boiler, turbine and auxiliaries. In case of non-access to the MaxDNA system, the whole plant may undergo uncontrolled in respect of supervision activities and protection of the boiler, turbine and auxiliaries.

Audit observed that the MaxDNA system being used in STPS was working on Windows XP-based operating system and had become obsolete in 2018. The frequent freezing of CPU and network data loss problem was leading to Human Machine Interface (HMI) failures. The expert group for Computerisation & Instrumentation (C&I) recommended (June 2019) upgrading HMI. The Powerhouse proposed to upgrade the system with all software/ hardware essential to its latest version for automation, all protections for safe and smooth operations. The Original Equipment Manufacturer (OEM) i.e. M/s Bharat Heavy Electricals Limited (M/s BHEL) offered (June 2020) to upgrade the MaxDNA system at a cost of ₹ 18.69 crore with technological validity till 2029. However, the Company could not finalise (March 2022)

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25 The causes of the failure include pitting, erosion, fatigue, creep and stress corrosion cracking etc.

26 Clinker or slag is a fused mass of non-combustible residue (ash) from coal.

27 Conducting of Cold Air Velocity Test (CAVT) for uniform flew gas erosion and Welder verification test at 6G point. Preventive maintenance by capping the tubes with metallic caps, application of Zinc Chromate Primer along with steel wire mesh, regular deposit analysis of WW tubes, Chemical cleaning, temperature survey of the boiler and use of ceramic fibre insulation in high temperature burner zone etc.

28 132.263 MU x energy charges ₹ 2.33 per unit approved by the MPERC through Multi Year Tariff for the period 2019-20 to 2023-24).

29 This system consists of hardware (CPU, HMI system, DPU, IO modules etc.) and software utilities (Max VUE, Historian, Event logger, Gateway, OPC etc.)

its order for the upgradation of its MaxDNA system. As such, the Powerhouse continued to be at risk due to frequent HMI failures.

The Government in its reply (May 2023) stated that even if the system is declared obsolete, its spare parts remain available in the open market or through OEM, and the system can be in service until satisfactory performance. Further due to constraints of M/s BHEL (COVID-19 lockdown and preoccupation due to prior commitments), the proposal for installation could not be finalised.

The reply of the Government is not acceptable as the expert committee and the Powerhouse had considered various operational issues and then proposed to upgrade the system for safe and smooth operations of the plant. Moreover, constraints shown by M/s BHEL were not on records.

4.9 Amarkantak Thermal Power Station, Chachai Powerhouse (210 MW)

4.9.1 ATPS consists of one unit of 210 MW capacity and is in operation since 2009. The PH generated 4,825 MU of energy against the target of 4,911 MU during the years 2019-20 to 2021-22. ATPS achieved the targets in 2019-20 and 2020-21, but ATPS could not achieve the target in 2021-22 and there was a shortage of 7.94 *per cent* in that year as indicated in **Table 4.5**.

Table 4.5: Target and actual generation of electricity during 2019-20 to 2021-22

SI. No.	Year	MPERC Target (in MU)	Actual Generation (in MU)	Excess (+) / Shortage (-) (in MU)	Excess (+) / Shortage (-) (in *per cent*)
1.	2019-20	1,668	1,692	(+) 24	(+) 1.44
2.	2020-21	1,605	1,625	(+) 20	(+) 1.25
3.	2021-22	1,638	1,508	(-) 130	(-) 7.94
Total		**4,911**	**4,825**	**86**	**(-) 1.75**

***(Source**: Periodic information submitted by the Company to MPERC.)*

The reasons for the shortfall were excessive planned and forced outages due to delays in rectification of defects /unwanted tripping, partial loading due to coal shortage problems/ poor quality of coal which were controllable.

The Government in its reply (May 2023) stated that target for this unit is fixed on higher side as compared to other units. The main reason for low generation was low system demand and in 2021-22 AOH took 17 days more due to fire related works.

The reply is incorrect as the monthly generation reports of the Unit attributed low generation to planned and forced outages, coal shortage, poor coal quality etc. apart from low system demand. The performance of this PH with regard to operational parameters was below the targets fixed by MPERC. This has been analysed in paragraph numbers 4.9.2 to 4.9.6.

Further, Management in the Exit meeting (May 2023) stated that MPERC provides PAF targets and the generation targets indicated its internal targets. The reply is factually incorrect as the Company itself submits periodic returns of actual generation vis-à-vis MPERC generation targets to MPERC.

4.9.2 Excess Auxiliary Power Consumption (APC)

Similar to as discussed in para 4.7.5 above, MPERC has fixed Auxiliary consumption norms of 9.00 *per cent* for ATPS (1x210 MW) for the period of 2019-20 to 2023-24. Audit noticed that out of 36 months starting from 2019-20 to 2021-22, actual auxiliary consumption of units was more than the MPERC prescribed limit (9.01 to 13.24 *per cent* against norms of 9.00 *per cent*) during 21 months. The main reason ascertained by Audit were units run at partial load due to problems in the turbine, shortage of coal, poor quality of coal, tripping due to various reasons and Backing down. Thus, company's failure to restrict the Auxiliary consumption within MPERC norms has resulted in a loss of 13.83 MU which could have been transmitted to the grid and generated revenue of ₹ 1.95 crore.

The Government in its reply (May 2023) stated that the reasons of high APC were due to long shut down or forced outage period and being single Powerhouse, common area Electricity consumption is booked in Unit's auxiliary consumption.

However, the fact remains that APC was higher than the MPERC norms.

4.9.3 Generation loss due to prolonged period of Annual overhaul

The Company scheduled the annual overhauling of the Powerhouse from 01 August 2021 to 16 August 2021 (16 days) but due to an incident of fire in the Main oil Tank (MOT) room, the same was preponed by 45 days i.e. from 16 June 2021 and continued up to 18 July 2021. Thus, it took 17 days more than the regular AOH due to fire-related work.

As per records of the Powerhouse, during regular maintenance work of the MOT room on 10 May 2021, leakage of oil from the vacuum pump was noticed and the same was packed with "Chadi"[30] and the surface was cleaned. However, drop-by-drop leakage of lube oil persisted. The leakage suddenly broke into a spray-like stream of oil and spread all over the MOT room which caught fire after coming in contact with a hot mercury vapour lamp and the plant got tripped at 10.11 AM on 16 June 2021.

Audit observed that although an incident of leakage of oil was also noticed in June 2020, but the Company did not take any corrective action. The committee formed to analyse the reasons for the fire also found that safety norms were not adhered to.

Thus, improper maintenance of the MOT room and non-following fire safety norms resulted in a fire and consequent loss of generation of energy of 83.06 MU worth ₹ 11.73 crore[31] apart from secondary damages due to the fire incident.

In reply (May 2023) Government stated that after observing oil leakage, its regular monitoring, cleaning and collection was done safely by maintenance division. The oil leakage was under knowledge of all department and being well discussed in daily operation review meeting.

The reply reinforces the fact that despite possessing knowledge and having a discussion on the issue, timely remedial actions for safety were not taken.

[30] Temporary supporting sheet to cover the leakage.

[31] 83.06 MU* energy charges ₹ 1.413 per unit approved by the MPERC through Multi-Year Tariff for the period 2019-20 to 2023-24).

4.9.4 Loss of generation due to not carrying out capital overhauling as per the manual

The turbine gland sealing system (TGSS) prevents the escape of steam from the turbine shaft and casing penetrations and the glands of the main steam stop and control valves. This system also prevents air leakage into low-pressure turbine glands. As per the BHEL manual, the complete capital overhauling of the turbine was due in 2014, 2018 and 2022.

During scrutiny of records, it was observed that as per the Turbine overhaul chart major overhaul should be done every four years and a medium overhaul should be done every two years. A major overhaul was done in 2014 but in 2016, 2018 and 2020 only medium overhauling was executed. Due to the continuous running of the unit, severe damages were suffered in parts of the turbine and high leakage of seal steam from Turbine Glands occurred from 25 March 2022 to 03 April 2022. This led to a generation loss of 7.206 MU worth ₹ 1.02[32] crore.

In reply (May 2023) Government stated that a major overhaul of the unit was carried out in 2016 wherein both the HP & IP module overhauling was done which were again opened in the year 2022.

The reply of the Government is factually incorrect as the major overhauling was done in 2014 as per the Unit's records and no major overhauling activities have been undertaken till March 2022.

4.9.5 Higher fixation of tariff

Regulation 45 of the Regulations, 2020 specifies that allowable transit and handling losses for coal shall be 0.20 *per cent* for pit head[33] plants and 0.80 *per cent* for non-pit head[34] plants.

Audit observed that ATPS Chachai entered (2009) into a fuel supply agreement (FSA) with South Eastern Coalfields Limited (SECL) for the supply of 20 Lakh Metric Tonnes (LMT) coal per year for its phase II (2*120 MW) and phase III (210 MW). Considering the fact that phase II was utilizing coal from Sangma siding MGR mode (pit head) and phase III from Korba siding via Indian railways (non-pit head), MPERC (2013-14) allowed transit and handling losses at the rate of 0.20 *per cent* for Phase II and 0.80 *per cent* for phase III. Both the units of phase II were closed in May 2014 and January 2015. During the period 2019-22, phase III was utilising coal through MGR mode from Sangma siding (pit head). The fact, however, was not brought to the notice of the MPERC which continued to allow the transit and handling losses at the rate of 0.80 *per cent* for phase III. This resulted in higher fixation of tariff by 0.60 *per cent* which resulted in extra burden of ₹ 3.27 crore to the consumers.

In reply (May 2023) Government stated that MPERC has been informed about phasing out of PH-II ATPS and every year vide true-up petition MPPGCL conveys the details of coal procurement for final settlement.

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32 7.206 MU x energy charges ₹ 1.413 approved by the MPERC through Multi-Year Tariff (for the period 2019-20 to 2023-24).

33 A pit head power plant is a plant which keeps its captive transportation system for the exclusive movement of coal from the loading point at the mine to the unloading point. Pit head plants are situated near coal mines.

34 Non-pithead plants are situated at a distance from coal mines and do not have their own/captive system of coal transportation from mines to power plants.

The fact, however, remains that consumers had to bear an extra burden of ₹ 3.27 crore.

4.9.6 Non-up-keep of plant & machinery resulting in partial generation loss

Similar to as discussed in paragraph 4.7.10 above, we observed that ATPS was running on partial load resulting in a generation loss of 74.25 MU during 2019-20 to 2021-22. This was arrived after excluding the backing down and coal shortage of the units under Merit Order Dispatch (MOD) system during the above period.

The reasons responsible for running the units on partial load were frequent operational problems faced due to Shortage of coal, Drum Pressure Restriction, ID fan, Tube leakage and FD Fan outage, Ash handling etc. The partial loss suffered by ATPS is given in **Table 4.6**.

Table 4.6: Details of Partial Losses During the Period 2019-20 to 2021-22

Sl. No.	Year	Partial Losses (in MU)								
		Coal Shortage	Poor coal	Backing down	Boiler	Turbine	Electrical	Grid Loss	Others	Total
1.	2019-20	25.56	2.84	41.36	0.75	0.00	1.05	7.25	2.79	**81.60**
2.	2020-21	0.00	2.75	20.94	5.12	0.24	0.00	1.13	4.12	**34.30**
3.	2021-22	5.42	34.41	80.91	3.36	5.32	0.24	0.91	1.96	**132.53**
Total		**30.98**	**40.00**	**143.21**	**9.23**	**5.56**	**1.29**	**9.29**	**8.87**	**248.43**

***(Source**: Monthly Generation Report of the Company.)*

Audit noticed that PH-III of ATPS, Chachai had the system of AOH/COH besides the preventive maintenance and regular maintenance contracts etc. worth ₹ 87.45 crore (₹ 51.37 crore for work and ₹ 36.08 crore for purchases) during the period 2019-20 to 2021-22 for up-keep of the various equipment of the plant and machinery. Despite having this maintenance mechanism in place, there were frequent problems in various units of the plant compelling to run the units on partial load resulting in a generation loss of 74.24 MU[35] (29.88 *per cent* of total partial losses) valuing ₹ 10.49 crore[36].

The Government in its reply (May 2023) stated that partial loss due to coal shortage and poor coal are dependent on external factors and not attributable to MPPGCL. Also, the small technical issues are part and parcel of Unit operation.

The reply is not tenable as for ensuring availability and quality of coal, liaisoner has been appointed and to minimise partial losses on account of technical issues, annual repair and maintenance contracts are being executed apart from AOH/ COH.

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[35] Loss is worked out after deducting the total partial loss incurred due to coal shortage (30.98 MU) and backing down (143.21 MU) during the period under audit from total partial loss of 74.24 MU suffered on account of all controllable reasons.

[36] 74.24 MU x energy charges ₹ 1.413 per unit approved by the MPERC through Multi Year Tariff (for the period 2019-20 to 2023-24).

4.10 Ineffective functioning of Maintenance Planning Cell

A dedicated Maintenance Planning Cell (MPC) was established in each of the generating stations, to prepare plans for improving the functional performance and achieving overall efficiency and economy. Though it was envisaged to have 34 persons[37] in the MPC, only nine persons[38] were manning it. During the period under audit, no major plans were prepared and implemented by this Cell. Consequently, the generating station continued to face operational problems and the targets set by MPERC with regard to various operational parameters were not achieved.

The Government in its reply (May 2023) explained that there is a crunch of employees in MPPGCL. It further stated that the issue raised is hereby noted and the Company would endeavour to improve the functioning of MPC.

4.11 Contract Management in the three Powerhouses

The Powerhouses entered into a Fuel Supply Agreement (FSA) with South Eastern Coalfields Limited (SECL), Western Coalfield (WCL) and Northern Coalfield Limited (NCL) for supply of coal. To ensure smooth supply of quality coal, the Powerhouses also appointed Liaisoning contractors for coordination among Powerhouse, Railways and Coal companies. A review of these contracts revealed the following shortcomings:

4.11.1 Non-preparation of Coal Plan

The installed electricity generation capacity in the MPPGCL as on 31 March 2019 was 6317.5 MW out of which coal-based capacity was 5,400 MW (85.47 *per cent*). Coal cost constitutes more than 50 *per cent* of the total expenses of a coal-based power station and has a major impact on cost of supply of power to consumers. Inefficiencies in fuel management would increase the energy charges for the stations and cost of power to the ultimate consumer.

Audit observed that the company envisaged to generate about 3,500[39] MW (Net DC) continuously and for generation of these approximately 199 LMT coal would be required. In addition to this 13.47 LMT should also be required to maintain the stock as per norms prescribed by CEA, the total requirement of coal is about 212.53 LMT. To fulfil the requirement, for smooth functioning of plants and coal availability with all power generation stations of MPPGCL, the Company was required to prepare a Coal Plan, which provides a long view on the availability of Coal at every Power Generating Station, reducing arrears of bills, availability of transport facility etc. However, during the period under audit, no coal plan was prepared and implemented. Consequently, the generating station continued to face coal-related problems and the targets set by MPERC with regard to various operational parameters were not achieved, as discussed in paragraph numbers 4.11.3 to 4.11.5.

The Government in its reply (May 2023) while accepting the audit observation stated that looking at the coal shortage at the national level during 2021-22 it was anticipated that the crisis is going to continue. Thus, a Coal Plan was prepared first time for 2022-23 which resulted in a sharp increase in the supply of coal.

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37 Sanctioned posts in SGTPS 18 and ATPS 16.
38 Actually, deployed in SGTPS 06 and ATPS 03.
39 Considering 64.80 *per cent* Plant Load Factor of installed capacity i.e. 5,400 MW.

4.11.2 Reduction in Gross Calorific Value (GCV) of coal from the loading end to unloading end

The Company entered upon various Fuel Supply Agreement (FSA) with various coal companies for the supply of coal to its three plants ATPS, Chachai, STPS PH-IV, Sarni and SGTPS PH III, Birsinghpur. Each year the coal companies declare mine-wise grade of coal (G-8 to G-13), keeping in view the Gross Calorific Value (GCV) of the respective coal mine. The bills for the supply of coal are raised by coal companies as per the GCV of coal at the loading point and Company claims the Energy Charge Rate (ECR)/ variable cost as per the GCV received at the unloading end. The Company had engaged CIMFR[40] for sampling and analysis of coal at loading ends at mines as well as at unloading end at Powerhouses.

Since GCV is one of the key factors used for energy billing, the Audit compared the GCV 'as billed' by coal companies for coal loaded on wagons at mines and GCV of coal 'as received' at the unloading point of the Powerhouses. Audit observed that GCV of coal decreased from the 'as billed' stage to the 'as received' stage, though as per CEA, the GCV values, i.e., GCV 'as billed' and 'as received' should be approximately same. During 2019-20 to 2021-22, there was a drop in GCV up to 3,129 kCal/kg valuing ₹ 546.88[41] crore.

As a particular grade of coal (having bandwidth of 300 kCal/Kg) cannot change or convert into different grade during its transportation, the above position required in-depth analysis of the reasons for the vast drop in GCV. Audit found that though this issue persisted in the Company for long despite engaging the same firm, CIMFR at loading end as well as unloading end, the Company did not make any effort to arrest this reduction. Consequently, the issue persisted during the entire period of 2019-20 to 2021-22.

The Government in its reply (May 2023) accepted the audit observation and stated that efforts are being made by the Company to arrest/minimise the reduction of GCV from loading end to unloading end. Further development in this regard is awaited (July 2023).

4.11.3 Shortage of coal resulting in loss of Generation

As per the regulation of MPERC, Powerhouses were required to keep the coal stock for 30 days corresponding to the normative plant availability factor (85 *per cent*). Further, these plants were required to maintain the stock of coal for at least 20 days as per the methodology[42] framed by CEA in November 2017. CEA revised the norms of coal stock w.e.f. 06 December 2021 and coal stock of 26 days at non-pit head stations from February to June and for other months to be kept was varying[43] between 20 to 24 days.

Audit noticed that the Powerhouses failed to arrange continuous supply of coal leading to shortage of coal and loss of generation during 2019-20 to 2021-22 as discussed below in **Table 4.7**:

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[40] Central Institute of Mining and Fuel Research (CIMFR) is a constituent laboratory of Council of Scientific and Industrial Research (CSIR), an autonomous body under GOI.

[41] STPS ₹ 166.30 crore, SGTPS ₹ 341.25 crore and ATPS ₹ 39.33 crore.

[42] Stipulates that non- pit head TPSs situated up to 500 KM away from the mines were required to keep the coal stock for minimum 20 days.

[43] For July and August it was 22 and 21days respectively and thereafter five months from September to January it was 20, 21, 22, 23 and 24 days respectively.

Table 4.7: Details of loss of generation due to shortage of Coal

SI. No.	Name of TPS	Generation loss in MU at 85 *per cent* capacity	ECR per kWh as per MYT	Value of loss of generation (₹ in crore)
1.	**STPS, Sarni**	20.77	2.33	4.84
2.	**SGTPS, Birsinghpur**	174.75	1.85	32.33
3.	**ATPS, Chachai**	34.89	1.41	4.92
	Total	**230.41**		**42.09**

*(**Source**: Monthly Generation Report of the Company.)*

The main reasons for coal shortage were non-arrangement of coal from alternative source against coal allotted (10.43 LMT) for SSTPS PH-II, Khandwa, till start of production from Dhuptala mine, reduction of coal supplies by coal companies due to outstanding dues, failure of the company to procure coal through e-auction/ occasional offers from coal companies through Road/RCR mode and failure to take up the matter of reduction of Annual Contracted Quantity (ACQ) of ATPS Chachai to the extent of 0.67 LMT per year.

Further, the Powerhouse of ATPS remained closed[44] due to shortage of coal on account of non-finalisation of tender and annual rate contract resulting in a generation loss of 29.719 MU worth ₹ 4.20[45] crore due to the non-operation of plant.

The Government in its reply (May 2023) stated that railway was not providing sufficient coal rakes commensurate with the quantity allocated, COVID-19 also led to coal shortage. MPPGCL accepted shortage of funds from MPPMCL for coal procurement. Regarding reduction in ACQ of ATPS, it was stated that matter is being regularly pursued.

Reply of the Government regarding insufficient coal rakes is not tenable as liaisoner has been appointed to coordinate with railway to arrange sufficient rakes as well as coordinate with coal companies for materialisation of ACQ.

4.11.4 Delay in swapping of coal linkage resulted in higher generation costs

Ministry of Coal had issued (May 2018) guidelines for rationalisation of coal linkage to facilitate the Power Generator in transferring the coal linkage allocated to them from one Coal Company to another Coal Company subject to coal availability and future coal production plan of the coal companies. Thus, by such rationalisation, the power Generator might reduce the landed cost of coal by reducing the transportation cost of coal and thereby reducing the cost of generation and producing cheaper power. This exercise was voluntary on the part of TPPs, aimed to reduce the distance by which the coal was transported.

Audit observed that the STPS, Sarani was having coal linkage from Western Coalfield Limited (WCL) for its PH II & III and from SECL for PH IV. The coal cost was more economical from WCL sources than SECL due to lower landing rates. The PH II & III were approved for decommissioning before 2018 and the units were running at the PLF of 33.60, 10.75 and 0 from 2019-20, 2020-21 and 2021-22 respectively against norms of 70 due to Reserved Shut Down (RSD), forced outage etc. The Company belatedly (January 2021) made proposal for swapping from SECL to WCL but no formal FSA has been executed so far. The Company should have taken timely action (2019) for swapping of coal at a cheaper rate considering

[44] 30 October 2019 to 04 November 2019.
[45] 29.719 MU x energy charges ₹ 1.413.

decommissioning & lower PLF of PH II & III and low generation cost & better heat rate of PH IV. Thus, the Company incurred an extra expenditure of ₹ 50.79 crore which in turn resulted in higher generation cost.

The Government in its reply (May 2023) stated that it had not yet approved the decommissioning of units even though the same was approved by BoD of the Company. The units PH II & III were running in 2019-20 & 2020-21 and as soon as it was felt that these units may not run to their capacity, proposal of swapping was submitted. Moreover, after implementation of flexi utilisation of coal policy, the WCL sources was also utilised in units PH-IV and there is no loss.

The reply is not tenable as despite knowing the fact in 2019 itself that the generation cost of PH-II&III was high, the Company had not taken timely action for swapping to reduce generation cost under flexi utilisation policy.

4.11.5 Loss due to not uplifting of coal at economical rates

The main component of fuel for the generation of electricity in thermal power plants was coal and the Company should have taken due steps for its uninterrupted supply at economical rates. The coal in STPS was procured through different modes viz. Railways, Rail cum Road (RCR) and Road.

Audit observed that considering the limitation of the supply of coal through Rail mode, the coal company offered uplifting of coal in different quantities from various mines through Rail cum Road (RCR) mode. The Powerhouse assessed (June 2021 and September 2021) the rates of coal supply from various mines through different modes and evaluated that the overall cost via RCR mode was cheaper than the other modes. Despite ascertaining the economical rates, the coal could not be uplifted through RCR mode due to delay in finalisation of tender and lack of system for awarding work on rate contract basis. Thus, the process of uplifting coal at the earliest and economical prices could not be ensured resulting in a loss of ₹ 3.74 crore.

The Government in its reply (May 2023) stated that Coal companies offer a certain quantity of coal to be lifted through RCR mode from time to time as per the availability of coal at different mines. Further, the prospective bidders for RCR tenders participate as per their suitability because all contractors do not operate from all mines/sidings of a coal company.

However, the fact remains that the Company could not initiate the tender process at an early stage and finalise the process to uplift the coal at economical rates.

4.11.6 Improper power scheduling resulting in avoidable payment

As per clause 5 read with clause 6(2) of Central Electricity Regulatory Commission notification, 2014, the Deviation Settlement Mechanism (DSM) charges were payable by the power generator for under-injection of energy within the permissible grid frequency[46]. Under the said regulations the generator was also allowed to revise the committed energy to be injected into the grid up to one hour before (i.e. 4 blocks) the scheduled period.

[46] Permissible grid frequency is between 50.3 Hz and 49.2 Hz.

Audit observed that the PHs injected less or excess energy than the scheduled generation into the grid many times during the period 2019-20 to 2021-22. Further MPPGCL had not revised the committed energy within the allowed period. This resulted in paying the avoidable excess deviation charges of ₹ 20.78[47] crore for the period 2019-22.

The Government in its reply (May 2023) while accepting the audit observation has stated that all efforts are being made for DC revision on time and to generate/inject power as per grid frequency & schedule during the audit period. Further developments were awaited (July 2023).

4.11.7 Avoidable expenditure due to execution of Water Supply Agreement for excess quantity of water.

For the usage of water, the PHs are liable to pay water charges to the Water Resource Department (WRD) of the Government of Madhya Pradesh (GoMP). As per clause 2 of Water Supply Agreement entered in December 2013, the MPPGCL was liable to pay water charges for at least 90 *per cent* of the contracted quantity of water or actual consumption, whichever is higher.

During the review of water supply agreement and water consumption pattern by Powerhouses, it was noticed that the consumption of water by two Powerhouses (ATPS and SGTPS) was much lower than the contracted quantity of water. The monthly consumption of water, as a percentage to the contracted quantity remained in the range of 5.99 *per cent* to 36.61 *per cent* in respect of ATPS and in the range of 2.11 *per cent* to 36.97 *per cent* in case of SGTPS from January 2014 to March 2022.

To review and suggest reallocation of the quantity of water by WRD, the Company formed a committee chaired by the Executive Director (Engg.) which in its report suggested (April 2017) to reduce the contracted quantity by 8.93 Million Cubic Meter (MCM) and 31.39 MCM in respect of ATPS and SGTPS, respectively. However, even after lapse of 62 months after the Committee report, the agreement was not revised to reduce the quantity of water.

Thus, due to execution of an agreement for excess quantity of water without evaluating the actual consumption led to an additional expenditure of ₹ 16.25 crore[48] for the period from January 2014 to March 2022.

The Government in its reply (May 2023) stated that in the case of ATPS, it has been decided to install a new unit in place of decommissioned units (2016) and in the case of SGTPS due to technical constraints, it is not prudent to surrender the water allocation.

However, the fact remains that a substantial time has elapsed from decommissioning of units of ATPS, but no plant has been installed so far. In the case of SGTPS, the actual consumption of water was far below the contracted quantity. Besides, the Committee (comprising of technical members) had also recommended for reduction of the contracted quantity.

[47] SGTPS PH III ₹ 17.06 crore, STPS ₹ 1.60 crore and ATPS ₹ 2.12 crore.

[48] Excess amount (SGTPS PH III ₹ 11.01 crore and ATPS ₹ 5.26 crore) calculated with reference to maximum actual monthly consumption of the plants respectively.

4.12 Environmental Compliances by Power Houses

TPSs, being under the category of major polluting industry, are under statutory obligation to comply with norms/provisions of various Acts pertaining to environmental compliance. Upon review of the records, we noticed the following shortcomings:

4.12.1 Non-achievement of the target of ash utilisation

The fly ash generated during the process of power generation at Thermal Power Stations is collected in the ash dykes from where it is further utilised. The unutilised ash remains in the ash dykes and when the ash dyke is filled completely, the same is surrendered to Forest Department[49].

The Ministry of Environment, Forest and Climate Change (MoEF&CC), GoI issues notifications[50] from time to time regarding targets of ash utilisation, responsibilities of related parties and various steps to promote ash utilisation. Accordingly, the Powerhouses were to utilise 100 *per cent* of the fly ash generated by 31 December 2017 and onwards.

Audit noticed that to meet the targets of ash utilisation, the Plants[51] utilized the fly ash for raising the height of the dyke/filling of voids in the dykes proposed to be surrendered. The Plantwide ash utilisation is given in the **Table 4.8**:

Table 4.8: Plants wise Ash utilisation during the period 2019-20 to 2021-22

SI. No.	Name of Plant	Capacity in MW	Number of dykes	Number of dykes proposed for surrender	Year	Ash utilisation(in *per cent*)	Ash utilisation after excluding utilisation in filling of voids in the dyke proposed for surrender (in *per cent*)
1.	**STPS**	1,330	3	1	2019-20	63.72	63.72
					2020-21	94.20	51.98
					2021-22	99.82	64.32
2.	**SGTPS**	1,320	2	1	2019-20	99.59	53.74
					2020-21	100.10	49.38
					2021-22	71.49	40.18
3.	**ATPS**	210	2	1	2019-20	100.55	100.55
					2020-21	64.81	64.81
					2021-22	39.09	39.09

***(Source**: Information collected from particular plants.)*

Further, in violation of GoI notification (25 January 2016) the Powerhouse did not facilitate or promote setting up of the ash-based production units within their premises or in the vicinity of their premises where ash is generated so as to reduce the transportation of ash.

Audit further noticed that as per notification (2009) the whole proceeds of ash sale should be utilised for creating better facilities to improve the ash utilisation. The Company realised ₹ 213.68 crore by sale of ash till 31 March 2022 but could utilise ₹ 75.98 crore (35.56 *per cent*)

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49 As the ash dykes have been made on forest land, these are to be surrendered back to the Forest Department.

50 The notifications were issued on 14 September 1999, 27 August 2003, 3 August 2009, 25 January 2016 and 31 December 2021.

51 In the Powerhouse, the Fly ash generated is collected and stored in combined ash dykes.

only for creation of better facilities. As such, the Company failed to utilise the funds from sale of ash as per MOEF directions.

Thus, lackadaisical approach of the Company to promote utilisation of ash resulted in problem of legacy ash, damage to environment and non-compliance to MoEF&CC notifications, which may result in levy of penalty.

The Government in its reply (May 2023) stated that all efforts are being made by the thermal power stations of MPPGCL to achieve the targets.

The Government has not furnished any reply on not setting up of ash based production units as well as non-incurring of sufficient expenditure out of fund created for development of infrastructure, promotion and facilitation activities. The fact remains that the company failed to adhere to the MoEF&CC norms of ash utilisation applicable during audit period.

4.12.2 Excess Stack Emission

The MoEF&CC, GoI, amended (7 December 2015) the 'Environmental (Protection) Rules, 1986 and prescribed stack emission standards for the units of thermal power stations installed after 1 January 2003 to 31 December 2016. As per notification, the level of Particulate Matter (PM), Sulphur Dioxide (SO_2), Oxides of Nitrogen (NOx) and Mercury (Hg) should be within prescribed norms[52]. However, norms of Oxides of Nitrogen (NOx) were relaxed[53] later through notification dated 19 October 2020.

Audit analysed the data provided[54] by the TPSs for the period 2019-20 to 2021-22, and found that STPS, SGTPS and ATPS failed to restrict the emission within limit prescribed by MoEF&CC. Out of 36 months starting from 2019-20 to 2021-22, units of STPS, SGTPS and ATPS exceeded the emission of SO_2 (ranging between 33 and 35 months), NOx (ranging between 12 and 29 months) and PM (ranging between 0 and 12 months) as detailed in **Appendix 4.3**. Further, the company had not installed any system[55] to restrict emission of SO_2 and NOx.

The Government in its reply (May 2023) explained various reasons viz. poor quality of coal, tripping due to deposition of oil fumes on analyzer lens etc. which resulted in excess stack emissions. Further, emission of SO_2 would be reduced after installation of FGD for which tender is in process. It also added that time line for compliance of NOx is upto 31 December 2024 and for SO_2 is 31 December 2026. For mitigation of NOx emission, technical specification is being finalised for primary combustion modification in all TPSs.

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52 Particulate Matter (PM): 50 mg/NM3, Sulphur Dioxide (SO_2): 600 mg/NM^3 (for <500 MW) and 200 mg/Nm^3 (for 500 MW capacity and above), Oxides of Nitrogen (NOx): 300 mg/$Nm^3$and Mercury (Hg): 0.03 mg/$Nm^{3.}$

53 As per revised norm maximum limit of NOx was extended to 450 mg/Nm^3 w.e.f. 19 October 2020.

54 Continuous Emission Monitoring System (CEMS) data of Particulate Matter (PM), Sulphur Dioxide (SO_2) and Oxides of Nitrogen (NOx) SGTPS, Birsinghpur was provided to audit but of STPS, Sarni and ATPS Chachai failed to provide complete CEMS data therefore their offline records were analysed for 2019-20 to 2021-22.

55 For SO_2: Flue Gas Desulphurisation System (FGDS), for NO_X: Selective Catalytic Reduction (SCR) system or the Selective Non-Catalytic Reduction (SNCR) system or Low NOx Burners with Over Fire Air (OFA).

However, the fact remains that the management failed to restrict the emission norms within limit prescribed by MoEF&CC.

4.13 Conclusion

Audit observed that:

- The Powerhouses failed to meet the operational parameters determined by MPERC which resulted in the loss of generation, excess auxiliary consumption, excess consumption of coal and under-recovery of fixed cost.
- The Company failed in the proper arrangement and management of coal. Instances of delay in swapping of coal, not uplifting the coal at economical rates, and reduction in Gross Calorific Value of coal from the loading end to the unloading end were noticed which resulted in higher costs of coal. The company also failed to arrange the required quantity of coal and this shortage of coal resulted in the loss of generation.
- The Company failed to upgrade the systems and execute the Annual Overhauling (AOH)/Capital Overhauling (COH) as per manual/best practices in time. The delays in the execution of AOH/COH resulted in generation loss.
- The Company could not adhere to various environmental norms issued by Ministry of Environment, Forest and Climate Change (MoEF&CC) regarding stack emission and disposal of ash which have an adverse impact on the environment.

4.14 Recommendations

- The Company should make efforts to operate the Powerhouses within the parameters prescribed by the regulatory authority to keep the cost of generation at desired level and avoid generation loss.
- The Company should improve its coal planning and management to ensure availability of good quality coal at economical rates to avoid generation loss and to reduce generation cost.
- The Company should strictly adhere to norms of AOH/COH and consider including a clause / timeline in the contract to bind the Original Equipment Manufacturer (OEM) for timely completion of work.
- The Company should install updated equipment to restrict emission within MoEF&CC norms and improve its ash disposal/utilisation strategy to ensure strict adherence to the environmental norms and regulations.

CHAPTER – V
MADHYA PRADESH POWER TRANSMISSION COMPANY LIMITED

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MADHYA PRADESH POWER TRANSMISSION COMPANY LIMITED

Compliance Audit on "Construction of Lines and Sub-stations by Madhya Pradesh Power Transmission Company Limited (MPPTCL)"

Summary

The Compliance Audit of the Madhya Pradesh Power Transmission Company Limited was taken up during April 2022 to December 2022 for scrutinising the records pertaining to the period 2019-20 to 2021-22 at the Head office of the Company at Jabalpur and eight out of 17 circle offices including construction circle, maintenance circle, and testing & communication circles.

Audit scrutinised the records pertaining to the planning and project formulation, award, and execution of the construction of sub-stations and line during the period 2019-20 to 2021-22.

The broad categories of audit observations are outlined below:

- *Deficient planning in the construction of new Sub-stations;*
- *High incidence of tower collapse, improper investigation and non-reporting;*
- *Procurement of material without synchronising erection activities;*
- *Procurement of transformers from Turnkey Contractors (TKCs);*
- *Delay in execution of works and Non-levy of Liquidated Damages;*
- *Award of work for construction of sub-stations without ensuring availability of land; and*
- *Non-synchronisation of works and Undue favour to contractors.*

These instances of shortcomings have an overall impact of ₹ 99.96 crore.

5.1 Introduction

The Madhya Pradesh Power Transmission Company Limited (Company), Jabalpur, was incorporated in November 2001 as a wholly owned government company under the administrative control of the Energy Department (Department), Government of Madhya Pradesh (GoMP) on unbundling of the erstwhile Madhya Pradesh State Electricity Board (MPSEB). The Company is entrusted with the construction and maintenance of Extra High Tension[1] (EHT) sub-stations and transmission lines of 132, 220 and 400 kilovolts (kV) in the State of Madhya Pradesh for transmitting the power to the power distribution companies (DISCOMs)[2].

[1] EHT transmission systems are used to transmit electric power over relatively long distances, usually from a central generating station to main sub-stations.

[2] In addition to the DISCOMs, the Company supplies power to the Special Economic Zone (SEZ) and Western Central Railways (WCR).

5.2 Organisational Set-up

The Management of the Company is vested with a Board of Directors comprising six members (one independent and two GoMP Nominee Directors), including the Managing Director (MD). The day-to-day operations are carried out by the MD, who is the Chief Executive of the Company, with the assistance of the Director (Technical) and Chief Financial Officer (CFO).

5.3 Audit Objective

The Compliance Audit (CA) was conducted to assess whether the projects of construction of sub-stations and lines were conceptualised properly, awarded economically and transparently and executed expeditiously and efficiently.

5.4 Audit Criteria

The audit criteria adopted for assessing the audit objectives were:

- The long-term plan, annual plan, project DPRs and Guidelines for Capital Expenditure (CAPEX);
- The Manual of Transmission Planning Criteria (MTPC) issued (January 2013) by Central Electricity Authority (CEA), CEA (Grid Standard) Regulations, 2010 and Grid Connectivity Standards, 2007;
- Recommendations of Task Force on transmission projects constituted (February 2005) by the Ministry of Power, Government of India (GoI), Manual of the Company, and circulars issued by Company/ State Government/ Central Government;
- Norms/guidelines issued by Madhya Pradesh Electricity Regulatory Commission (MPERC)/ Central Electricity Authority (CEA) and Funding Agencies;
- Recommendations of the committee constituted (November 2001) by the Ministry of Power, GoI, recommending “Best Practices in Transmission”; and
- Agenda/Minutes of Board of Directors (BoD) meetings of the Company.

5.5 Scope and Methodology of Audit

A Performance Audit on the construction of extra high tension (EHT) sub-stations and transmission lines by the Company was last included in the Audit Report (Commercial) of the Comptroller and Auditor General of India for the year ended March 2017, Government of Madhya Pradesh (Audit Report no 3 of 2018). The Committee on Public Undertakings (COPU) discussed the Report in August 2019 and its recommendations are awaited (February 2023).

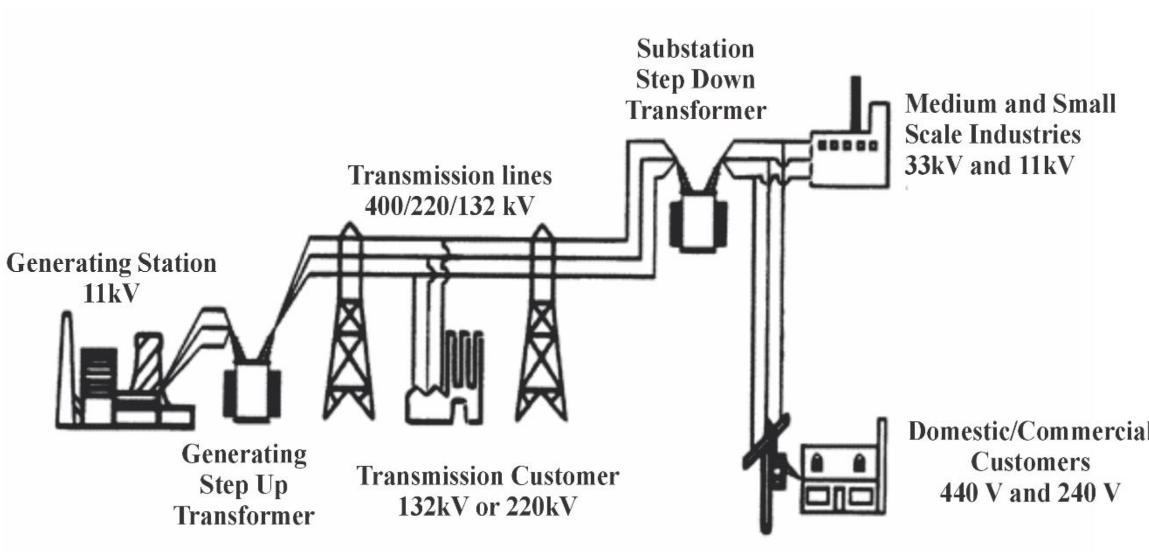
The current Compliance Audit covers the issues relating to the construction of EHT sub-stations and transmission lines (132 KV, 220 KV and 400 KV) which, inter alia, included formulation and planning of projects, procurement, construction and commissioning of sub-stations and transmission lines during the years 2019-20 to 2021-22. The Head office of the Company and three[3] (out of five) EHT construction Circle Offices along with five[4] (out of 12) Testing and Communication (T&C) and EHT Maintenance Circle were selected for detailed scrutiny of records wherein audit selected and test checked 25 turnkey work contracts valued at ₹ 2,787.16 crore (68 *per cent*) based on stratified random sampling method out of 57 turnkey work contracts of ₹ 4,076.95 crore executed during 2019-20 to 2021-22.

Audit objectives, criteria, scope and methodology, etc., were explained to the Company during the entry meeting (March 2022). Replies to the audit findings from the Government were received in May 2023 and the same has been considered while finalizing the Report. The Exit meeting was held on 30 May 2023.

5.6 Brief description of the Transmission Process

Electricity transmission is the bulk transfer of power over long distances at high voltages, generally at 132 KV and above. EHT sub-stations are facilities for stepping up and down voltages from one level to another, connecting electric systems and switching equipment in and out of the system. Electric power generated at relatively low voltages in power plants is stepped up to high voltage before transmission to reduce transmission loss and increase grid efficiency. Voltages are again stepped down to low voltage for distribution to the consumers. The distribution system includes lines, poles, transformers and other equipment required to deliver electricity at specific voltages. A pictorial representation of the transmission process is as below:

Chart 5.1: Transmission process of electricity



[3] Indore, Ujjain and Gwalior.

[4] Three T&C circle Office namely Indore, Ujjain, Gwalior and two EHT Maintenance circle office i.e. Jabalpur, Indore.

5.7 Transmission system and capacity

The major elements of transmission systems are transmission lines and sub-stations, which cater to the power demand of downstream networks of distribution licensees. Increased demand for power necessitates strengthening the transmission system by constructing new sub-stations, adding capacity at existing sub-stations and laying new transmission lines to the load centers. The system expansion is planned gradually as per the load growth scenarios projected based on historical data. The growth of transmission capacity[5], increase in the number of sub-stations and the expansion of the transmission network are correlated.

(i) The status of the transmission system of the Company as a whole for the last three years ending 31 March 2022 is summarised in **Table 5.1** below:

Table 5.1: Details of the transmission system available with the Company

Sl. No.	Particulars/Years		31.03.2019	31.03.2020	31.03.2021	31.03.2022
1.	Number of Sub-stations (at the end of the year)	(in number)	362	375	396	407
2.	Transformation capacity of all categories of sub-stations (at the end of the year)	(in MVA)	60,387.5	64,762	70,512	73,931
3.	Length of transmission lines (at the end of the year)	(in ckm[6])	35,229.366	36,751.75	38,045.84	39,330.886
4.	Actual Power Transmitted on MPPTCL Network	(in MUs)	71,945	72,278	79,385	82,079

During 2019-20 to 2021-22, the Company constructed 45 new sub-stations (SSs) of 13,543.5 MVA capacity and 4,101.52 ckm transmission lines. As a result, the transformation capacity increased by 22.42 *per cent*, the length of transmission lines increased by 11.64 *per cent*, and the actual power transmitted increased by 14.08 *per cent*. The Company invested ₹ 5,410.94 crore during the period from 2019-20 to 2021-22 on account of augmenting/ expanding its transmission systems.

Further, the construction of seven new sub-stations and capacity augmentation of 51 sub-stations were in progress at the end of 2021-22**.**

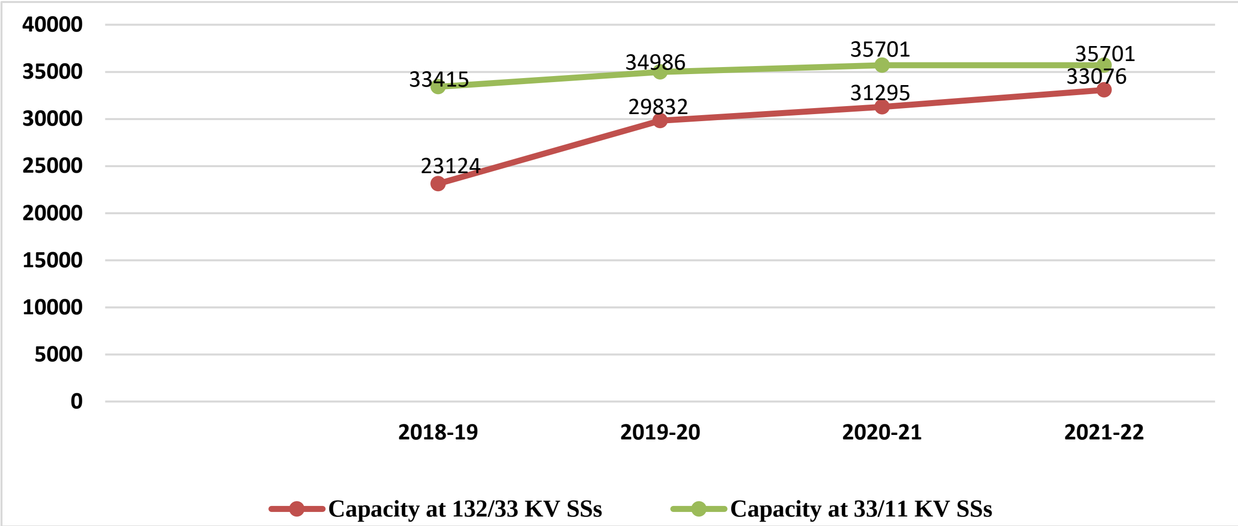
(ii) Transformation Capacity of the Company vis-à-vis that of DISCOMs

Para 3.7 of the MTPC provides that the transmission utility shall be responsible for meeting the requirements of the DISCOMs/ SEZ/ WCR. The 132 kV SSs of the Company have a direct interface with the 33 kV SSs of DISCOMs/ SEZ/ WCR. The year-wise position of the transformation capacity of 132 KV SSs of the Company as a whole *vis a vis* 33kV SSs of the DISCOMs/ SEZ/ WCR is depicted in the **Chart 5.2** below:

5 Transmission capacity refers to the amount of electric power that can be passed through a transmission network from one place to another.

6 Circuit Kilometer (ckm) means one kilometer of electrical transmission circuitry, including all necessary conductors, insulators and supporting structures required to provide a complete circuit or double circuit.

Chart 5.2: Year wise growth in transformation capacity of 132/33 KV SSs of MPPTCL vis a vis capacity of 33/11 KV SSs of DISCOMs/ SEZ/WCR



(Note: Figures for 33 KV SSs for 2021-22 have not been confirmed by the Company up to February 2024)

Audit Findings

The Audit findings are discussed in the succeeding paragraphs:

5.8 Consistent gap in the transmission network at the interface of the Company and its consumers

The Manual on Transmission Planning Criteria (MTPC) provides that the installed capacity of the sub-station (SS) should be in such a way that the connected load should not exceed 80 *per cent* of the installed capacity of SS.

Audit observed that the Company invested ₹ 5,410.94 crore from 2019-20 to 2021-22 to augment/expand its transmission systems. However, as indicated in **Chart-5.2** above, the transformation capacity of 132/33 KV SSs of the Company vis a vis 33/11 KV SSs of its consumers always remained low during the period 2019-22. Though the transformation capacity increased from 23,124 MVA (69.20 *per cent* of the transformation capacity of its consumers) to 33,076 MVA (92.64 *per cent* of the transformation capacity of its consumers) during the audit period, it could never match the capacity of its consumers due to which the risk factor of additional downstream loading upon the transmission network could not be denied which can adversely affect the system strengthening of the company also.

In reply, the Government stated (May 2023) that transmission capacity added by the Company is not directly related with capacity addition by DISCOMs, therefore capacity mismatch will always be there.

The reply is not cogent as the Company's transmission network is only to serve its consumers, and their capacities should be in sync for smooth transmission.

5.9 Project planning

The planning wing of the Company, headed by the Chief Engineer (Planning & Design), is the nodal wing for planning new transmission projects of sub-stations and associated lines. The expansion of the transmission system is planned for long-term requirements. It should consider the long-term plans of Generation companies, Distribution companies and feedback / persistent congestion reports of the State Load Dispatch Centre[7] (SLDC). The following deficiencies have been noticed:

- Under the Guidelines for Capital Expenditure (CAPEX) issued (July 2005) by the Madhya Pradesh Electricity Regulatory Commission (MPERC), the Company was required to develop a ten-year perspective plan and submit five-year plans and annual CAPEX plans to MPERC containing the details of all the projects to be executed. The Company submits its five-year plan as well as annual plan to the MPERC. However, it had not developed any ten-year perspective plan for the State Transmission System. As such, the Company failed to adhere to these regulatory requirements.

- As per clause 1.21 of the Guidelines for Capital Expenditure (CAPEX) issued by MPERC, the strategic/long-term transmission planning is required to assess the areas where the generation is likely to grow and areas where load demand will grow in a periodical manner so that the transmission system at any point of time may be capable of meeting the demand in every corner of the State. Audit observed that the Company did not have any Project Planning and Management Manual for standardisation and directions for Project Planning. This led to ad-hoc decision-making in planning the project works and their execution, as discussed in para 5.9.1, 5.9.2, 5.11.1 and 5.11.3 below.

- The Company prepared its Capital Investment Plan for the transmission works for 2017-22, which was approved (May 2018) by MPERC for 783 works amounting to ₹ 9,889.15 crore (including ₹ 1,632.43 crore for other misc. works). For the years 2017-19, against the planned expenditure of ₹ 3,756.47 crore, an amount of ₹ 3,538.47[8] crore was incurred. To align the period of the CAPEX Plan with the Tariff Regulation period [9] the Company revised the CAPEX Plan to 2019-24 for ₹ 8,480.52 crore[10]. During the period 2019-22, the Company constructed 45 new sub-stations of 13,543.50 MVA capacity and 4,101.52 ckm transmission lines and incurred expenditure of ₹ 5,410.94 crore on account of augmenting/ expanding its transmission system.

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7 SLDC is the nerve center for Madhya Pradesh Power System. Its principal activities include real-time operation of intra –state grid, i.e. Madhya Pradesh Grid.

8 ₹ 2,286.86 crore for 267 works completed and ₹ 1,251.61 crore for 516 works incurred during 2017-19.

9 The control period of the MPERC (Term and Conditions for Determination of Transmission Tariff) Regulation, 2020.

10 ₹ 6,147.37 crore for 516 works already approved in the previous CAPEX Plan, ₹ 1,999.47 crore for 215 new works planned for 2019-24, and ₹ 333.67 crore expended for 114 sub-works till March 2019.

Audit observed that due to the above revision of the CAPEX plan, the Company deferred 182 (out of 516) works of ₹ 623.81 crore for execution during 2022-24. Besides, there was a cost overrun of ₹ 611.41 crore in respect of 516 works. Thus, the deferment of the CAPEX plan not only delayed the works to enhance the capacity to match with that of the consumers but also resulted in cost overrun.

The Government replied (May 2023) that identified requirement of system for next ten years is dynamic and as such approval of the same is not taken from any agency or MPERC. However, no record indicating such identified requirement was produced to Audit. Government further stated that long-term transmission system of the State is planned following CEA transmission planning criteria and other codes and regulations issued by CERC/MPERC *etc*. This, however, does not negate the need for standardisation and directions for Project Planning for effective implementation through use of Manual.

Government also stated that depending upon requirement, the planned works were deferred to be taken up subsequently. The reply appears to be an afterthought as the 516 works were planned by the Company under the CAPEX Plan for the period 2017-22 on Need Basis only but later, these were deferred which resulted in cost overrun.

5.9.1 Deficient planning in the construction of new Sub-stations

The Manual on Transmission Planning Criteria (MTPC) provides that the installed capacity of the sub-station (SS) should be in such a way that the connected load should not exceed 80 *per cent* of the installed capacity of SS. The Company was also required to go for capacity addition/ augmentation to relieve the stress on overloaded SSs and to take care of future load requirements. Simultaneously, it had to synchronise its planning with the availability/ planned construction of downstream 33kV SSs at the interface of the concerned DISCOMs. The Company could not do so effectively, as is evident from the following:

- Three[11] new SSs of 220kV and two[12] new SSs of 132kV constructed at the cost of ₹ 108.41 crore (total capacity 890 MVA) became overloaded within three years of their commissioning as the connected load remained in the range of 87.50 *per cent* to 95.31 *per cent* of their installed capacity.
- Five[13] new SSs of 132kV constructed at the cost of ₹ 61.44 crore (total capacity 276 MVA) had idle capacity even after three years of their commissioning as the connected load remained in the range of 20.63 *per cent* to 30.00 *per cent* only of their installed capacity.
- Six[14] new SSs of 132kV and 220kV constructed at the cost of ₹ 104.19 crore (total capacity 473 MVA) commissioned during May 2020 and March 2022 were yet to be

[11] 220 kV Sheopur, 220 kV Kukshi and 220 kV Sagar (at 400 kV Sagar).
[12] 32 kV Khujner and 132 kV Morwan.
[13] 132 kV Ss- Gudgaon, Tendukheda, Gorakhpur, Vikram Udyogpuri, and Natrip.
[14] 220 kV Budhni, 220 kV Ratangarh, 132 kV Ss Bargi, Mahawadiya, Gormi and Sinhawal.

connected (March 2022) with DISCOMs due to delayed/non-construction of respective downstream 33 kV SSs by the DISCOMs and the company failed to coordinate with respective DISCOMs.

Sixteen[15] SSs (35.56 *per cent*) out of the 45 new SSs were either overloaded or underutilised due to absence of ten-year perspective plan and annual plans.

While agreeing with the above facts, the Government assured (May 2023) to take due care in future for planning of strengthening the transmission network to match the load requirement of the DISCOMs.

5.9.2 High incidence of tower collapse, improper investigation and non-reporting

The Transmission Line Manual (1995) of the Central Board of Irrigation and Power (CBIP) provides that while planning and designing the transmission towers, all factors, including design based on load, the strength of line components, and wind load on transmission lines should be considered. Further, the design will be finalised based on the terrain effects and topography of line corridors, wind speed zone, and anti-cascading checks on all tower angles.

Audit noticed that during 2019-20 to 2021-22, a total of 104 towers collapsed in 29 incidents, as tabulated in **Table 5.2** below:

Table 5.2: Details of number of incidents of towers collapse and power supply disrupted

Sl. No.	Year	Number of incidents of tower collapse category wise				Supply of Power disrupted (in hours)	No. of Towers Collapsed	No. of Cases investigated	Time taken for investigation (in days)	Total Incidence Reported to CEA
		400 KV	220 KV	132 KV	Total					
1.	2019-20	4	4	0	8	30788.70	42	6	169- 227	6
2.	2020-21	0	6	8	14	8466.28	41	0	No Report Provided	0
3.	2021-22	1	3	3	7	4555.48	21	1	80	1
Total		**5**	**13**	**11**	**29**	**43810.46**	**104**	**7**	**80-227**	**7**

From the above table, it can be seen that out of 29 incidents, the Company investigated only seven incidents that too with a delay of 80 to 227 days. However, these incidents were required to be reported within 15 days as per regulation issued by CEA. The collapse of towers resulted in interruption of power supply ranging between 4,555 hours and 30,789 hours. Out of the 29 incidents of tower collapse, the management reported only seven incidents to BoD and CEA with a proposal to strengthen the towers of 400kV lines with an estimated cost of ₹ 42.98 crore. It was also noticed that 18 incidents (220kV and above) out of 29 incidents were reportable to CEA; the Company reported only seven incidents.

From the available investigation reports, Audit observed that before planning the transmission line works, the Company was required to analyse wind-zone-wise terrain-specific designing of towers so that the quality and safety assurance could be ensured and the occurrence of the tower

[15] Four new SSs out of 12 new SSs of 220 kV and 12 new SSs out of 30 new SSs of 132 kV.

collapsing and interruption of power could be avoided. However, it failed to do so, which resulted in high incidence of tower collapse.

Further, after analysing the incidents reported in the last twenty years, it was observed that a total of eight incidences of tower collapse on 400kV lines occurred during 2003-2022 and out of these, five incidences of tower collapse occurred during the audit period *i.e.*, 2019-2022. Further, it was also observed that five towers of two[16] critical Power Evacuation lines collapsed twice within a short span of two years viz. in 2019-20 and 2021-22. Thus, the company failed to adhere to the guidelines issued by CBIP resulting in higher incidents of collapsing of towers during the period from 2019-20 to 2021-22.

The Government replied (May 2023) that directives have been issued (June 2022) to the concerned department to investigate the incidents thoroughly and submit the investigation reports expeditiously. Further during the Exit meeting (May 2023), Management stated that it was taking up a review of old lines as per the latest wind zone guidelines.

5.10 Procurement Management

The material required for the expansion of the transmission network as well as for Operation & Maintenance (O&M) works of the Company is procured by the Procurement wing of the Company through open tenders. The deficiencies noticed in the procurement of material by the Company are discussed below:

5.10.1 Procurement of material without synchronising erection activities

In order to minimise the cost, the supplies/ delivery of materials should be synchronised with the erection activities. Procuring materials before their actual requirement would lead to blockage of funds and payment of avoidable interest as the Company avails 70 *per cent* of the project cost as loans with interest rates ranging between 11.50 *per cent* and 12 *per cent*.

Audit observed that in 45 cases the material valuing ₹ 197.63 crore was received by the Company much before its projected utilisation. As a result, the material remained idle for a period ranging between one month and 21 months, after allowing one month as a lead period[17] as detailed in **Appendix 5.1**. This resulted in an avoidable financial burden of interest of ₹ 7.98 crore[18] and risk of damage/theft etc. also remained with the Company for a longer period.

The Government replied (May 2023) that erection activities can start only after receipt of accessories and other equipment associated with transformers. As per the circular of 2005, the time allowed for commissioning is three to six months. Further, the reasons for the delay were the non-availability of shutdowns, RoW and line crossing issues, the COVID-19 pandemic,

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[16] 400 kV SSTPS-Pithampur CKT-1 and 400 kV SSTPS-Pithampur CKT-2 (Power evacuation line).

[17] The Company has no work manual wherein lead period for execution of work was described however, the audit has considered one month as lead period for transformer erection work in the sub-station.

[18] Calculated at the rate of 11.50 *per cent* being the rate for 70/40 *per cent* of the value of the material till June 2022 after allowing one month period as lead time for erection. (70 *per cent* for Other than KFW funded works and 40 *per cent* for KFW funded works).

excessive rain and transformer oils parameters issues etc. The delay of one to three months may be considered as normal.

The reply of the Government is not convincing as the Company should have synchronised its activities so that the materials procured don't remain unutilized for want of accessories/ associated equipment or delayed installation causing loss of interest and exposure to the risk of theft/damage etc. Further, even after considering a period of six months for commissioning, there were delays in 29 cases resulting in a financial burden of interest of ₹ 4.02 crore.

Audit recommends that the 2005 circular is of the pre-unbundling era, the Company should again consider the issue and devise an optimum timeline for the commissioning of transformers, which may be included in the Project Planning and Management Manual.

5.10.2 Procurement of transformers from Turnkey Contractors (TKCs)

Para 5 (i) of Best Practices in Transmission Systems (BPITS) notified by MoP, GoI stipulates that sub-station (SS) may be packaged under turnkey contracts except transformer/ reactors which may be procured separately and provided to the turnkey contractor during the execution of work.

The Company, however, packaged nine turnkey contracts including the supply of 27 transformers for which no reasons were found on record. It was observed in Audit that the cost of transformers supplied by the turnkey contractors was comparatively higher than the transformers of the same capacity procured by the Company directly during the same period. This resulted in an extra payment of ₹ 6.68 crore as detailed in **Table 5.3** below:

Table 5.3: Details of transformers supplied by TKC and payment made before execution by Company

(₹ in crore)

Sl. No.	Tender No.	Name of TKC firm	Transformer capacity (in MVA)	Amount paid to TKC for Transformers	Difference w.r.t. own procurement cost	Days[19] between receipt and commissioning	Days between payment and commissioning	Loss of interest
1.	TR/36	M/s Asiatic Traders	40	2.14		242	105	0.05
2.	TR/36	M/s Shayam Steel	160	5.29	0.05	47		0
			63	3.38	0.62	222	21	0.02
			50	3.14	0.61	420	383	0.27
3.	TR/37	M/s Man Structure	160	4.59		36	373	0.38
			50	2.72	0.19	53	34	0.02
			50	2.72	0.19	558	522	0.31
4.	TR/38	M/s Shyam Steel	160	4.95	0.00			
			50	2.93	0.00			
			63	3.16	0.40	71	49	0.03
			63	3.16	0.40	287	219	0.15
			63	3.16	0.40	55		0.00

19 In excess of 30 days.

Sl. No.	Tender No.	Name of TKC firm	Transformer capacity (in MVA)	Amount paid to TKC for Transformers	Difference w.r.t. own procurement cost	Days[19] between receipt and commissioning	Days between payment and commissioning	Loss of interest
5.	TR/60	M/s Techno electric and Engineering	50	2.76	0.23	186	174	0.11
			50	2.76	0.23	44		0.00
			50	2.76	0.23	118	53	0.03
			50	2.76	0.23	62		0.00
			50	2.76	0.23	151	112	0.07
			50	2.76				0.00
			50	2.76	0.23	259	135	0.08
			50	2.76	0.23	145	181	0.11
6.	TR/61	M/s R. S. Infroproject	50	2.73	0.20	278	125	0.08
			50	2.73	0.20	128	42	0.03
			50	2.73	0.20	198	101	0.06
			50	2.73	0.20	124	65	0.04
7.	TR/206	M/s Amara Raja Power System	315	10.76	1.32	392	103	0.24
8.	TR/39	M/s Bajaj Electricals	50	2.60	0.07	105	2	0.00
9.	TR/47	M/s Kshema Power and Infra	50	2.55	0.02	268		0.00
	Total			**90.25**	**6.68**			**2.07**

Further, 19 transformers were supplied on-site by the Contractor much before their installation for which payment of ₹ 63.08 crore was made to suppliers. These transformers remained idle for a period ranging between 36 days and 558 days, after allowing one month as a lead period, leading to a loss of interest of ₹ 2.07 crore. The Company, thus, not only contravened the recommendation of the BPITS but also incurred an avoidable expenditure of ₹ 8.75 crore (₹ 6.68 crore + ₹ 2.07 crore) for procuring transformers from the turnkey contractors.

The Government replied (May 2023) that report of the Committee issued by CEA regarding BPITS is in the form of advisory only. Further, the transformers were included in the turnkey contracts to ensure coordination of the delivery of power transformers with the pace of progress of execution of work and timely commissioning. Besides, as the payments against the supply of transformers are being made after the completion of erection activities, there is no loss of interest. However, the company has now decided that the scope in future turnkey contracts shall be excluding power transformers and the same shall be procured by floating separate supply tender.

The fact remains that the delayed acceptance of BPITS to purchase transformers separately resulted in an extra expenditure of ₹ 6.68 crore. Further, the Company's assertion that there is no loss of interest is factually incorrect as payments have been made before the erection of the transformers resulting in financial burden to the company amounting to ₹ 2.07 crore in the form of interest payment to the funding agency.

5.11 Execution of turnkey projects

A transmission project consists of three components viz. the Sub-station (SS), the feeder lines of SS and outgoing lines to feed other transmission/distribution SSs. The Company designed packages for the implementation of transmission projects and awarded these packages on a turnkey basis to the contractors selected through open bidding.

During the period 2019-20 to 2021-22, 57 turnkey contracts for the Construction of EHT Sub-stations, feeder bays and EHV transmission lines at a total cost of ₹ 4,076.95 crore were being executed, of which the Audit selected 25 Nos. turnkey contracts amounting to a total ₹ 2,787.16 crore (68 *per cent* of the total cost of works) for detailed scrutiny.

5.11.1 Delay in execution of works

Timely completion of the work is the essence of achieving the overall objectives of any Scheme/ Project. The selected 25 turnkey contracts (details in **Appendix 5.2**) involved a total of 171 works for the construction of sub-stations and transmission lines. The status of these 171 works as on 31 December 2022 is summarised in the following **Table 5.4**:

Table 5.4: Status of works execution

Sl. No.	Particulars of works	Works taken up	Works Completed within time	Works completed with delay	Works in progress	Works commenced but stopped	Works still to be commenced
1.	Sub-stations	61[20]	29	30	0	1[21]	1
2.	Lines	110	32	67	6	2	3
Total		**171**	**61**	**97**	**6**	**3**	**4**

It could be seen from **Table 5.4** above that 61 works out of total 171 works were completed within the scheduled time and the remaining 110 works were either completed with delay or still running with delay. Further, of these 110 delayed works, in the case of 23 works, the delay was attributed to the Company for various reasons like delay in the approval of project Profile/ Layout, delay in getting Forest approval/ clearance, not sorting out ROW on the part of Company, non-clearance from Government side, non-supply of material to the contractor, delay in handing over of sites, awarding of works without ensuring land availability etc. Whereas, in 26 works, the delay was completely attributed to the Contractor for various reasons like poor progress of work, deployment of inadequate manpower by the contractor at the site, not sorting out ROW problem by the contractor, delay in finalization of technical parameters etc. and in remaining 61 works, the delay was simultaneously attributed to the Company as well as contractors for various reasons as mentioned above.

While confirming the facts the Government replied (May 2023) that there were numerous reasons, including the COVID-19 pandemic for the delay in the execution of the projects.

[20] This includes the construction of 46 new sub-stations and the augmentation of 15 sub-stations.
[21] Dropping of Indore Super Corridor Plan by GoMP.

The reply of the Government is not cogent as most of the reasons were controllable and the Company could have minimised the delays through proper planning and monitoring of projects.

Out of 23 works, five works are discussed in the subsequent paragraph 5.11.1.1 where the delay was solely attributed to the non-ensuring of land by the Company.

5.11.1.1 Award of work for construction of sub-stations without ensuring availability of land

To complete the Transmission projects within the targeted period, the Task Force on the Transmission Projects[22] recommended (August 2005) that activities for vendor/ contractor selection, selection of land and environment & forest clearance etc. for the clear site should be carried out in parallel by the State Transmission Utilities.

Audit observed that in five out of the above 46 new substations including one inordinately delayed project of 220 kV Gora Bazar which were to be constructed but the Company failed to hand over clear land to the turnkey contractor in time as detailed in **Table 5.5** below:

Table 5.5: Details of substations not completed on time due to non-availability of land

Sl. No.	Name of sub-stations	Date of Award and Cost (₹ in crore)	Date of handing over of land	Scheduled date of completion / actual date of completion	Total delay as on 31/12/2022 due to non-availability of land (in months)	Reasons for non-availability of land
1	2	3	4	5	6	7
1.	132 kV, Vijay Nagar, Jabalpur	31.07.2019 (32.83)	-	30.01.2022/ Not Completed	41	GoMP withdrew allotted land due to a change in policy.
2.	220 kV at super corridor, Indore	25.01.2019 (45.48)	-	24.01.2021/ Not Completed	47	Land dispute with Forest Department.
3.	132 kV, Dheemarkheda	04.10.2018 (7.71)	July 2020	23.12.2020/ 09.08.2022	21 (till July 2020)	Delay in land acquisition by the Company. Alternate land was allotted to the Company (July 2020) and Substation was commissioned on 09.08.2022
4.	132 kV, Kshepra Vihar	11.02.2019 (12.18)	-	10.01.2021/ Not Completed	47	Land dispute with Railway Department
5.	220 kV Gora Bazar	10.09.2012 (10.56) 13.12.2018 (12.73)	April 2018	09.05.2014/ 21.03.2020	67 (till April 2018)	The substation was commissioned on 21.03.2020

Thus, the Company failed to adhere to the recommendations of the Task Force of CEA to execute activities in parallel and due to the non-availability of land, the construction of three SSs could

[22] Constituted (February 2005) by the Central Electricity Authority (CEA), Ministry of Power, GoI.

not be started so far (December 2022) even after a lapse of time ranging between 41 months and 47 months from the date of issue of LOIs.

In one case, for the construction of 220 kV Gorabazar sub-station, the Company invited tender in November 2011 and awarded the work in September 2012 to M/s Shreem Electric Ltd., Kolhapur for ₹ 10.56 crore. The Company was aware that the land on which it had planned the construction was Defence land. When the contractor started the construction activities the Defence Authorities stopped the work and insisted the Company obtain permission from the Ministry of Defence for use of its land. Thereafter, the Company submitted (July 2015) the request to the Defence Authorities which allotted 22,500 sq. meter land for SS construction in April 2018. When the Company requested the contractor to start the work, he refused to do so at the same rate due to the passage of six years. So, the Company invited (September 2018) a fresh tender for the construction of Gorabazar SS and awarded (December 2018) to M/s Vihan Enterprises, Bhopal at ₹ 12.73 crore with a time schedule of 18 months.

Audit observed that the Company had failed to ensure the possession of required land from the Defence Authorities before inviting tender for construction of the work. This resulted in a delay in the completion of work by more than five years and an enhancement of cost by ₹ 2.17 crore. Further, the entire tender process done in the year 2011-12 became ineffective and unfruitful.

The Government replied (May 2023) in all five cases that lands were allotted by the competent authority but the works could not be initiated due to objections raised by landholders/possessors of the land.

The reply of the Government is not acceptable as the Company was to award the TKC only after ensuring the availability of land along with all probable site clearance.

5.11.1.2 Non-levy of Liquidated Damages

According to Liquidated Damage (LD) clause (clause.11.2 of the Contract agreement) of the turnkey contracts, in case the work is not completed within contractual time as per the approved Bar Chart, the LD shall be levied at the rate of 0.5 *per cent* of the contract price of each work per week or part thereof subject to maximum 10 *per cent*.

Audit observed that out of the selected 171 works of construction of sub-stations and lines under 25 turnkey contracts, in 10 works of construction of sub-stations and lines (selected as sample bases) under eight turnkey contracts the actual completion of the work was delayed ranging between one month and 30 months but the Company did not levy an amount of ₹ 69.96 crore as liquidated damages upon the contractors for the delay in the completion of works attributed on the part of contractor nor was recovered/ deducted from their running bills as per clause mentioned in the contract agreement. The company must check all those cases and impose and recover LD accordingly.

In reply, the Government stated (May 2023) that in eight works covered in seven turnkey contracts, time extension was granted without levy of LD due to various reasons viz. delay in handing over of site, allotment of additional works, Covid-19, non-availability of shut down etc. whereas two works of one turnkey contract were terminated and LD has been recovered from the contractor.

The reply is not to the point as the Government has pointed out the delays by the Company only. Whereas audit has worked out LD for the delays on the part of the Contractors. Further, the levy of penalty is part of the standard terms and conditions of the contract which cannot be diluted for the award of additional work or grant of time extension for completion of work.

5.11.2 Non-synchronisation of works

A transmission project consists of three components viz. the Sub-station, the feeder lines of SS and outgoing lines to feed other transmission/distribution SSs. The delay in the completion of any component of the project leads to the non-utilisation of the entire transmission project and also results in a blockade of funds expended on the unutilised components. All the construction activities of these three components should be synchronised in such a way that the work should be completed together in time. However, the Company failed to synchronise the construction activities of these three components as detailed below:

A) Sub-Stations completed but not the lines and *vice-versa*

Audit observed that in the case of five transmission work projects, SSs and lines valued ₹ 95.79 crore were completed but the works related to the associated SSs and lines (which were awarded to another contractor) were incomplete (December 2022) as detailed in the **Table 5.6** below:

Table 5.6: Details of non-completion of associated works of the SSs and lines

Sl. No.	Name of work completed	Date of Award of work (Scheduled date of Completion) Actual Date of completion	Cost of completed works (₹ in crore)	Name of associated work completed subsequently	Date of Award of associated work (Scheduled date of Completion) Actual Date of completion	Period the associated works remained unutilised till December 2022 (in months)	Loss of interest[23] (₹ in crore)
1.	132/33kV Sub-station at Bichhiya	11-02-2019 (10-04-2021) 23-10-2020	15.11	132kV DCSS line from 132kV Mandla to Bichhiya	11-02-2019 (10-04-2021) 27-06-2022	20	2.07
2.	Stringing of conductor on Nainpur-Ghansaur 132kV RTS line	11-02-2019 (10-04-2021) 13-10-2020	1.18	132/33kV Sub-station at Ghansor	11-02-2019 (10-04-2021) 29-07-2021	10	0.08
3.	Construction of 132 kV S/s at Orchha	05-10-2018 (23-03-2021) 31-05-2022	13.63	132kV Prithvipur-	05-10-2018 (04-10-2020)	7	0.65

[23] Calculated at the rate of 11.5 *per cent* on 70 *per cent* of the cost of work completed for the unutilised period.

				Orchha DCSS line	Not Completed		
4.	Panagar 220kV-Dheemarkheda 132kV DCSS line	05-10-2018 (04-10-2020) 25-03-2022	34.52	Construction of 132 kV S/s at Dheemarkheda	05-10-2018 (23-03-2021) 09-08-2022	5	1.06
5.	132kV DCDS line from 220kV S/s Budhni to Mohasa (Babai)	12-02-2019 (24-04-2021) 31-05-2022	31.35	132kV Sub-station Mohasa Babai	12-02-2019 (24-04-2021) Not Completed	7	1.50
Total			**95.79**				**5.36**

***(Source:** Information provided by the Company.)*

Although these works were awarded separately, these should have been synchronised for simultaneous completion. The Company, however, failed to do so and as a result despite incurring the expenditure of ₹ 95.79 crore for the above five works, the project remained unutilised (December 2022) for a period ranging from five months to 20 months.

The Government while accepting the Audit observation submitted (May 2023) that in all five cases, the reasons for the delay in execution included late receipt of forest clearance, not granting of blasting permission, line crossing of the river where towers were erected on a special type of foundation etc. which were beyond the control of the Company. Further, the Management agreed that through effective monitoring the delay could be minimised and assured to take care in future.

B) Completion of Line without feeder bays and *vice versa*

For the Construction of 220kV and 132kV Sub-stations, associated feeder bay and Transmission Lines the Company awarded (July 2017) the contract to M/s Larsen and Toubro Limited, Chennai with a total financial commitment of ₹ 186.46 crore for a total of 22 sub-works including five sub-works amounting to ₹ 13.70 crore. The Scheduled date of completion was 23.10.2019 considering 27 months from the effective date i.e. 24 July 2017.

Audit observed that though it was a composite work contract, the Company could not ensure synchronisation of the sub-works to ensure timely completion of the work project. It was found that in five sub-works the feeder bays and lines valuing ₹ 13.70 crore were completed but the sub-works related to completed feeder bays and lines were still incomplete as detailed in the **Table 5.7** below:

Table 5.7: Details of completed and not completed sub-works of the Feeder Bays and lines

Sl. No.	Name of Work Completed	Actual Date of completion	Estimated cost (₹ in crore)	Name of Work	Actual Date of completion	Period remain Idle (in months)	Loss of Interest (₹ in crore)
1.	2 nos.132 KV Feeder Bays at Pansemal 132kV S/s	29-10-2018	1.99	132kV DCDS line from Sendhwa 220kV S/s to Pansemal 132kV S/s	07-07-2021	33	0.44
2.	2 nos 220kV Feeder Bays at Dhar 220kV S/s	06-07-2019	3.74	220kV DCDS from Kanwan 220kV S/s to Dhar 220kV S/s	07-09-2020	14	0.35

3.	Second circuit stringing of 132kV Jhabua – Meghnagar 132kV DCDS line	25-03-2018	4.48	1 No. 132 KV feeder bay at existing 132kV Sub-station Jhabua and 1 No. 132 KV feeder bay at 132kV Sub-station Meghnagar	06-01-2019	10	0.29
4.	1 No. 132 KV feeder bay at existing Sub-station Rajgarh(D)220 and 1 No. 132 KV feeder bay at existing 132kV Substation Jhabua	19-12-2018	1.89	Second circuit stringing of 132kV Rajgarh (D) 220 – Jhabua 132kV DCDS line	20-11-2019	11	0.14
5.	Construction of 1 No. 132 KV feeder bay at existing Sub-station Rajgarh(D)220 and 1 No. 132 KV feeder bay at existing 132kV Sub-station Petlawad	15-12-2018	1.60	Second circuit stringing of 132kV Rajgarh (D) 220 –Petlawad 132kV Double Circuit Single Strung line	Not completed	49[24]	0.53
Total			**13.70**				**1.75**

***(Source:** Information provided by the Company.)*

It can be seen from the above table that the completed works of the above five projects valuing ₹ 13.70 crore were lying unutilised for a period ranging from 10 months to 49 months. Although the above works were executed under the same contract, the Company could not ensure to synchronise the completion of these sub-works together. Due to the non-utilisation of the above-completed works, funds of ₹ 13.70 crore remained blocked which also led to the avoidable payment of interest of ₹ 1.75 crore.

The Government, while accepting the Audit observation submitted (May 2023) that in these cases the reasons for the delay in execution were severe RoW problems, obtaining of NOC, existence of certified seed crop, de-scoping of the line work etc. In the Exit meeting (May 2023), Management agreed that through effective monitoring the delays could be minimised and assured to take care in future.

5.11.3 Undue favour to contractors

To execute the Transmission works the Company issued 21 work orders on a turnkey basis from July 2017 to March 2018. The contractors submitted the item-wise rates under five schedules[25] at the time of bidding for these works and the works were awarded to the bidder with the lowest total cost, Freight on Road (FOR) destination. These works were awarded after the implementation of the GST regime which was applicable from July 2017. As the GST subsumed many taxes, including Excise duty, Service tax, State VAT, CST, Entry tax etc., the Company revised the rates for these turnkey contracts to give the impact of these changes.

24 Till December 2022.

25 Item-wise rates were submitted under five schedules viz. (i) supply of materials for construction of sub-stations, (ii) supply of materials for construction of transmission lines, (iii) erection charges for construction of sub-stations (iv) erection charges for construction of EHT lines and (v) civil construction works.

Audit reviewed the revision of rates of these contracts and observed that at the time of bidding, the rates for civil construction works were to be submitted based on the SOR of MP Public Works department effective from 01.08.2014. The rates given in SOR were inclusive of all duties, octroi, taxes, royalty, insurance *etc*. Further, the State Government issued (24 August 2017) an amendment to SOR for Building works w.e.f. 01.08.2014. As per the amendment, it was directed to reduce the SOR rates by 10 *per cent* and then add the GST to make payments. The Company, however, while revising the orders did not reduce the SOR rates by ten *per cent* and instead reduced the rates between 1.75 *per cent* to 5.00 *per cent*, as offered by the contractors as input tax rebate. This resulted in undue favour to contractors by ₹ 7.68 crore in six cases.

The Government stated (May 2023) that the rates were in line with the circular dated 24 August 2017 of PWD, which was considered while arriving at estimated cost of civil works.

The reply is incorrect as the Company in contravention of the circular dated 24 August 2017 did not reduce the SOR rates by ten *per cent* before adding GST as directed in the circular, and thus, it fixed the rates on the higher side.

5.12 Conclusion

Audit observed that:

- In the absence of a Project Planning and Management Manual, the projects were not being conceptualised properly. The planning of the identified projects was inadequate resulting in sub-stations becoming overloaded within three years of commissioning on one hand and creation of idle capacity in other sub-stations on the other hand. It should also adhere to guidelines issued by Central Board of Irrigation and Power (CBIP).
- The Company did not put in place a mechanism for planning procurement in synchronisation with project execution. It should have followed the recommendations of the Ministry of Power.
- The Company failed to execute most of the projects within the scheduled time period. It should have a mechanism to review the progress of the construction of projects so that timely completion of the projects could be ensured. An amount of ₹ 109.49 crore of the Company also remained blocked with an avoidable interest cost of ₹ 7.11 crore. The Company also lacked any formal review mechanism for monitoring the projects that could help it in identifying potential bottlenecks and taking corrective action.

5.13 Recommendations

- The Company should have a Project Planning and Management Manual in place. It should have long-term planning for the transmission projects with due consideration of future requirements. The Company should adhere to the Manual on Transmission Planning Criteria as well as the Transmission Line Manual of CBIP.

- The Company should have a procurement plan in synchronisation with the execution of the projects. It should put in place a mechanism to ensure the strict compliance of provisions of the contracts by using scarce resources economically and in an efficient manner.
- The Company Guidelines (2005) provides a timeline for the commissioning of transformers, which is very old. The Company should consider the issue and devise an optimum timeline for the commissioning of transformers, which may be included in the Project Planning and Management Manual.
- The Company should initiate all parallel activities relating to the implementation of the project and synchronise implementation of the three components of transmission projects viz. the substation, the feeder lines of SS and outgoing lines to other transmission/distribution SSs.
- The Company should adopt the correct methodology during GST implementation in a manner to safeguard the financial interest of the Company.

Bhopal
The : 07 August 2024

(PRIYA PARIKH)
Accountant General (Audit II)
Madhya Pradesh

Countersigned

New Delhi
The : 08 August 2024

(GIRISH CHANDRA MURMU)
Comptroller and Auditor General of India

APPENDICES

Appendix-1.1

(Referred to in Paragraph 1.3)

Statement showing the cluster-wise list of Departments and Public Sector Undertakings

Sl.	Cluster	Department	Public Sector Undertakings	Remarks
1	Environment	Forest	Madhya Pradesh Rajya Van Vikas Nigam Limited	-
2		Environment	Madhya Pradesh Pollution Control Board	Autonomous Body
3	Science & Technology and IT & Communication	Science & Technology	Madhya Pradesh State Electronics Development Corporation	-
4			Bhopal Electronics Manufacturing Park Limited	-
5			Jabalpur Electronics Manufacturing Park Limited	-
6	Urban Development	Urban Development & Housing	Bhopal Smart City Development Corporation Limited	GCOC
7			B-Nest Foundation	GCOC
8			Jabalpur Smart City Development Corporation Limited	GCOC
9			Sagar Smart City Limited	GCOC
10			MP Urban Development Company Limited	-
11			Burhanpur City Transport Services Limited	First Account Not Received
12			Ratlam Bus Services Limited	First Account Not Received
13			Indore Idea Factory Foundation	GCOC
14			Sagar City Transport Services Limited	First Account Not Received
15			Gwalior Smart City Development Limited	GCOC
16			Indore Smart City Development Limited	GCOC
17			Ujjain Smart City Development Limited	GCOC
18			Satna Smart City Development Limited	GCOC First Account Not Received
19			MP Metro Rail Corporation Limited	-
20			Madhya Pradesh Real Estate Regulatory Authority	Autonomous Body
21			Madhya Pradesh Housing and Infrastructure Development Board	Autonomous Body
22	Culture & Tourism	Tourism	MP Tourism Board	-
23			MP State Tourism Development Corporation Limited	-
24			MP Hotel Corporation Limited	-

Sl.	Cluster	Department	Public Sector Undertakings	Remarks
25	Transport & Civil Aviation	Civil Aviation	Singrauli Airport Corporation Limited	First Account Not Received
26		Transport	Madhya Pradesh State Road Transport Corporation	Statutory Corporation. Inactive
27	Industry and Commerce	Mineral Resources	Madhya Pradesh State Mining Corporation Limited	-
28			MP AMRL (Semaria) Coal Company Limited	Inactive
29			MP AMRL (Morga) Coal Company Limited	Inactive
30			MP AMRL (Bicharpur) Coal Company Limited	Inactive
31			MP AMRL (Marki Barka) Coal Company Limited	Inactive
32			MP Monnet Mining Company Limited	Inactive
33			MP and Maharashtra Minerals and Chemical Limited	Inactive
34			MP Sainik Coal Mining Private Limited	Inactive
35			MP Jaypee Coal Limited	Inactive
36			MP Jaypee Coalfields Limited	Inactive
37			MP Jaypee Minerals Limited	Inactive
38		Department of Industry Policy & Investment Promotion	Madhya Pradesh State Industrial Development Corporation Limited	-
39			Madhya Pradesh Industrial Development Corporation Limited	-
40			DMIC Pithampur Jal Prabhandhan Limited	-
41			DMIC Vikram Udyogpuri Limited	-
42			Madhya Pradesh Plastic City Development Corporation Gwalior Limited	-
43			Madhya Pradesh Plastic Park Development Corporation Limited	-
44			Pithampur Auto Cluster Limited	-
45		Micro, Small and Medium Enterprises	Madhya Pradesh Laghu Udyog Nigam Limited	-
46		Cottage & Rural Industries	Sant Ravidas MP Hastha Shilp Evam Hath Kargha Vikas Nigam Limited	-
47			Madhya Pradesh Khadi and Gramodyog Board	Autonomous Body
48	Finance	Finance Department	Madhya Pradesh Venture Finance Limited	-
49			Madhya Pradesh Venture Trustee Finance Limited	-
50			Provident Investment Company Limited	-
51			Madhya Pradesh Financial Corporation	Statutory Corporation
52	Energy & Power	Energy	Madhya Pradesh Paschim Kshetra Vidyut Vitran Company Limited, Indore	-
53			Madhya Pradesh Madhya Kshetra Vidyut Vitran Company Limited, Bhopal	-

Sl.	Cluster	Department	Public Sector Undertakings	Remarks
54			Madhya Pradesh Poorv Kshetra Vidyut Vitran Company Limited, Jabalpur	-
55			Madhya Pradesh Power Transmission Company Limited	-
56			Madhya Pradesh Power Generating Company Limited	-
57			Madhya Pradesh Power Management Company Limited	-
58			Shri Singaji Thermal Power Project Limited	-
59			Shahpura Thermal Power Company Limited	-
60			Bansagar Thermal Power Limited	-
61			Madhya Pradesh Electricity Regulatory Commission	Autonomous Body
62		New & Renewable Energy	Madhya Pradesh Urja Vikas Nigam Limited	-
63	Public Works	Public Works Department	Madhya Pradesh Road Development Corporation Limited.	-
64		Public Health Engineering	Madhya Pradesh Jal Nigam Maryadit	-
65		Asset Management Department	Madhya Pradesh State Assets Management Company Limited	-

GCOC means Government Controlled Other Company.

***Note:** During the year 2022-23, 14 Government Companies (at Sl. No. 6 to 19), two Autonomous bodies (at Sl. No. 20 and 21) were transferred to O/o Accountant General (Audit-I) Gwalior and three Government Companies namely, MP State Civil Supplies Corporation Limited, MP State Agro Industries Development Corporation Limited and Narmada Basin Project Company Limited and One Statutory Corporation namely MP Warehousing & Logistics Corporation has been transferred to this office.*

Appendix-1.2

(Referred to in Paragraph 1.4.1)

PSU wise and Department wise break-up of outstanding Inspection Reports and Paragraphs

Sl.	Name of the PSU	Number of IRs/ Paragraphs pending as of 31 March 2022	
		IRs	Paragraphs
1	Madhya Pradesh Rajya Van Vikas Nigam Limited	10	105
	Forest	**10**	**105**
2	Madhya Pradesh Pollution Control Board	39	146
	Environment	**39**	**146**
3	Madhya Pradesh State Electronics Development Corporation	6	31
	Science & Technology	**6**	**31**
4	Bhopal Smart City Development Corporation Limited	2	34
5	Jabalpur Smart City Development Corporation Limited	2	11
6	MP Urban Development Company Limited	2	29
7	Gwalior Smart City Development Limited	3	51
8	Indore Smart City Development Limited	4	65
9	Ujjain Smart City Development Limited	3	28
10	MP Metro Rail Limited	1	2
	Urban Development & Housing	**17**	**220**
11	MP Tourism Board	2	24
12	MP State Tourism Development Corporation Limited	6	42
13	MP Hotel Corporation Limited	2	9
	Tourism	**10**	**75**
14	Madhya Pradesh State Mining Corporation Limited	6	43
15	MP AMRL (Semaria) Coal Company Limited	2	2
16	MP AMRL (Morga) Coal Company Limited	2	2
17	MP AMRL (Bicharpur) Coal Company Limited	2	4
18	MP AMRL (Marki Barka) Coal Company Limited	2	2
19	MP Sainik Coal Mining Private Limited	1	1
20	MP Jaypee Coal Limited	3	4
21	MP Jaypee Coalfields Limited	3	4
22	MP Jaypee Minerals Limited	3	6
	Mineral Resources	**24**	**68**
23	Madhya Pradesh State Industrial Development Corporation Limited	4	8
24	Madhya Pradesh Industrial Development Corporation Limited	34	193
25	DMIC Pithampur Jal Prabhandhan Limited	1	2

Sl.	Name of the PSU	Number of IRs/ Paragraphs pending as of 31 March 2022	
		IRs	Paragraphs
26	DMIC Vikram Udyogpuri Limited	3	25
27	Pithampur Auto Cluster Limited	2	4
	Department of Industry Policy & Investment Promotion	**44**	**232**
28	Madhya Pradesh Laghu Udyog Nigam Limited	6	37
	Micro, Small and Medium Enterprises	**6**	**37**
29	Sant Ravidas MP Hastha Shilp Evam Hath Kargha Vikas Nigam Limited	3	14
30	Madhya Pradesh Khadi and Gramodyog Board	3	11
	Cottage & Rural Industries	**6**	**25**
31	Madhya Pradesh Venture Finance Limited	1	3
32	Madhya Pradesh Venture Trustee Finance Limited	1	3
33	Provident Investment Company Limited	3	40
34	Madhya Pradesh Financial Corporation	7	68
	Finance Department	**12**	**114**
35	Madhya Pradesh Paschim Kshetra Vidyut Vitran Company Limited, Indore	60	337
36	Madhya Pradesh Madhya Kshetra Vidyut Vitran Company Limited, Bhopal	53	342
37	Madhya Pradesh Poorv Kshetra Vidyut Vitran Company Limited, Jabalpur	38	243
38	Madhya Pradesh Power Transmission Company Limited	28	95
39	Madhya Pradesh Power Generating Company Limited	36	188
40	Madhya Pradesh Power Management Company Limited	6	42
41	Shri Singaji Thermal Power Project Limited	1	1
42	Shahpura Thermal Power Company Limited	1	1
43	Bansagar Thermal Power Limited	1	2
44	Madhya Pradesh Electricity Regulatory Commission	1	2
	Energy	**225**	**1253**
45	Madhya Pradesh Urja Vikas Nigam Limited	1	8
	New & Renewable Energy	**1**	**8**
46	Madhya Pradesh Road Development Corporation Limited.	6	120
	Public Works Department	**6**	**120**
47	Madhya Pradesh Jal Nigam Maryadit	3	68
	Public Health Engineering	**3**	**68**
	Grand Total	**409**	**2,502**

Note: *During the year 2022-23, seven Government Companies (at Sl. No. 4 to 10) were transferred to O/o Accountant General (Audit-I) Gwalior.*

Appendix-2.1

(Referred to in Paragraph 2.1)

Details of projects executed under ADB Schemes

Scheme		ADB-V (March 2022)	ADB-VI[@]
Mode		**Regular Contract (BoQ based)**	**Hybrid Annuity Model**
Total	Packages	26	36
	Roads/ KM length	57/1467.37 km	57/ 1709.88 km
	Contract Cost	₹ 3178 cr	₹ 4502.87cr
Completed	Packages	25	4
	Roads	52/1367	02/ 203.10 km
	Contract Cost	₹ 2753 cr	₹ 379.60 cr
Terminated	Packages	2	0
	Roads	8/ 181 km	0
	Contract Cost	₹ 375 cr	0
Ongoing	Packages	1	30
	Roads	5/102 km	47/1387.59 km
	Contract Cost	₹ 162 cr	₹ 3726.83 cr
Tender not finalised	Packages	0	02
	Roads	0	03/ 119.19 km
	Contract Cost	0	₹ 302.14 cr

(@: As on November 2022)

Appendix-2.2

(Referred to in paragraph 2.4)

Statement showing the details of selected Packages

ADB-V							
Sl. No	Package No.	No. of Roads	Roads	Length (Kms)	Contract Cost (₹ in crore)	Division	Status
1	1	1	Khatakia to Suthaliya via NH-3, Kumbhraj, Barod, Mragwas, Batawda, Chanchoda, Binaganj, Teligaon road	70.80	145.36	Gwalior	Completed
2	3	4	Mungawali-Malahargarh road Piprod-Thubon road Belai-Kareela Mata Mandir road Bhounrasa-Malhargarh road	62.31	113.06	Gwalior/ Bhopal	Completed
3	4	1	Sanwer, Chandravatiganj, Gautampura road	33.94	96.20	Indore	Completed
4	5	1	Bijwar Kataphod Satwaas Khategaon road	55.17	103.86	Ujjain	Completed
5	7	3	Maharajpur Sahajpur road Samnapur-Bilehra-Nanhi-Deori-Narayanpur road Kesali Sahapur road	84.91	145.11	Sagar	Completed
6	8	4	Barodiya Dhamoni road Nauniya Madanpura road Khurai Rajwans road Garpehera Dhamoni road	88.96	146.49	Sagar	Ongoing[1]
7	10	5	Rajnagar Bachhon road Khaparia Banspahari road Chhatarpur-Vikrampur-Rajnagar road Bamitha to Dumra Baraiya Choki Lugasi Garhi Malhara road	102.17	162.30	Sagar	Completed
8	11	3	Barghat Kanhiwada road Dharna Aata Dondiwada Dharmakua	78.62	126.00	Chhindwara	Completed

1 Ghat portion of Garpehera Dhamoni road has not been completed.

ADB-V							
Sl. No	Package No.	No. of Roads	Roads	Length (Kms)	Contract Cost (₹ in crore)	Division	Status
			Waraseoni Katangi road				
9	12	4	Rampayali-Garra Chouki Road Khairlanji-Agasi road Laalbarra-Samnapur road Sitapathar-Mahkepaar-Goreghat road	87.96	173.66	Chhindwara	Completed
10	14	3	Chand-Bichhua-Khamarpani road Chourai-Panjara-Chand road Rayamond Chowk- Sai Kheda	88.22	124.95	Chhindwara	Completed
11	15B	1	Baheradabar-Piparahi-Jadkud road	19.70	47.29	Rewa	Completed
12	18A	2	Parsona-Mada road Mada Ramgarh road	32.49	63.32	Sidhi	Completed
13	18B	1	Jhurai-Sarai Road	31.44	50.28	Sidhi	Completed
14	21	3	Govindgarh Tikar Laxmanpur Road Jigna New Ramnagar to Gorsari Road Byohari Manpur Road Jamna-Bilav Road	58.74	120.35	Rewa/ Shahdol	Completed
(ADB-VI)							
15	3	1	Jobat-Nanpur road	21.87	66.60	Dhar	Ongoing[2]
16	4	1	Alirajpur-Mathwad road	56.24	186.00	Dhar	Ongoing
17	19	1	Maharastra Border-Kukru-Khamla-Bhaisdehi	30.16	89.50	Narmadapuram	Ongoing
18	26	2	Porsa-Mehgaon-Mau-Seondha Road Jamna-Bilav Road	94.83	267.87	Chambal	Ongoing

[2] Package-3 and 4 were opened for commercial operation by issuance of provisional completion certificate.

Appendix-2.3

(Referred to in Paragraph 2.5.6)

Delay in submission of reimbursement claims to ADB V

Sl. No.	Withdrawal Application No.	Date of Claim	Payment made during		Claim Amount (₹)	Delay in Claim (Days)	Interest (₹ in crore)
			From	To			
I	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII=VI*(3[3])*VII/(365*100)**
1	01	20-07-2017	01-03-2017	15-05-2017	25,20,26,167	66	0.14
2	05	09-02-2018	01-11-2017	30-11-2017	20,05,47,156	71	0.12
3	06	09-02-2018	01-12-2017	31-12-2017	18,28,32,290	40	0.06
4	08	11-07-2018	01-03-2018	31-03-2018	40,23,96,709	102	0.34
5	09	11-07-2018	01-04-2018	30-04-2018	68,93,04,974	72	0.41
6	10	14-08-2018	01-05-2018	31-05-2018	72,85,79,085	75	0.45
7	11	14-08-2018	01-06-2018	30-06-2018	65,51,53,855	45	0.24
8	12	24-09-2018	01-07-2018	31-07-2018	38,35,86,616	55	0.17
9	15	05-12-2018	01-10-2018	31-10-2018	55,30,78,729	35	0.16
10	22	02-07-2019	01-04-2019	30-04-2019	37,71,33,359	63	0.20
11	23	02-07-2019	01-05-2019	31-05-2019	45,99,19,156	32	0.12
12	25	24-09-2019	01-07-2019	27-07-2019	60,55,38,218	59	0.29
13	30	25-01-2020	01-12-2019	24-12-2019	31,85,40,542	32	0.08
14	34	03-06-2020	01-03-2020	31-03-2020	30,74,03,607	64	0.16
15	35	03-06-2020	01-04-2020	30-04-2020	45,40,95,837	34	0.13
16	40	02-11-2020	09-09-2020	30-09-2020	25,66,18,981	33	0.07
17	41	02-11-2020	09-09-2020	30-09-2020	1,15,17,788	33	0.003
Total					**6,83,82,73,069**	**32-102 days**	**3.14**

Note 1: Simple interest calculation method adopted for interest calculation.
Note 2: Lowest rate (Fixed Deposit account) of interest has been taken for calculation.

[3] Minimum rate of interest has been taken.

Appendix-2.4

(Referred to in Paragraph 2.7.2)

Extra cost due to execution of excess thickness of DLC below PQC

(₹ in crore)

Civil Work Pkg. No.	Name of Roads	Length in KM	Package length in KM	DLC (in MM)	Width of DLC in meter	Minimum quantity of DLC executed as per calculation or actually executed	Rate of DLC as per BOQ	Extra cost in execution of excess thickness of 50 mm of DLC	Methodology for minimum quantity of DLC taken
1	2	3	4	5	6	7= ((3*1000)*6*(5/1000))	8	9=(7*8)/3 for or (7*8)/6	10
1	Khatakia to Suthaliya via NH-3, Kumbhraj, Barod, Mragwas, Batawda, Chanchoda, Binaganj, Teligaon	11.525	70.79	150	6.5	11236.875	2400	0.90	As per calculation
3	Piprod-Thubon road	7.74	62.31	150	6.5	7546.5	2250	0.57	As per calculation
4	Sanwer-Chandravatiganj-Gautampura road	33.94	33.94	150	6.5	40657.265	2550	3.46	Actually executed
5	Bijawar-Kantaphod-Satwaas-Khategaon road	55.17	55.17	150	6.5	57231.829	2300	4.39	Actually executed
8	Khurai-Rajwas road	31.82	88.96	120	6.5	24819.6	2250	0.93	As per calculation
Total								**10.25**	

Appendix-2.5

(Reference to in Paragraph 2.9.9)

Statement showing the details of non-imposition of delay damages

(₹ in crore)

Sl. No.	ADB Phase	Package no.	Schedule time allowed	Name of contractor & Contract value	Extension of time (EOT) granted which were inadmissible				Penalty leviable (in ₹ crore)	Penalty recovered	Remark
					EOT 1	EOT 2	EOT 3	EOT 4	10 = 1/20%*5*12 (limited to 10% of Contract amount)		
1	2	3	4	5	6	7	8	9		11	12
1	V	1	457	M/s Bansal Construction Works Pvt. Ltd. & Prakash Asphaltings & Toli Highways (India) Ltd. (JV) ₹ 145.36	176	112	604	76	5.23	0	**EOT-2:** 72 days for shifting/relocating water pipeline.
2	V	4	457	M/s Dineshchandra R. Agrawal Infracon Pvt. Ltd. ₹ 96.20	315	190	-	-	3.46	0	**EOT-2:** 92 days for unseasonal/abnormal rain and 06 days for completion of balance work not completed due to countrywide lockdown. Since the work was completed 26 days earlier (05.12.2020) from the EOT-2 (31.12.2020) given, the actual delay damages to be levied is for 72 days.
3	V	8	609	M/s K.C.C. Buildcon Pvt.Ltd. ₹ 146.49 crore	156	380	-	-	14.65	0	**EOT-1:** 45 days for electrical pole shifting. **EOT-2:** 305 days towards reconstruction work.

Sl. No.	ADB Phase	Package no.	Schedule time allowed	Name of contractor & Contract value	Extension of time (EOT) granted which were inadmissible				Penalty leviable (in ₹ crore)	Penalty recovered	Remark
					EOT 1	EOT 2	EOT 3	EOT 4	10 = 1/20%*5*12 (limited to 10% of Contract amount)		
1	2	3	4	5	6	7	8	9		11	12
4	V	18A	457	M/s Barbrik Project Limited. ₹ 63.32 crore	139	52	-	-	1.74	0	**EOT-1**: 19 days EOT was granted for shifting of electrical pole and 29 days was granted on account of rainy season. **EOT-2**: 7 days was granted on account of rainy season.
5	V	18B	457	M/s Shreeji Infraspace Pvt. Ltd. ₹ 50.29	141	90	164	-	5.03	0	**EOT-1:** 42 days for unseasonal/ abnormal rain, 10 days for working restrictions in forest area and 64 days for electric utility shifting due to Legislative Assembly election-2018. **EOT-2:** 36 days for unseasonal/ abnormal rain and 26 days for working restrictions in forest area. **EOT-3:** 10 days for unseasonal/ abnormal rain.
Total									**30.11**		

Appendix-2.6

(Referred to in Paragraph 2.9.10.3)

Undue financial benefit to the contractor due to delay

(₹ in crore)

Sl. No.	Package no.	1st Milestone		3rd / Final milestone		Contract amount in crore	Total delay involved	Leviable liquidated damages in %	Liquidated damages	Total time overrun
		Target in %	Achievement in %	Target in %	Achievement in %					
1	10	30	2.30	100	24.48	213.55	588 days (till termination from 14.12.2017 to 25.07.2019	10	21.30	1254 days (25.04.19 to 30.09.22)
2	11	30	2.77	100	17.65	161.71	656 days (07.10.2017 to 25.07.2019)	10	16.17	1166 days (25.10.18 to 03.01.22)
Total									**37.47**	

Appendix-2.7

(Referred to in Paragraph 2.9.14)

Inflated payment to the contractor

(₹ in crore)

Package no./IPC	Sl No.	Item No.	Negative Qty.	Negative Payment
4/31 (Pre-final)	1	3.03(i)	12379.132 cum	0.31
	2	3.03(ii)	409.517 cum	0.01
	3	6.05(ii)	17.004 cum	0.01
	4	6.08	1249.415 cum	0.05
	5	6.19(A)	222.956 cum	0.04
	6	NB-2	40.2 cum	0.03
	7	Bill No.9A (30)	995 Mtr.	0.01
	Total (A)			**0.46**
5/32(Pre-final)	1	3.03(i)	154758.02 cum	1.70
	2	6.03 B(i)	8195.613 cum	3.45
	3	6.05 D(ii)	247.13 cum	0.15
	4	6.06	387.177 MT	1.94
	Total (B)			**7.24**
7/17	1	3.01	225581.9 cum	1.13
	2	6.04 (i)	264.31 cum	0.14
	3	7.07(c)	1056 each	0.11
	4	7.12(b)	21 nos.	0.01
	5	8.07(i)	1810 sqm	0.15
			Total	**1.54**
			Rebate @10.31%	**0.16**
	Total (C)			**1.38**
8/8,14,18,19	1	5.10 (ii)	13.031 MT	0.07
	2	2.04 (b)	9,662.39 cum	0.48
	3	3.02	6,580.97 cum	0.03
	4	6.05 (i)	26.13 cum	0.01
	5	3.01 (i)	3,587.84 cum	0.02
	6	7.07 (c)	885 nos.	0.09
			Total	**0.70**
			Rebate @10.31%	**0.07**
	Total (D)			**0.63**
10A/21	1	4.01 (i)	1840.996 cum	0.17
	2	6.05 (i)	184.418 cum	0.10
	3	6.08	2394.735 cum	0.18
	4	6.09	130.319 cum	0.01
	5	14.8 (Non-BOQ)	97.6 RM	0.02
	6	5.6(a) (Non-BOQ)	16.79 cum	0.01
	Total (E)			**0.49**
	28 items	**Grand Total = (A+B+C+D+E)**		**10.20**

Appendix-2.8

(Referred to in Paragraph 2.10.1)

Statement showing extra liability on Exchequer due to deployment of Consultancy Services beyond the scheduled period

(₹ in crore)

Pkg. No.	Name of the Consultant	No. of Civil Pkgs.	Date of Commencement of Service	Period of Consultancy service[4] (in months)	Scheduled completion of service[5]	Service extended upto	Extended Period of service (in months)	Relaxation by GoMP (months) Due to Covid	Total Extra Payment
(1)	(2)	(3)	(4)	(5)	(6)=(4)+(5)	(7)	(8)=(7)-(6)	(9)	(10)
1	M/s. URS Scott Wilson India Pvt. Ltd., India	5	15.03.2017	23	14.02.2019	30.12.2021	34	4	12.26
2	M/s. MSV International, Inc., USA	9[6]	27.03.2017	26	26.05.2019	31.10.2022	41	4	11.33
3	M/s. Intercontinental Consultants & Tech. Pvt. Ltd., India	14[7]	20.02.2017	26	19.04.2019	30.09.2022	41	4	16.09
Total							**34 to 41 months**	**4**	**39.68**

4 Excluding 12 Months of Defect Notification Period.
5 Excluding 12 Months of Defect Notification Period.
6 Two packages (Package-9 and Package-13) were not taken up for execution, two packages (package-10 and package-11) were terminated and re-tendered as package-10A and package-11A
7 Four Packages (Package-21, Package-22A, Package-22B and Package-23) were added in November 2017.

Appendix-2.9

(Referred to in Paragraph 2.10.1)

Extra payment to the consultants for period of engagement beyond the date of issuance of TOC

(₹ in crore)

Sl No	Name of SQC	Package No.	Actual date of Completion of Civil Contracts	Payment to the Consultant after actual date of completion of civil contracts
1	M/s URS Scott Wilson India Pvt. Ltd., India	1	15-05-2021	0.29
2		2	24-08-2019	0.37
3		3	31-01-2021	0.69
4		4	05-12-2020	0.78
5		5	21-06-2019	0.62
Total Payment (A)				**2.75**
6	M/s MSV International, INC., USA	6	30-06-2021	0.79
7		7	12-06-2019	0.24
8		8	16-06-2020	0.95
9		10	25-07-2019 (Terminated)	1.24
10		11	25-07-2019 (Terminated)	0.20
11		10A	02-08-2022	0
12		11A	03-01-2022	0.19
13		12	31-10-2019	0.30
14		14	29-01-2020	0.30
Total Payment (B)				**4.21**
15	M/s. Intercontinental Consultants & Technocrats Pvt. Ltd., India	15A1	20-12-2021	0.09
16		15A2	03-03-2021	0.03
17		15B	03-06-2019	0.41
18		16A	31-12-2021	0.24
19		16B	30-01-2021	0.13
20		17	05-06-2020	0.03
21		18A	07-02-2020	0.82
22		18B	28-08-2020	0.15
23		19	30-06-2019	0.14
24		20	06-07-2019	0.16
25		21	24-12-2020	0.14
26		22A	20-12-2021	0.24
27		22B	20-12-2021	0.24
28		23	04-04-2020	0.25
Total Payment (C)				**3.07**
Grand Total Payment (A+B+C)				**10.03**

Appendix-2.10

(Referred to in Paragraph 2.10.3)

Payment for work not done due to delay in deployment of Independent Engineer

Sl. No.	Package No. (ADB VI)	Name of IE (Date of appointment)	Rate payable to IE[8] (percentage of work done)	Work done till appointment of IE (till date) (₹ in crore)	Amount to be payable to IE in the event of IE deployed in time (₹)	Share to be borne by Concessionaire against the expenditure towards IE (50 *per cent*) (₹)	Total (₹ in crore)
1	**2**	**3**	**4**	**5**	**6 = (5*4)**	**7=(Col. 6/2)**	**8**
1	3 and 4	M/s Bloom Companies LLC Pvt. Ltd. (02.11.2021)	1.274%	1,32,64,31,736[9] (02.11.2021)	1,68,98,740	84,49,370	0.84
2	19	M/s Bloom Companies LLC Pvt. Ltd. (02.11.2021)	1.274%	46,46,73,986 (02.11.2021)	59,19,947	29,59,973	0.30
3	26	M/s L. N. Malviya Infra Projects Pvt. Ltd. (24.02.2022)	1.993%	1,45,28,30,446 (till 24.02.2022)	2,89,54,910	1,44,77,455	1.45
				Total			**2.59**

8 Rate payable to IE = Bid cost of IE/Total amount of work allotted.

9 Work done under package-3 = ₹ 346852800
Work done under package-4 = ₹ 979578936
Total = ₹ 1326431736.

Appendix-3.1

(Referred to in paragraph 3.6.2.4)

Statement showing the unit wise utilisation of term loan for different purposes

(₹ in crore)

Sl. No.	Name of unit	Date of sanction	Amount of sanction	Amount disbursed	Period of disbursement	Account No.	Amount of disbursement utilised for other purposes	Remarks
1	Shree Radhe Krishna	Jan-17	5.20	4.20	Feb 2018 to March 2021	02/9103	0.32	Amount utilised in the payment of defaulted dues during June 2019 to March 2020
2	Shivam Enterprises	Mar-19	1.00	1.00	Apr-19	02/9135	1.00	Amount utilised in the payment of defaulted dues of account no. 02/9114 in April 2019
3	Sparsun Pharmaceuticals	Mar-18	2.50	2.30	July 2018 to Sept 2019	02/9116	0.07	Amount utilised in the payment of defaulted dues in September 2019
4	Zebra fashions limited	Jan-18	6.50	6.50	Dec 2018 to Sept 2020	15/2718	0.08	Amount utilised in the payment of defaulted dues of in October 2019
5	Jal Tarang Resorts	Jul-18	4.00	2.80	Oct 2018 to Mar 2020	02/9126	0.13	Amount utilised in the payment of defaulted dues in July, October 2019 and March 2020
Total			**19.20**	**16.80**			**1.60**	

Appendix-3.2

(Referred to in paragraph 3.6.3.1)

Statement showing the excess disbursement of loan to the units against the power connection condition

(₹ in crore)

Sl. No.	Name of unit	Date of sanction	Sanctioned amount	Period of disbursement	Power connection to be obtained	Power connection obtained	Loan to be disbursed	Amount disbursed	Excess disbursement	Government reply
1	Shree Radhe Krishna	Jan-17	5.20	Feb 2018 to March 2021	340 KVA	5 KW	3.90	4.20	0.30	On this being pointed out (June 2022) the Government stated (May 2023) that only ₹ 0.30 crore was excess disbursement and the unit has applied for power connection but the same could not be availed. The reply was not acceptable as the Corporation failed to comply with the terms of the sanction.
2	Mahishamati Plastics	Jul-18	6.50	Nov 2019 to Mar 2021	400KVA	350 KVA	4.87	5.95	1.08	On this being pointed out (June 2022) the Government stated (May 2023) that the unit is operative and connected load was sufficient. The reply was not acceptable as the unit has not complied with the condition of sanction letter and got provisional load sanction. Further, the reply does not provide any fresh load assessment and actual load connected.
3	Raounak Drugs Pvt Ltd	Mar-16 & Sep-20	4.80	Sept 2017 to Feb 2022	58 HP	5 KW	3.60	4.30	0.70	On this being pointed out (June 2022) the Government stated (May 2023) that the unit has obtained power connection in June 2018. The reply was not acceptable as the unit has got the provisional sanction of load in June 2018. However, the same has not been connected and the unit has got the power connection of 5 KW only.
4	Ambica Bigbags	Sep-17	0.95	July 2020 to Mar 2021	40 HP	20 HP	0.71	0.75	0.04	On this being pointed out (June 2022) the Government stated (May 2023) that the power is sufficient at this prevailing stage. The reply was not acceptable as the unit has not complied with the condition specified in the sanction. Further, the promoter also failed to implement the project.

Sl. No.	Name of unit	Date of sanction	Sanctioned amount	Period of disbursement	Power connection to be obtained	Power connection obtained	Loan to be disbursed	Amount disbursed	Excess disbursement	Government reply
5	Devvrat Agrawal	Sep-17	7.00	March 2018 to August 2019	150 KVA	Applied	5.25	6.60	1.35	On this being pointed out (June 2022) the Government stated (May 2023) that the power is already connected in the GP Mall, Harda. The reply was not acceptable as the unit has to obtain a separate connection of the necessary power of 150 KVA as mentioned in the sanction letter.
6	Balaji Syndicate	Jan-14 & Feb-19	7.50	Oct 2014 to Jan 2022	600 KVA	100 KVA	5.62	6.09	0.47	On this being pointed out (June 2022) the Government stated (May 2023) that the unit is operative and connected load was sufficient. The reply was not acceptable as the unit has not complied with the condition of sanction letter. Further, the reply did not provided any fresh load assessment.
7	Oyster Infrastructure	July-15, April-19	10.75	July 2016 to Aug 2016	200 KVA	31 KW	8.06	10.75	2.69	On this being pointed out (June 2022) the Government stated (May 2023) that the said unit is not a manufacturing unit and the project is for dwelling unit to be sold, therefore connection would be taken separately by the each purchaser. The reply is not acceptable as per the section letter condition no. 27(5), the unit has to obtain necessary power connection of 200 KVA.
8	Balaji Steroids and Hormones	July-17, Dec-17, and Oct-18	13.35	Mar 2018 to April 2019	500 KVA	200 KVA	10.01	13.35	3.34	On this being pointed out (June 2022) the Government stated (May 2023) that unit is operative and power load is sufficient for the project. The reply was not acceptable as the unit has not complied with the terms of the sanction and currently the connected load of unit is 100 KVA only.
Total			**56.05**				**42.02**	**51.99**	**9.97**	

Appendix-3.3

(Referred to in paragraph 3.6.3.2)

Unit wise details of share capital raised as per condition of sanction of term loan is given below

(₹ in crore)

Sl. No.	Name of unit	Account. No	Disbursed during	Defaulted amount of principal	Defaulted interest	Total default	Total o/s as on 31 March 2022	Share capital to be raised	Share capital actually invested	Less invested	Loan sanctioned	Loan disbursed	Loan to be disbursed	Government reply
1	Shree Radhe Krishna	2/9103	Feb 2018 to March 2021	1.08	1.49	2.57	5.69	1.70	1.19	0.51	5.20	4.20	3.64	The reply was silent on the issue raised by Audit.
2	Balaji Steroids and Hormones	2/9125	Mar 2018 to April 2019	0.44	1.12	1.56	3.47	0.60	0.07	0.53	2.35	2.35	0.27	On this being pointed out (June 2022) the Government stated (May 2023) that on the request of the unit, the Corporation accepted the additional capital of Rs. 0.07 crore only. The reply was not acceptable as the unit has failed to comply with the conditions mentioned in the sanction letter.
3	HF India Pvt Ltd	2/9133	February 2019 to August	0	0.00	0.00	0.61	0.40	0.15	0.25	1.50	0.75	0.56	On this being pointed out (June 2022) the Government stated

Sl. No.	Name of unit	Account. No	Disbursed during	Defaulted amount of principal	Defaulted interest	Total default	Total o/s as on 31 March 2022	Share capital to be raised	Share capital actually invested	Less invested	Loan sanctioned	Loan disbursed	Loan to be disbursed	Government reply
			2019											(May 2023) that the unit has repaid the loan. The reply was not acceptable as though the loan account has been fully repaid the Corporation disbursed the loan without complying the condition mention in the sanction letter.
4	Oyster Infrastructure	15/2722	July 2016 to Aug 2016	0.00	0.00	0.00	3.04	1.69	0.35	1.34	10.75	10.75	2.23	On this being pointed out (June 2022) the Government stated (May 2023) that loan is almost repaid. The reply was not acceptable as the Corporation has not obtained the share capital as mentioned in the sanction letter.
Total				**1.52**	**2.61**	**4.13**	**12.81**	**4.39**	**1.76**	**2.63**	**19.80**	**18.05**	**6.70**	

Appendix-3.4

(Referred to in paragraph 3.6.4.1)

Statement showing the details of units whose projects are under implementation/ Delay Implementation

(₹ in crore)

Sl. No.	Name of unit	Date of sanction	Amount of sanction	Date of disbursement	Amount Disbursed	Schedule completion as per project appraisal	Date by which project was to be implemented	Delay in months as on March 2022	Reason for delay	Government reply
1	Shree Radhe Krishna	Jan-17	5.20	05/02/2018	0.55	One year from date of first disbursement	Feb-19	37	Construction of factory building and installation of plant and machinery under progress.	On this being pointed out (June 2022) the Government stated (May 2023) that the project could not be implemented due to Covid 2019 and delay in supply of equipment. The legal notice was served. The reply was not acceptable as the unit has failed to implement the project within stipulated time.
				10/05/2018	0.30					
				16/08/2018	0.20					
				29/08/2018	0.10					
				30/11/2018	0.75					
				13/06/2019	0.17					
				26/08/2019	0.35					
				06/09/2019	0.25					
				03/12/2019	0.40					
				07/03/2020	0.75					
				12/03/2020	0.38					
				Total	**4.20**					
2	Jal Tarang Resorts	Jul-18	4.00	30/10/2018	0.60	Nine months from date of first disbursement	Jul-19	32	Promotors failed to implement the project and they are searching the buyers to pay the loan.	On this being pointed out (June 2022) the Government stated (May 2023) that the project could not be implemented due to Covid 2019 and cost escalation. The reply was not acceptable as the unit has failed to
				08/02/2019	0.50					
				11/04/2019	0.25					
				04/07/2019	0.30					
				16/07/2019	0.20					
				05/10/2019	0.35					
				07/03/2020	0.60					

Sl. No.	Name of unit	Date of sanction	Amount of sanction	Date of disbursement	Amount Disbursed	Schedule completion as per project appraisal	Date by which project was to be implemented	Delay in months as on March 2022	Reason for delay	Government reply
				Total	**2.80**					implement the project within stipulated time which resulted in accumulation of dues.
3	Mahishamati Plastics	Jul-18	6.50	26/10/2019	0.50	One year from date of first disbursement	Nov-20	16	due to shortage of raw material and shortage of working capitals	On this being pointed out (June 2022) the Government stated that (May 2023) that the project is fully implemented now (May 2023). The fact remains that the project was delayed which resulted in accumulation of dues.
				31/10/2019	0.25					
				20/03/2020	1.70					
				20/10/2020	1.50					
				15/01/2021	1.20					
				18/01/2021	0.30					
				22/01/2021	0.50					
				Total	**5.95**					
4	Raounak Drugs Pvt Ltd	Mar-16	4.00	14/09/2017	0.90	18 months from the date of sanction	Sep-17	54	Change in the capacity of plant as per the requirement of World Health Organisation and working capital yet to be sanctioned	On this being pointed out the Government stated that (May 2023) that the project got delayed due to late receipt of various approvals and now fully implemented. The fact remains that due to delay in implementation the outstanding dues were accumulated.
				01/01/2018	0.50					
				11/05/2018	0.50					
				02/08/2018	0.45					
				04/02/2019	0.24					
				04/02/2019	0.10					
				14/03/2019	0.55					
				23/09/2019	0.55					
				08/10/2020	0.21					
				Total	**4.00**					
		Sep-20	0.80	28/02/2022	**0.30**					

Sl. No.	Name of unit	Date of sanction	Amount of sanction	Date of disbursement	Amount Disbursed	Schedule completion as per project appraisal	Date by which project was to be implemented	Delay in months as on March 2022	Reason for delay	Government reply
5	Angelique Castings	Nov-15	1.35	01/02/2016	0.67	6 months from the date of sanction	Apr-17	59	The project was delayed due to non-availability of power connection (December 2022).	On this being pointed out (June 2022), the Government stated (May 2023) that the unit has already started operation and fully implemented. The reply was not acceptable as the unit does not have permanent power connection for the operation of the unit.
				12/01/2016	0.25					
				09/02/2016	0.07					
				11/02/2016	0.01					
				15/03/2016	0.11					
				22/04/2016	0.1					
				26/04/2016	0.05					
				31/03/2017	0.09					
				Total	**1.35**					
		Aug-18	0.65	06/10/2018	0.15					
		Oct-19	0.25	07/11/2019	0.25					
				Total	**0.40**					
6	Hotel Vijay Palace	Nov-17	0.50	26/04/2019	0.15	6 months from the date of sanction	May-18	47	The expansion of the project is yet to be completed as the works of asset creation is not fully done. (September 2022)	On this being pointed out the (June 2022) the Government stated (May 2023) that the project is almost implemented. The fact remains that the project was still under implementation.
				01/05/2019	0.05					
				08/05/2019	0.05					
				18/06/2019	0.15					
				Total	**0.40**					

Sl. No.	Name of unit	Date of sanction	Amount of sanction	Date of disbursement	Amount Disbursed	Schedule completion as per project appraisal	Date by which project was to be implemented	Delay in months as on March 2022	Reason for delay	Government reply
7	Ambica Bigbags	Sep-17	0.95	29/07/2020	0.45	9 months from the date of first disbursement	Apr-21	12	The loan was released on the basis of proforma invoice for the purchase of machines. However, machines are yet to be installed. Working capital is yet to be sanctioned.	On this being pointed out (June 2022) the Government stated (May 2023) that the promoter has dropped the plan to implement the project and recovery action is in progress. However, the fact remains that the Corporation has disbursed the funds without verification.
				03/02/2021	0.30					
				Total	**0.75**					
Total			**24.20**	**Grand Total**	**20.15**					

Appendix-3.5

(Referred to in paragraph 3.6.4.2)

Unit wise details of unsecured loans raised as per condition of sanction of term loan

(₹ in crore)

Sl. No.	Name of unit	Account No	Month of sanction	Disbursed during	Unsecured loans to be raised	unsecured actually raised	Less raised	Loan sanctioned	Loan disbursed	Loan to be disbursed proportionate	Loan disbursed in excess
1	Zebra Fashions Limited	15/2718	Jan-18	Dec 2018 to Sept 2020	5.30	4.65	0.65	6.50	6.50	5.70	0.80
2	Hotel Vjiay Palace	5/4179	Nov-17	April 2019 to June 2019	0.20	0.09	0.11	0.50	0.40	0.23	0.17
Total					**5.50**	**4.74**	**0.76**	**7.00**	**6.90**	**5.93**	**0.97**

Appendix-3.6
(Referred to in paragraph 3.7.2)

Non-recovery of dues due to non-disposal/delay in disposal of assets

(₹ in crore)

Sl. No.	Name of unit	Category	Loan A/c No.	Principal default		Interest default		Total defaulted dues	Outstanding as on March 2022	Date of possession	Government reply
1	Kallu seth Masalevala	3b	15/2677	0.31	01-02-2018	0.13	01-07-2020	0.44	0.58	Dec-19	On this being pointed out (June 2022) the Government stated (May 2023) that the OTS is approved. The reply was silent on the recovery status.
	Kallu seth Masalevala	3b	15/2699	0.21	01-01-2018	0.17	31-03-2019	0.38	0.41		
2	Meenesh Irrigation India Pvt. Ltd.	3b	10/8377	1.77	01-06-2018	0.94	01-07-2020	2.71	3.76	Jan-20	On this being pointed out (June 2022) the Government stated (May 2023) that the advertisement was published in the newspaper for sale of unit but no offered were received. Further, the borrower approached OTS and the Corporation considered the proposal of OTS. The reply was not acceptable because the unit has not paid the OTS amount.
	Meenesh Irrigation India Pvt. Ltd.-ii	3b	10/8401	0.25	01-02-2020	0.05	01-02-2021	0.31	0.34		
	Meenesh Irrigation India Pvt. Ltd.-CLCSS	3b	10/8398	0.15	01-12-2021	0.00		0.15	0.15		
3	Chaitanya Hospital & Research Center	3C	31/0005	1.13	01-04-2016	0.68	01-10-2019	1.81	1.87	May-19	On this being pointed out (June 2022) the Government stated (May 2023) that the OTS was cancelled on 03 July 2018 and Publication was done on 01 October 2019. However, the reply was silent on the recovery status.
4	Maharaj Body Builder	3b	31/0002	0.08	01-03-2019	0.04	01-04-2020	0.12	0.12	May-19	On this being pointed out (June 2022) the Government stated (May 2023) that legal notice was issued in March 2023. The reply was silent on the recovery status.
5	Babashri Bio Coal	3b	04/6486	0.52	01-04-2018	0.26	01-12-2019	0.78	0.78	Dec-19	On this being pointed out (June 2022)

Sl. No.	Name of unit	Category	Loan A/c No.	Principal default		Interest default		Total defaulted dues	Outstanding as on March 2022	Date of possession	Government reply
	Babashri Bio Coal (II)	3b	04/6545	0.20	01-08-2018	0.28	31-03-2019	0.49	0.71		the Government stated (May 2023) that the offer was invited for the sale, but no response received. RRC is to be issued shortly.
6	The Sensation Hotel	3b	21/0358	1.57	01-01-2018	1.01	01-10-2019	2.58	3.05	Oct-19	On this being pointed out (June 2022) the Government stated that (May 2023) the advertisement was published for the sale of unit. The reply is not acceptable as the Corporation failed to recover the defaulted dues since August 2019 and the borrower had also not settled the account.
	The Sensation Hotel	3b	21/0395	0.35	01-08-2019	0.56	01-04-2019	0.91	1.51		
7	Guruji Packers	3b	02/9096	0.42	01-10-2018	0.07	01-09-2019	0.49	0.92	Sep-19	On this being pointed out (June 2022) the Government stated (May 2023) that the matter is being pursued.
8	Om Crop Science	3b	02/8935	0.37	01-04-2018	0.08	01-03-2021	0.46	0.46	Mar-19	On this being pointed out (June 2022) the Government stated (May 2023) that the recovery is still pending.
9	Ramjan Traders	3b	02/9025	0.74	01-06-2018	0.13	01-08-2021	0.87	1.09	Mar-20	On this being pointed out (June 2022) the Government stated (May 2023) that the matter is being pursued.
10	Blue Chip Equipment Engg.	3b	02/8960	0.67	01-01-2018	0.29	01-03-2020	0.97	0.97	Mar-20	On this being pointed out (June 2022) the Government stated (May 2023) that the advertisement was published in January 2023. The recovery is still pending.
11	R-9 Club Pvt. Ltd.	3b	21/0307	0.56	01-10-2018	0.05	01-10-2021	0.61	0.61	Jul-20	On this being pointed out (June 2022) the Government stated (May 2023) that the advertisement was published in December 2022.
12	Dilip Kumar Jain	3b	02/9073	0.36	01-01-2019	0.19	01-02-2021	0.55	1.12	Jan-21	On this being pointed out (June 2022) the Government stated (May 2023) that the unit has assured to submit the OTS proposal.

Sl. No.	Name of unit	Category	Loan A/c No.	Principal default		Interest default		Total defaulted dues	Outstanding as on March 2022	Date of possession	Government reply
13	Poorvi Paper Products Pvt. Ltd.	2	02/9087	0.26	01-01-2021	0.03	31-03-2022	0.29	7.33	Oct-21	On this being pointed (June 2022) out the Government stated (May 2023) that the balance amount will be recovered.
14	Susan Auto Comp Pvt. Ltd.	3b	02/8963	1.02	01-10-2018	0.48	01-01-2020	1.50	1.50	Oct-21	On this being pointed out (June 2022) Government stated (May 2023) that the unit is sold, and sale price has been received for ₹ 1.13 crore. The reply was not acceptable as per the ledger an amount of ₹ 0.70 crore is yet to be recovered from the unit.
15	G & G Irrigation Technology	3b	02/9127	1.19	01-09-2019	1.53	31-03-2020	2.71	5.01	Mar-22	On this being pointed out (June 2022) the Government replied (May 2023) that the advertisement was published in April 2023. The fact remains that amount is yet to be recovered.
16	Swapnil Rubber & Plast India	3b	02/9029	0.12	01-01-2021	0.07	01-11-2021	0.19	0.44	Apr-22	On this being pointed out (June 2022) the Government replied (May 2023) that the account is settled. The reply was not acceptable as the amount of ₹ 0.27 crore is yet to be recovered from the unit.
Total						**7.04**		**19.32**	**32.73**		

Appendix-3.7

(Referred to in paragraph 3.7.3)

Non-recovery from closed non-operational units and units working in low capacity

(₹ in crore)

Sl. No.	Name of unit	Category	Loan A/c No.	Principal default		Interest default		Total defaulted dues	Outstanding as on March 2022	Remarks	Government reply
				Amount	Date	Amount	Date				
1	Shri Krishna Polimers	3b	16/6391	0.19	01-12-2019	0.07	01-04-2021	0.26	0.48	The unit is closed for the last two years	On this being pointed out (June 2022) the Government replied (May 2023) that legal notice issued in February 2023 and OTS proposal under consideration. The reply was not acceptable as the Corporation failed to initiate action for the recovery of outstanding dues.
2	R. R Bio Energy	3b	05/4156	0.55	01-10-2018	0.01	31-03-2021	0.56	0.56	The unit is closed from August 2016	The Government reply was silent on the issued raised by Audit.
3	Sahara Cotton Cloth Weaver	3b	33/006	0.77	01-05-2019	0.57	31-03-2020	1.34	1.54	Not operational from September 2019	On this being pointed out (June 2022) the Government replied (May 20230 that legal notices were issued in September 2021 and November 2022. The reply was not acceptable as the Corporation failed to initiate action for the recovery of huge outstanding dues.
	Sahara Cotton Cloth Weaver (Additional)	3b	33/0016	0.40	01-05-2019	0.44	31-03-2020	0.84	1.20		
	Sahara Cotton Cloth Weaver (Capital Subsidy)	3b	33/0027	0.04	01-02-2021	0.00		0.04	0.04		
	Sahara Cotton Cloth Weaver	3b	33/0026	0.25	01-06-2019	0.20	31-03-2020	0.45	0.53		
4	Pious Industries	3b	05/4177	0.40	01-06-2019	0.33	31-03-2020	0.73	1.23	Not operational from March 2021	On this being pointed out (June 2022) the Government replied (May 2023) that the OTS proposal is under consideration. The reply was not acceptable as the Corporation failed to initiate action for the recovery of huge outstanding dues.

Sl. No.	Name of unit	Category	Loan A/c No.	Principal default		Interest default		Total defaulted dues	Outstanding as on March 2022	Remarks	Government reply
				Amount	Date	Amount	Date				
5	Seema Plastic Industries	3b	04/6508	0.26	01-03-2019	0.10	01-05-2020	0.36	0.49	Not operational from November 2021	On this being pointed out (June 2022) the Government replied (May 2023) that due to lack of working capital the unit was operating in low capacity. The reply was not acceptable as the Corporation failed to recover the defaulted amount.
	Seema Plastic Industries (Additional)	3b	04/6549	0.23	01-05-2019	0.19	31-03-2020	0.42	0.65		
6	Dev Cow & Milk Farms Pvt. Ltd.	3b	08/3618	2.03	01-03-2019	0.72	01-03-2021	2.75	4.47	The unit is work in very low capacity from June 2021.	On this being pointed out (June 2022) the Government replied (May 2023) that the legal notice was issued in February 2023 and OTS proposal under consideration. The reply was not acceptable as the Corporation failed to initiate action for the recovery of huge outstanding dues.
7	Balaji Steroids & Harmones Pvt. Ltd. (ii)	3a	02/9106	0.92	01-01-2020	1.83	31-03-2020	2.75	5.34	In October 2021 inspection was carried out by the Corporation and during inspection the unit was found non-operational.	On this being pointed out (June 2022) the Government replied (May 2023) that the unit could not be commenced due to legal issues with promoters. The reply was not acceptable as the Corporation failed to initiate action for the recovery of huge outstanding dues since October 2021.
	Balaji Steroids & Harmones Pvt. Ltd.	3a	02/9089	2.03	01-02-2020	3.59	31-03-2020	5.62	11.07		
	Balaji Steroids & Harmones Pvt. Ltd.	3a	02/9125	0.44	01-04-2020	1.12	31-03-2020	1.56	3.47		
Total								**17.68**	**31.06**		

Appendix-4.1

(Referred to in Paragraph no. 4.6)

Operational Performance of ATPS, Chachai, STPS, Sarni and SGTPS, Birsinghpur of MPPGCL for the year 2019-20 to 2021-22

Operational Parameters	Sanjay Gandhi Thermal Power Station, Birsinghpur (PH-III)				Satpura Thermal Power Station, Sarni (PH-IV)				Amarkantak Thermal Power Station, Chachai (PH-III)			
	Installed Capacity: 1x500 MW				Installed Capacity: 2x250 MW				Installed Capacity: 1x210 MW			
	CoD: 27.08.2008				CoD: 18.08.2013 and 16.03.2014				CoD: 09.09.2009			
	Norms	2019-20	2020-21	2021-22	Norms	2019-20	2020-21	2021-22	Norms	2019-20	2020-21	2021-22
Plant Availability Factor (in *Per cent*)	85	79.33	94.28	63.14	85	86.35	93.48	92.26	85	94.08	89.88	86.99
Plant Load Factor (in *Per cent*)	85	76.37	87.97	60.27	85	64.36	85.04	78.76	85	91.7	88.34	81.97
Auxiliary Consumption (in *Per cent*)	5.75	6.34	5.65	6.44	8.5	9.01	8.63	8.58	9	9.25	9.11	9.61
Specific Oil Consumption (in ML/KWH)	0.5	0.49	0.28	1.33	0.5	0.35	0.21	0.21	0.5	0.21	0.29	0.39
Station Heat Rate (in KCAL/KWH)	2390	2447	2409	2444	2400	2435	2400	2400	2450	2423	2411	2406

Appendix-4.2

(Referred to in Audit Findings)

Power house wise Generation Target and Actual Generation Achievement for the period 2019-20 to 2021-22

Name of Power House	SGTPS				STPS				ATPS				Grand Total
Year	2019-20	2020-21	2021-22	Total	2019-20	2020-21	2021-22	Total	2019-20	2020-21	2021-22	Total	
Installed Capacity	*1 x 500 MW*				*2 x 250 MW*				*1 x 210 MW*				
Target Fixed By MPERC	3788	3816	3722	11326	3748	3759	3707	11214	1668	1605	1638	4911	27451
Actual Generation	3354	3853	2640	9847	2827	3725	3450	10002	1692	1625	1508	4825	24674
(+) Excess /(-) Shortfall	-434	37	-1082	-1479	-921	-34	-257	-1212	24	20	-130	-86	-2777
Percentage of Excess/Shortage	-11.46%	0.97%	-29.07%	-13.06%	-24.57%	-0.90%	-6.93%	-10.81%	1.44%	1.25%	-7.94%	-1.75%	-10.12%

Appendix-4.3

(Referred to in Paragraph no. 4.12.2)

Excess Stack Emission

SGTPS Birsinghpur

S. No.	Parameter	Norms in mg/Nm^3	Actual monthly Average emission in mg/Nm^3	Data was available (Month)	No. of months when average monthly emission exceeded the norms
1	Sulphur Dioxide (SO_2)	200	171.72-2022.95	34	33
2	Oxides of Nitrogen (NOx)	300/450	50.46-951.29	34	12
3	Particulate Matter (PM)	50	22.37-84.00	34	7

STPS, Sarni

S. No.	Parameter	Norms in mg/Nm^3	Unit no.	Actual monthly Average emission in mg/Nm^3	Offline Data available (Month)	No. of months when average monthly emission exceeded the norms
1	Sulphur Dioxide (SO_2)	600	10	1109-1975	34	34
			11	1139-1544	35	35
2	Oxides of Nitrogen (NOx)	300/450	10	221-508	34	22
			11	302-608	35	26
3	Particulate Matter (PM)	50	10	34.62-50.00	34	0
			11	34.00-50.91	35	1

ATPS Chachai

S. No.	Parameter	Norms in mg/Nm^3	Actual monthly Average emission in mg/Nm^3	Offline data available (Month)	No. of months when monthly average emission exceeded the norms
1	Sulphur Dioxide (SO_2)	600	582.97-1878.46	35	34
2	Oxides of Nitrogen (NOx)	300/450	234.45-815.6	35	29
3	Particulate Matter (PM)	50	24-110.61	36	12

Appendix-5.1

(Referred to in Paragraph no. 5.10.1)

Details of procurement of materials without synchronizing erection activities

S. No	Name of Firm	Order No.	Capacity of Transformer	Cost of Transformers (Amount ₹ in lakh)	Funding Agency	Dispatch No. & Date	Name of Substation where supply was placed with date	Date of Receipt (Plinth/ Accessories)	DOC	Delay in Commissioning (in days)	Delay in Commissioning (in days) allowing 30 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)	Delay in Commissioning (in days) allowing 180 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)
1	2	3	4	5	6	7	8	9	10	11	12	13 =5*12*11.5 %*0.4 or 0.7	14	15 =5*14*11.5 %*0.4 or 0.7
1	M/s BBL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-III/SI/04593-8 dtd. 31.01.2017	63 MVA	271.22	KFW	4602 Dtd. 19.07.18	220 kV S/s Sailana	08-08-2018	12-03-2019	216.00	186.00	6.36	36	1.23
2	M/s BBL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-III/SI/04593-8 dtd. 31.01.2017	63 MVA	271.22	KFW	4604 Dtd. 19.07.18	220 kV S/s Sendhwa	08-08-2018	09-04-2019	244.00	214.00	7.31	64	2.19
3	M/s BBL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-III/SI/04593-8 dtd. 31.01.2017	63 MVA	271.22	KFW	6056 Dtd. 01.09.18	220 kV S/s Gudgaon	24-09-2018	21-01-2019	119.00	89.00	3.04	-61	0.00
4	M/s BBL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-III/SI/04593-8 dtd. 31.01.2017	63 MVA	271.22	KFW	7157 Dtd. 29.09.18	220 kV Kanwar	05-11-2018	16-03-2019	131.00	101.00	3.45	-49	0.00
5	M/s BBL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-III/SI/04593-8 dtd. 31.01.2017	63 MVA	271.22	KFW	11031 Dtd. 11.01.19	220 kV Ratangarh	02-02-2019	05-05-2020	458.00	428.00	14.63	278	9.50
6	M/s BBL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-III/SI/04593-8 dtd. 31.01.2017	63 MVA	271.22	KFW	6238 Dtd. 30.09.19	220 kV S/s Gorabazar	29-10-2019	21-03-2020	144.00	114.00	3.90	-36	0.00

S. No	Name of Firm	Order No.	Capacity of Transformer	Cost of Transformers (Amount ₹ in lakh)	Funding Agency	Dispatch No. & Date	Name of Substation where supply was placed with date	Date of Receipt (Plinth/ Accessories)	DOC	Delay in Commissioning (in days)	Delay in Commissioning (in days) allowing 30 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)	Delay in Commissioning (in days) allowing 180 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)
1	2	3	4	5	6	7	8	9	10	11	12	13 =5*12*11.5 %*0.4 or 0.7	14	15 =5*14*11.5 %*0.4 or 0.7
7	M/s BBL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-III/SI/04593-8 dtd. 31.01.2017	40 MVA	206.79	KFW	4507 Dtd. 18.07.18	220 kV Jaora	02-08-2018	17-02-2019	199.00	169.00	4.40	19	0.50
8	M/s BBL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-III/SI/04593-8 dtd. 31.01.2017	40 MVA	206.79	KFW	5208 Dtd. 30.08.19	132 kV S/s Vijaypur	23-09-2019	18-09-2020	361.00	331.00	8.63	181	4.72
9	M/s CGL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04591-6 dtd. 31.01.2017	315 MVA	944.00	KFW	9391 Dtd. 27.11.18	400kV S/s Sagar	17-12-2018	09-03-2020	448.00	418.00	49.73	268	31.88
10	M/s CGL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04591-6 dtd. 31.01.2017	315 MVA	944.00	KFW	9525 Dtd. 27.11.18	400kV S/s Sagar	13-12-2018	25-08-2019	255.00	225.00	26.77	75	8.92
11	M/s CGL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04591-6 dtd. 31.01.2017	315 MVA	944.00	KFW	447 Dtd. 12.04.19	400 kV S/s Ujjain	03-05-2019	15-02-2021	654.00	624.00	74.24	474	56.39
12	M/s CGL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04591-6 dtd. 31.01.2017	315 MVA	944.00	KFW	4142 Dtd. 26.07.19	400 kV S/s Ujjain	27-08-2019	11-06-2021	654.00	624.00	74.24	474	56.39
13	M/s CGL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04591-6 dtd. 31.01.2017	315 MVA	944.00	KFW	5668 Dtd. 13.09.19	400 kV S/s Mandsaur	03-11-2019	10-03-2021	493.00	463.00	55.08	313	37.24

S. No	Name of Firm	Order No.	Capacity of Transformer	Cost of Transformers (Amount ₹ in lakh)	Funding Agency	Dispatch No. & Date	Name of Substation where supply was placed with date	Date of Receipt (Plinth/ Accessories)	DOC	Delay in Commissioning (in days)	Delay in Commissioning (in days) allowing 30 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)	Delay in Commissioning (in days) allowing 180 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)
1	2	3	4	5	6	7	8	9	10	11	12	13 =5*12*11.5 %*0.4 or 0.7	14	15 =5*14*11.5 %*0.4 or 0.7
14	M/s CGL, Mumbai	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04591-6 dtd. 31.01.2017	315 MVA	944.00	KFW	1027 Dtd. 17.06.20	400 kV S/s Mandsaur	06-07-2020	27-03-2021	264.00	234.00	27.84	84	9.99
15	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	8731 Dtd. 09.11.18	220 kV S/s Jaora	07-12-2018	14-08-2019	250.00	220.00	13.21	70	4.20
16	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	10436 Dtd. 27.12.18	220kV S/s Gudgaon	12-01-2019	13-12-2019	335.00	305.00	18.31	155	9.31
17	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	12444 Dtd. 20.02.19	220kV S/s Sailana	20-04-2019	29-02-2020	315.00	285.00	17.11	135	8.10
18	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	2082 Dtd. 31.05.19	220 kV S/s Jaora	02-07-2019	29-01-2020	211.00	181.00	10.87	31	1.86
19	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	4021 Dtd 25.07.19	220 kV S/s Morena	18-10-2019	02-01-2020	76.00	46.00	2.76	-104	0.00

S. No	Name of Firm	Order No.	Capacity of Transformer	Cost of Transformers (Amount ₹ in lakh)	Funding Agency	Dispatch No. & Date	Name of Substation where supply was placed with date	Date of Receipt (Plinth/ Accessories)	DOC	Delay in Commissioning (in days)	Delay in Commissioning (in days) allowing 30 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)	Delay in Commissioning (in days) allowing 180 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)
1	2	3	4	5	6	7	8	9	10	11	12	13 =5*12*11.5 %*0.4 or 0.7	14	15 =5*14*11.5 %*0.4 or 0.7
20	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	4914 Dtd. 22.08.19	220 kV S/s Satna	12-10-2019	14-11-2019	33.00	3.00	0.18	-147	0.00
21	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	4019 Dtd. 25.07.19	220 kV S/s Narsinghpur	25-11-2019	18-10-2020	328.00	298.00	17.89	148	8.89
22	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	5712 Dtd. 16.09.19	220 kV S/s Panagar	13-11-2019	27-03-2021	500.00	470.00	28.22	320	19.21
23	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	8024 Dtd. 29.11.19	400kV S/s Ujjain	22-01-2020	17-09-2021	604.00	574.00	34.46	424	25.45
24	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	8026 Dtd. 29.11.19	220kV S/s Ratangarh	10-03-2020	22-12-2020	287.00	257.00	15.43	107	6.42
25	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	9098 Dtd. 31.12.19	400kV S/s Mandsaur	30-01-2020	20-03-2021	415.00	385.00	23.11	235	14.11
26	M/s BHEL, Jabalpur	04-01/KfW/MPPTCL/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	10690 Dtd. 03.02.20	220kV S/s Nalkheda	25-04-2020	26-03-2021	335.00	305.00	18.31	155	9.31

S. No	Name of Firm	Order No.	Capacity of Transformer	Cost of Transformers (Amount ₹ in lakh)	Funding Agency	Dispatch No. & Date	Name of Substation where supply was placed with date	Date of Receipt (Plinth/ Accessories)	DOC	Delay in Commissioning (in days)	Delay in Commissioning (in days) allowing 30 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)	Delay in Commissioning (in days) allowing 180 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)
1	2	3	4	5	6	7	8	9	10	11	12	13 =5*12*11.5 %*0.4 or 0.7	14	15 =5*14*11.5 %*0.4 or 0.7
27	M/s BHEL, Jabalpur	04-01/KfW/MPPTC L/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	11962 Dtd 09.03.20	400kV S/s Ujjain	18-07-2020	17-06-2021	334.00	304.00	18.25	154	9.25
28	M/s BHEL, Jabalpur	04-01/KfW/MPPTC L/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	85 Dtd. 02.05.20	220kV S/s Indore-II (Jetpura)	04-08-2020	30-09-2020	57.00	27.00	1.62	-123	0.00
29	M/s BHEL, Jabalpur	04-01/KfW/MPPTC L/TR-108/Lot-II/SI/04592 dtd. 31.01.2017	160 MVA	476.37	KFW	1954 Dtd. 29.07.20	400kV S/s Katni	09-10-2020	30-06-2022	629.00	599.00	35.96	449	26.96
30	M/s BHEL, Jabalpur	04-01/JICA-II/MPPTCL/TR-204/SI/04688-9 dtd. 31.08.2018	160 MVA	523.92	JICA	11964 Dtd. 09.03.20	220kV S/s Pipariya	18-06-2020	09-11-2020	144.00	114.00	13.17	-36	0.00
31	M/s BHEL, Jabalpur	04-01/JICA-II/MPPTCL/TR-204/SI/04688-9 dtd. 31.08.2018	160 MVA	523.92	JICA	87 Dtd. 02.05.20	220kV S/s Vidhisha	20-06-2020	11-11-2020	144.00	114.00	13.17	-36	0.00
32	M/s BHEL, Jabalpur	04-01/JICA-II/MPPTCL/TR-204/SI/04688-9 dtd. 31.08.2018	50 MVA	363.44	JICA	11924 Dtd. 07.03.20	220kV S/s Sukha	11-05-2020	15-08-2021	461.00	431.00	34.55	281	22.52
33	M/s BHEL, Jabalpur	04-01/JICA-II/MPPTCL/TR-204/SI/04688-9 dtd. 31.08.2018	50 MVA	363.44	JICA	105 Dtd. 04.05.20	220kV S/s Sukha	26-06-2020	26-01-2021	214.00	184.00	14.75	34	2.73

S. No	Name of Firm	Order No.	Capacity of Transformer	Cost of Transformers (Amount ₹ in lakh)	Funding Agency	Dispatch No. & Date	Name of Substation where supply was placed with date	Date of Receipt (Plinth/ Accessories)	DOC	Delay in Commissioning (in days)	Delay in Commissioning (in days) allowing 30 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)	Delay in Commissioning (in days) allowing 180 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)
1	2	3	4	5	6	7	8	9	10	11	12	13 =5*12*11.5 %*0.4 or 0.7	14	15 =5*14*11.5 %*0.4 or 0.7
34	M/s Technical Associates, Lucknow	04-01/JICA-II/MPPTCL/TR-205/SI/04709-5 dtd. 04.10.2018	50 MVA	264.32	JICA	7190 Dtd. 01.11.19	132kV S/s Tejgarh	12-12-2019	04-06-2020	175.00	145.00	8.45	-5	0.00
35	M/s Technical Associates, Lucknow	04-01/JICA-II/MPPTCL/TR-205/SI/04709-5 dtd. 04.10.2018	50 MVA	264.32	JICA	9470 Dtd. 10.01.19	132kV S/s Tendukheda	11-02-2020	30-07-2020	170.00	140.00	8.16	-10	0.00
36	M/s Technical Associates, Lucknow	04-01/JICA-II/MPPTCL/TR-205/SI/04709-5 dtd. 04.10.2018	50 MVA	264.32	JICA	9468 Dtd. 10.01.19	132kV S/s Unchhera	08-02-2020	17-07-2020	160.00	130.00	7.58	-20	0.00
37	M/s Technical Associates, Lucknow	04-01/JICA-II/MPPTCL/TR-205/SI/04709-5 dtd. 04.10.2018	50 MVA	264.32	JICA	10734 Dtd. 04.02.20	132kV S/s Suthaliya	14-03-2020	11-09-2020	181.00	151.00	8.80	1	0.06
38	M/s Technical Associates, Lucknow	04-01/JICA-II/MPPTCL/TR-205/SI/04709-5 dtd. 04.10.2018	50 MVA	264.32	JICA	10470 Dtd. 26.02.20	132kV S/s Khirkiya	17-05-2020	31-08-2020	106.00	76.00	4.43	-74	0.00
39	M/s Technical Associates, Lucknow	04-01/JICA-II/MPPTCL/TR-205/SI/04709-5 dtd. 04.10.2018	50 MVA	264.32	JICA	12230 Dtd. 21.03.20	132kV S/s Chachoda	06-06-2020	04-11-2020	151.00	121.00	7.05	-29	0.00
40	M/s Technical Associates, Lucknow	04-01/JICA-II/MPPTCL/TR-205/SI/04709-5 dtd. 04.10.2018	50 MVA	264.32	JICA	1125 Dtd. 22.06.20	132kV S/s Mahawadia	25-07-2020	23-07-2021	363.00	333.00	19.41	183	10.67
41	M/s Technical Associates, Lucknow	04-01/JICA-II/MPPTCL/TR-205/SI/04709-5 dtd. 04.10.2018	50 MVA	264.32	JICA	4555 Dtd. 28.11.20	132kV S/s Atraila	18-01-2021	20-08-2021	214.00	184.00	10.73	34	1.98

S. No	Name of Firm	Order No.	Capacity of Transformer	Cost of Transformers (Amount ₹ in lakh)	Funding Agency	Dispatch No. & Date	Name of Substation where supply was placed with date	Date of Receipt (Plinth/ Accessories)	DOC	Delay in Commissioning (in days)	Delay in Commissioning (in days) allowing 30 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)	Delay in Commissioning (in days) allowing 180 days period for erection	Loss of interest due to delayed commissioning (Amount ₹ in lakh)
1	2	3	4	5	6	7	8	9	10	11	12	13 =5*12*11.5 %*0.4 or 0.7	14	15 =5*14*11.5 %*0.4 or 0.7
42	M/s Technical Associates, Lucknow	04-01/JICA-II/MPPTCL/TR-205/SI/04709-5 dtd. 04.10.2018	50 MVA	264.32	JICA	5318 Dtd. 04.01.21	132kV S/s Niwari	27-01-2021	13-07-2021	167.00	137.00	7.99	-13	0.00
43	M/s Technical Associates, Lucknow	04-01/JICA-II/TR 64/2018/50MVA/ SI/04726-8 dtd. 31.01.2019	50 MVA	252.93	JICA	10600 Dtd. 30.01.20	132kV S/s Raisen	18-02-2020	11-07-2020	144.00	114.00	6.36	-36	0.00
44	M/s Technical Associates, Lucknow	04-01/JICA-II/TR 64/2018/50MVA/ SI/04726-8 dtd. 31.01.2019	50 MVA	252.93	JICA	1060 Dtd. 30.01.20	132kV S/s Katangi	21-02-2020	28-09-2020	220.00	190.00	10.60	40	2.23
45	M/s Technical Associates, Lucknow	04-01/JICA-II/TR 64/2018/50MVA/ SI/04726-8 dtd. 31.01.2019	50 MVA	252.93	JICA	10730 Dtd. 04.02.20	132kV S/s Badod	03-03-2020	06-08-2020	156.00	126.00	7.03	-24	0.00
Total				**19762.84**								**797.54**		**402.21**

Appendix-5.2

(Referred to in Paragraph no. 5.11.1)

Details of delay in execution of TKCs works

Sl. No	Work Order and date	Amount (₹ in crore)	Actual amount (₹ in crore)	Completion Period/ schedule date of completion	Actual date of Commissioning/ Charged	Substations (in numbers)		Lines		Number of feeder bay
						New	Argumentation	Numbers	CKMs	
1	04-01/KfW/MPPTCL/TR-101/TK-I/06775-6 dated 24.07.2017	194.87	192.46	27 Months/ Oct.'19	10-12-2018	2	-	10	288	18
2	04-01/KfW/MPPTCL/TR-102/TK-I/06778-9 dated 10.08.2017	247.27	240.35	30 months / 09.02.2020	09-03-2021	1	-	4	205	4
3	04-01/KfW/MPPTCL/TR-103/TK-I/06776-7 dated 24.07.2017	196.34	189.14	30 Months/ Jan.'20	13-12-2019	2	-	6	192	10
4	04-01/KfW/MPPTCL/TR-104/TK-I/06777-8 dated 24.07.2017	186.01	189.31	30 Months/ Jan'20	02-12-2020	3	-	7	237	14
5	04-01/KfW/MPPTCL/TR-105/TK-I/06774-5 dated 21.07.2017	187.80	116.90	27 months/ Feb.'20	Not Completed	0	-	2	145	4
6	04-01/KfW/MPPTCL/TR-106/TK-I/06779-0 dated 10.08.2017	172.14	161.62	30 months / 09.02.2020	15-02-2021	1	-	1	65	2
7	04-01/Kfw/MPPTCL/TR-107(Lot-1)/TK-I/06848-9 Dt. 24-7-18	147.35	133.96	30 Months/ 23.01.2021	18-09-2020	1	1	8	247	6
8	04-01/Kfw/MPPTCL/TR-107(Lot-II)/TK-I/06847-8 Dt. 24-7-18	113.75	102.96	21 Months / 23.01.2021	13-08-2020	0	1	10	308	18
9	04-01/TR-60/2018/TK-VII/06862-9 dated 11.02.2019	183.82	130.69	24 Months/ Sep'21	24-03-2021	8	-	9	183.81	3
10	04-01/TR-61/2018/TK-VII/06863-0 dated 11.02.2019	155.66	154.07	24 Months / April-21	27-06-2022	4	-	9	340.95	7
11	04-01/TR-36/2018/TR-V-06864-1 dated 12.02.2019	115.27	90.28	24 Months 24.04.21	18-11-2022	2	-	4	101.3	4
12	04-01/TR-37/2018/TR-II/11537 datedd 25.01.2019	86.66	64.00	24 Months 24.04.21	15-11-2022	3	-	5	130.3	3
13	04-01/TR-38/2018/TR-V-06865-1 dated 12.02.2019	81.39	47.12	24 Months / 24.04.21	24-11-2021	4	-	3	31	3
14	04-01/TR-39/2020/06917-8/(S/s-I)dtd. 27.03.2021	93.27	78.94	6 months / Sep 2021	16-06-2022	0	-	2	134.9	0
15	04-01/JICA-II/MPPTCL/TR-206/06851-5 dated 01.10.2018	45.21	**37.69**	Feb'21 Rev.Mar-21	10-12-2022	0	1	1	1.7	2

Sl. No	Work Order and date	Amount (₹ in crore)	Actual amount (₹ in crore)	Completion Period/ schedule date of completion	Actual date of Commissioning/ Charged	Substations (in numbers)		Lines		Number of feeder bay
						New	Argumentation	Numbers	CKMs	
16	04-01/JICA-II/TR-207/06853-7/Z-929/TK-III dated 05.10.2018	66.72	33.23	24 months / Mar-21	Not Completed	0	-	10	194.4	0
17	04-01/JICA-II/TR-208/06852-6/Z-928/TK-III dated 05.10.2018	83.62	59.08	24 months / Oct'20	Not Completed	0	-	6	221	0
18	04-01/JICA-II/TR-209/06854-8/Z-930/TK-III dated 05.10.2018	93.56	64.25	24 months/ Mar-21	Not Completed	0	-	5	228	0
19	04-01/JICA-II/TR-210/06855-9/Z-931/TK-III dated 05.10.2018	96.87	89.37	24 months/ Apr'21	Not Completed	0	-	5	206.3	0
20	04-01/JICA-II/MPPTCL/TR-211/06856-0 Dated 05.10.2018	63.99	52.53	24 months/ Apr'21	20-10-2022	6	10	0	0	6
21	04-01/JICA-II/MPPTCL/TR-212/066657-1 Dated 05.10.2018	91.50	69.22	24 months/ March'21	Not Completed	6	2	0	0	19
22	04-01/TR-36/2017/Z-916/06816-8 dated 07.02.2018	10.67	10.15	12 Month / (26.05.2019)	25-10-2019	1	-	1	2	0
23	04-01/06811-3/Z-912/TK-III dated 05.02.2018	23.53	22.62	12 Months/ March'19	04-11-2019	1	-	1	36.5	1
24	04-01/TR-47/TK-VI/06836-54dated 15.03.2018	16.03	8.91	12 Months/ April'19	21-12-2019	1	-	1	15	0
25	04-01/TR-47/2019/Ss-IV/06899-5 dated 07.03.2020	33.86	20.80	20 Months (Oct.21)	05-12-2022	0	-	0	0	14
	Total	**2787.16**	**2359.65**			**46**	**15**	**110**	**3514.16**	**138**

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