Chapter - II

CHAPTER - II

2. Performance Audit relating to Government Companies

2.1 Working of Tenughat Vidyut Nigam Limited

Executive Summary

Tenughat Vidyut Nigam Limited (Company) is a power generating company incorporated in November 1987 under the Companies Act, 1956 with the main objectives of construction, generation and maintenance of thermal power station and sells the power so generated to licensees/traders and other agencies. The Company has its thermal power station *viz*. Tenughat Thermal Power Station (TTPS) with installed capacity of 420 MW (210 MW x 2 units) located at Lalpania in Bokaro district.

The Performance Audit of the Company revealed multiple and chronic deficiencies affecting its finances and efficient operation. The Company is plagued by disputed ownership, weak governance, lack of finances, deficient planning, weak internal controls, and general apathy of most stakeholders which are showcased in this report.

Financial health of the Company

As of 31 March 2016, the Company has accumulated losses of ₹ 824.53 crore due to its poor operational performance since inception. The main reasons for the poor performance were (a) failure to achieve the projected output against the installed capacity (Plant Load Factor), (b) lower actual operation hours of the plant against maximum hours available (Plant Availability Factor), (c) consumption of excess auxiliary power (d) excess consumption of coal and oil etc.

The Company earned a profit of ₹ 0.02 per unit of energy sold in 2011-12 which increased to ₹ 0.33 per unit in 2012-13 as highest generation of power was achieved during that year. However, it suffered losses while selling energy during 2013-14 to 2015-16 at ₹ 0.66, ₹ 0.07 and ₹ 0.86 per unit of energy sold respectively. This was mainly due to increase in provision for penal interest on loans; prior period adjustments relating to outstanding energy dues, provisions for depreciation *etc.*

(Paragraphs 2.1.8.2 and 2.1.8.3)

Finalisation of Annual Accounts

The annual accounts of the company for the years 1994-95 to 2010-11 were finalised belatedly during 2011-12 to 2015-16. However, the annual accounts for the years 2011-12 to 2015-16 were not finalised till December 2016. The failure to finalise the accounts was mainly due to ownership dispute over the Company between GoJ and Government of Bihar. The delay in finalisation of accounts violated the provisions of the Companies Act, 1956/2013 and rendered it difficult for the Company to detect/prevent any lapse/fraud.

(Paragraph 2.1.8.1)

Financial Management

The State Government had not taken any proactive steps to create a common platform to bring together the Generator and the Distributor (JUVNL) and resolve the payment disputes arising out of outstanding dues of ₹ 3082.72 crore that had resulted in default in repayment of loans and accumulation of avoidable penal interests and losses to the Company. Further, unnecessary restraint to invoke the existing agreement clauses has resulted in inordinate

delay in realisation of sales revenue leading to poor debt servicing on Government loans (₹ 665.89 crore) and accrual of interest amounting to ₹ 2181.79 crore.

Further, Ministry of Heavy Industries and Public Enterprises, Department of Public Enterprises, Government of India issued model Memorandum of Understanding (MoU) to be executed by State Governments for monitoring the performance of State PSUs through setting targets. However, the Energy Department, GoJ has not adopted any such MoU with the Company. As a result, GoJ could not set operational and financial targets for the Company and monitor its performance so as to improve the financial position and profitability.

The Company has also failed to utilise the opportunity to expand its sales to others (50 MW) despite available opportunities.

(Paragraphs 2.1.7.2, 2.1.8.2, 2.1.8.6 and 2.1.8.7)

Plant Load Factor

The Plant Load Factor (PLF) of the Company ranged between 61.32 *per cent* and 79.42 *per cent* only during the years 2011-12 to 2015-16 as against the target of 85 *per cent* set by Jharkhand State Electricity Regulatory Commission (JSERC). This resulted in generation loss of 2809.48 MU of electricity valued at ₹ 870.78 crore during 2011-12 to 2015-16. The reasons for the low PLF were evacuation system constraints resulting in plant shutdowns, obsolete machines, lack of preventive and regular maintenance and use of poor grade coal in the plant.

The low PLF also caused financial losses to the Company as tariff had been calculated taking into account the PLF as 85 *per cent* instead of the actual PLF being worked out each year. Thus, during 2015-16, the Company suffered a financial loss of ₹ 0.446 per unit on 2328.28 MU of energy generated as compared to the tariff value which was worked out with 85 *per cent* PLF instead of the actual PLF of 71.46 *per cent*.

The actual losses in 2015-16 were even more at ₹ 0.86 per unit. It was also observed that the Company failed to apprise JSERC that 85 *per cent* PLF was on the higher side and it had never been able to achieve this. The failure to finalise accounts since 2011-12 meant that higher cost of debt servicing (higher penal interest on loan) and prior period adjustments etc. was not considered by JSERC while fixing the tariff.

(Paragraph 2.1.9.1)

Auxiliary Power Consumption (APC)

During 2011-12 to 2015-16, the Company consumed excess Auxiliary Power than the JSERC norms by 173.80 MU valued at ₹ 56.79 crore owing to ageing of machines, failure to conduct timely overhauling of machines and frequent tripping of transmission lines. The Company claimed that the APC was high because they could not take up overhauling of machines due to paucity of funds. However, it was observed that during 2011-16, the Company kept funds ranging from ₹ 275.26 crore to ₹ 392.41 crore under Short Term Deposits which could have perhaps been utilised. Further, the JSERC did not approve the higher Auxiliary Power Consumption (APC) of the Company while truing up the Aggregate Revenue Requirement (ARR) for the years 2011-12 to 2013-

14 as it was a controllable parameter as per the Generation Tariff Regulations, 2010. Truing up for the subsequent years was yet to be done by JSERC.

(Paragraph 2.1.9.3)

Repairs, Maintenance and Capital overhauling

Capital overhauling of Unit I of the Plant was taken up after a delay of 49 months from its due date and that of Unit II is yet to be taken up though overdue for 28 months. This has caused frequent breakdowns of boiler and rotor of the generation units causing plant shut downs. During 2011-12 to 2015-16, the plant shutdowns exceeded the JSERC norms by 7095 hours resulting in generation loss of 1490 MU valued at ₹ 409.10 crore. This could have been controlled by timely repair and maintenance and capital overhauling of the plant and equipment.

(Paragraphs 2.1.9.2 and 2.1.9.4)

Capacity expansion

The envisaged capacity expansion of TTPS could not be undertaken even after 19 years of its commissioning despite an investment of ₹ 359 crore due to deficient planning and indecision by the Government of Jharkhand/Company.

(Paragraph 2.1.13.1)

Merry-Go-Round rail system and other projects

The Merry-Go-Round (MGR) rail system of the Company meant for transportation of coal was commissioned in October 2015 after a delay of 24 years at an additional cost of ₹ 51.34 crore. The delay was due to delayed acquisition of land, funding constraints *etc*. During this period, the coal requirement for the plant had to be transported by road. Though the MGR rail system was commissioned in October 2015, transportation of coal is still being done partially by road due to shortage of wagons. Though the Company paid an advance of ₹ 2.88 crore in 1998 for 34 wagons, it could not take delivery of a single one till date.

(Paragraphs 2.1.13.3 and 2.1.13.4)

Upgradation of Switchyard of the power plant

Switchyard upgradation was left incomplete by the contractor, M/s Bharat Heavy Electricals Limited at the time of erection of the plant in the year 1997. When taken up again by the Company (July 2010), it was delayed by further 52 months and remained incomplete as of December 2016. This led to backing down of generation units caused by power evacuation constraints. As a result, Company suffered loss of power generation of 971 MU and a revenue loss of ₹ 267.51 crore during 2011-12 to 2015-2016. However, JSERC has directed (September 2016) the Company to complete the upgradation by March 2017.

(Paragraph 2.1.10.1)

Procurement of coal and quality of coal

The power plant suffered generation loss of 326 MU valued at ₹ 50.24 crore during 2011-12 to 2015-16 due to coal shortage and poor quality of coal such as grade slippage, higher percentage of moisture, and oversized stones supplied by Central Coalfields Limited (CCL). However, the Company could not realise the claims of ₹ 49.62 crore from CCL as it failed to conduct joint sampling of coal for quality testing. CCL also confirmed that in many cases, the Company did not participate in joint sampling at loading points. The

Company stated (November 2016) that Central Institute of Mining and Fuel Research has been authorised to conduct sampling at loading and unloading points.

(Paragraphs 2.1.12.1 and 2.1.12.2)

The Company suffered a loss of ₹ 8.14 crore during 2011-12 to 2015-16 due to its failure to claim loss of 43,857 MT of coal due to wind, rain, and evaporation of moisture in the tariff petitions.

(Paragraph 2.1.12.5)

During 2011-12 to 2015-16, there was high unburnt carbon in bottom ash ranging from 9.96 *per cent* to 12.66 *per cent* against the plant design norm of two *per cent.* During the period, the unburnt carbon in fly ash ranged between 4.87 *per cent* and 5.53 *per cent* against plant design norm of 0.5 *per cent.* This led to excess consumption of coal measuring 1,68,545 MT which increased the cost of generation by ₹ 35.10 crore. Also, there was excess consumption of 7329 Kilo litre of Light Diesel Oil valuing ₹ 38.57 crore over the JSERC norms during 2011-12 to 2015-16.

(Paragraphs 2.1.11.1 and 2.1.11.2)

Monitoring and Internal Control

The Energy Department, GoJ has not signed any Memorandum of Understanding (MoU) with the Company. As a result, Energy Department could not set operational and financial targets for the Company and monitor its performance so as to improve its financial position and profitability.

Effective monitoring of the activities of the Company was not done by the Board of Directors as its meetings were not held regularly. Further, the proposed appointment of the two functional directors and induction of independent directors was not done to strengthen the functioning of the Board.

(Paragraphs 2.1.7.2 and 2.1.15.3)

Human Resource Management

The Human Resource Management of the Company was deficient. As against a sanctioned strength of 510 technical manpower there were only 258 in place *i.e* deficit of 252 employees which would adversely impact the operational performance of the Company.

(Paragraph 2.1.12.7)

Thus, the failure of the Government/Management to strengthen the finances of the Company and augment its power generation contributed to the poor power supply in the State. This could adversely affect the overall business environment of the State. Consequently the State may jeopardise its position as seventh rank holder in 'Ease of Doing Business' as reported by the World Bank in its report for the period ending June 2016.

2.1.1 Introduction

Tenughat Vidyut Nigam Limited (Company) is a power generating company incorporated in November 1987 under the Companies Act, 1956. The main objectives of the Company *inter alia* were construction, generation and maintenance of Thermal Power Station (TPS) and to sell the power so generated to licensees/traders and other agencies as stipulated in the Electricity Act, 2003.

The Company has set up its thermal power station *viz*. Tenughat Thermal Power Station (TTPS) located at Lalpania in Bokaro district of Jharkhand with a current installed capacity of 420 MW (210 MW x 2 units). Unit-I of TTPS was put under commercial operation in September 1996 and Unit II commenced its commercial operation in September 1997. The entire electricity generated in its power station is sold to Jharkhand Urja Vikash Nigam Limited[9] (JUVNL), which procures about 20 *per cent* of its total power requirement from the Company.

Consequent upon re-organisation of Bihar, the ownership of the Company was vested in Government of Jharkhand (GoJ) under Section 47 of the Bihar Re-organisation Act, 2000. Accordingly, GoJ issued notification (February 2001) assuming the ownership of the Company. However, the same was disputed and challenged by the State of Bihar in the court of law. The Hon'ble Supreme Court (SC) in its Interim Order (August 2008) directed the parties to maintain status quo which would not however, prevent the state of Jharkhand from proceeding with any expansion works in respect of the Company, although no equity would be claimed for any such expansion or works. The final decision of the Supreme Court was yet to come (November 2016).

The Detailed Project Report (DPR) of TTPS envisaged capacity expansion by setting up three units of 210 MW each in stage-II and one Unit of 500 MW in stage-III of the Project.

2.1.2 Organisational Set-up

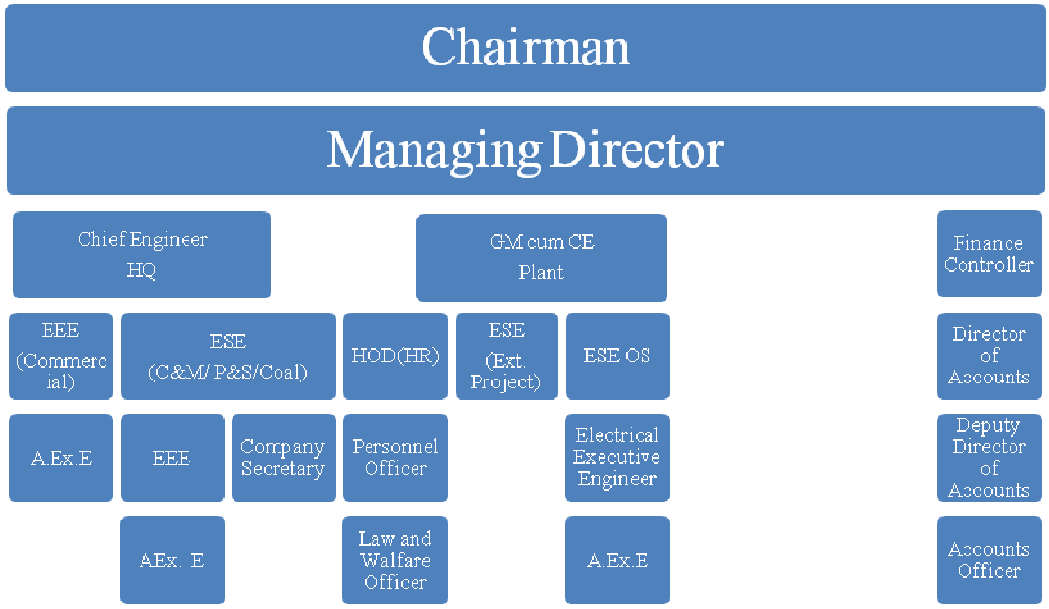
Company is under the administrative control of the Energy Department of the Government of Jharkhand (GoJ). The Management of Company is vested in its Board of Directors (BoD). As of 31 March 2016, there were four Directors *i.e.* two non-executive Directors *viz*. the Principal Secretary, Finance Department and the Principal Secretary, Energy Department, GoJ and two functional Directors *viz*. the Chairman[10] and the Managing Director of the Company.

The day-to-day operations of the company are carried out by the Managing Director. The General Manager, TTPS heads the Power Station at Lalpania and is the overall In-charge for running the TPS smoothly. The Finance Controller is the head of Finance Wing who is responsible for the financial management and accounting functions of the Company. Organisation chart of the Company is given in **Chart 2.1.1:**

[9] JUVNL is the holding company of Jharkhand Bijli Vidyut Nigam Limited (JBVNL), which procures energy for distribution by JBVNL.

[10] The post of Chairman, TVNL is vacant since 2 March 2015.

Chart 2.1.1: Organisation Chart of the Company



2.1.3 Audit Objectives

The objectives of the performance audit were to assess whether:

- A plan of action is in place for augmentation of generation capacity and optimisation of generation from the existing plant;
- Adequate funds were provided for operation of the plant and its upgradation; the funds were utilised for the intended purpose and all claims for sale of power were properly raised and recovered;
- The power plants were operated efficiently; renovation, modernisation and preventive maintenance as prescribed was carried out minimising the forced outages;
- Requirements of fuels were worked out realistically, procured economically and utilised efficiently;
- The company complied with various environmental laws and regulations; and
- Monitoring system and internal control mechanism was efficient and effective.

2.1.4 Audit criteria

The audit criteria adopted for assessing the achievement of the audit objectives were drawn from:

- Regulations for power generation issued by Jharkhand State Electricity Regulatory Commission (JSERC);
- Prescribed norms of JSERC for operation of Power Plant and planned outages;
- Standard procedures for award of contract with reference to principles of economy, efficiency and effectiveness;
- Targets fixed for generation of power; and
- Environmental laws, rules and regulations.

2.1.5 Audit Scope and Methodology

The Performance Audit was conducted during April 2016 to June 2016 to assess the performance of the Company during the period 2011-12 to 2015-16. Audit examination of the records of Corporate Office at Ranchi and TTPS was done during the Performance Audit.

The methodology adopted for attaining the audit objectives with reference to audit criteria consisted of scrutiny of records of Corporate Office and TTPS, interaction with the auditee personnel, analysis of data with reference to audit criteria, discussion of audit findings with the Management and issue of draft review to the Management for comments. A physical verification of the Central Stores and Plants of TTPS was conducted jointly with the officers of the Company, the observations on which have been incorporated in the present report. Also, interview of the company officials were taken regarding the affairs of the Company and their response on the macro and micro issues have been suitably incorporated in the Performance Audit Report.

An entry conference was held with the Managing Director of the Company on 21 April 2016 to discuss the objectives, scope and methodology of audit. The Audit findings were issued (July 2015) to the Company and to the Government and discussed with the Additional Chief Secretary, Energy Department, GoJ and the MD of the Company in an exit conference held on 9 November 2016. Reply of the Company has been received (October 2016) and reply of the Government is awaited. Reply of the Company and views expressed by the Government in exit conference have been suitably incorporated in the Report.

Audit Findings

2.1.6 Unsatisfactory performance of the Company

The audit findings in the present report indicate that the Company failed to perform as per the operational norms set by Jharkhand State Electricity Regulatory Commission (JSERC) during 2011-12 to 2015-16. It could not achieve the Plant Load Factor (PLF) target which ranged between 61.32 to 79.42 and suffered loss of power generation of 2809.48 MU valued at ₹ 870.78 crore. The Plant Availability Factor (PAF) of the plant was lower than the JSERC norms by 5.33 *per cent* to 21.25 *per cent* except in 2012-13 and 2015-16 and it consumed excess auxiliary power of 173.80 MU valuing ₹ 56.79 crore. Optimal utilisation of plant and equipment was not achieved due to failure to carry out proper maintenance of the plant as the capital overhauling of Unit I was conducted after a delay of 49 months and that of Unit II was yet to be taken up even after 28 months from the due date. Upgradation of the switchyard to 400 KV undertaken in July 2010 was not completed even after a delay of 52 months entailing loss of power generation of 971 MU valued at ₹ 267.51 crore during 2011-12 to 2015-16.

There was excess consumption of 1,68,545 MT of coal valued at ₹ 35.10 crore due to unburnt carbon in ash in excess of the designed parameter of the plant and excess consumption of Light Diesel Oil (LDO) over JSERC norm valued at ₹ 38.57 crore. The plant suffered generation loss of 326.39 MU valued at ₹ 50.24 crore due to trippings of generation units owing to shortage/poor quality of coal and it failed to realise the claims of ₹ 56.02 crore from Central Coalfields Limited (CCL) for grade slippage, higher percentage of moisture, and supply of oversized stones in coal.

The GoJ and the Company failed to undertake the envisaged capacity expansion of the power plant even after 19 years of commissioning of TTPS. The Merry-Go-Round (MGR) rail system for transportation of fuel was commissioned after a delay of 24 years with an additional cost of ₹ 51.34 crore and the delivery of 34 wagons for the MGR system against purchase order placed in March 1989 was yet to be taken from CIMMCO despite payment of ₹ 2.88 crore in 1998. Further, the provision in the Power Purchase Agreement (PPA) relating to payment security mechanism was not enforced resulting in outstanding dues of ₹ 3082.72 crore against JUVNL. Besides, it failed to augment its revenue by sale of power to other licensees as allowed in the PPA. Hence, the Company failed to function strictly on prudent financial principles and it did not take effective action to realise its outstanding dues from JUVNL though it was facing difficulty in meeting the expenditure on purchase of coal, capital overhauling, repair and maintenance, upgradation of its plants and equipment and payment for the wagons.

Thus, the Company failed to perform as per the operational norms set by JSERC, equipment installed and infrastructure created by it since inception of the plant remained idle, inordinate delay occurred in creation of required infrastructure and upgradation of existing infrastructure. It is imperative that unless the Company operates as per the parameters set by JSERC and carries out capital overhauling and preventive maintenance of the plant on regular basis, the Company will not be financially viable and its sustainability in the long term may be compromised. The audit findings are discussed in the succeeding paragraphs.

2.1.7 Planning

Short term and long term plans not prepared

2.1.7.1 Proper Planning assists in identifying the activities to be undertaken to achieve the envisaged objectives. It increases the efficiency and reduces the risks involved in execution of schemes/projects and carrying out the activities of the Company.

Audit noticed that the Company had not prepared any short term or long term plan during the years 2011-12 to 2015-16 for capacity augmentation of the plant, its renovation and modernisation and to improve the operational efficiency of the plant. However, the Company was preparing the annual budgets by allocating funds for the renovation and modernisation works only. The budgeted works were not taken up for execution also during the respective years in which funds were allocated thereby indicating that funds for renovation and modernisation works were provided without proper planning for execution of the works. As a result, neither the renovation and modernisation works nor the capacity augmentation works were implemented. Thus, in absence of proper planning, the financial resources of the Company were not utilised in an efficient and effective manner.

MoU with Government of Jharkhand not signed

2.1.7.2 The Department of Public Enterprises (DPE), GoI had evolved a model Memorandum of Understanding (MoU) system for State PSUs for improving their performance and to ensure adequate autonomy with accountability. The State Government may adopt the model with or without modification as per need. The Government thus monitors the performance of

these undertakings through setting targets at the beginning of the year in the MoU signed with them and performance evaluation at the end of the year.

Audit noticed that the administrative department *viz*. Energy Department, GoJ has not signed any Memorandum of Understanding (MoU) with the Company setting the target for power generation, capacity expansion, financial and operational parameters *etc*. for monitoring the performance of the Company. Thus, effective monitoring and evaluation of the performance of the Company has not been done by the GoJ.

As of 31 March 2016, the Company has accumulated losses of ₹ 824.53 crore and outstanding energy dues of ₹ 3082.72 crore from JUVNL indicating weak financial position and performance of the Company. GoJ should sign MoU with the Company so that Energy Department could set operational and financial targets for the Company and monitor performance of the Company so as to improve its financial position and profitability.

2.1.8 Financial Management

The main source of earning of the Company was the revenue realised from sale of power[11] generated by it and the day to day expenditure of the Company is met from such revenue. Following deficiencies were observed during the review of financial management of the Company:

Delay in finalisation of Annual Accounts

2.1.8.1 As per Section 210 read with Section 166 of the Companies Act 1956 and Section 129(2) read with 96 (1) of the Companies Act 2013 (applicable from April 2014), every Company has to finalise and place its Annual Financial Statements in the Annual General Meetings within six months from the end of the financial year.

Audit noticed that the annual accounts of the company for the years 1994-95 to 2010-11 were finalised belatedly during 2011-12 to 2015-16, the reason for which was stated to be ownership dispute over the Company between GoJ and Government of Bihar. However, finalisation of the annual accounts for the years 2011-12 to 2015-16 was pending (October 2016). Delay in finalisation of accounts is not only a violation of provisions of the Companies Act, 1956/2013, but also renders it difficult for the Company to detect/prevent any lapse/fraud and take immediate corrective action. Also, in absence of finalisation of accounts the Company has failed to watch over its financial health. Consequently, opportunities, if any, to initiate appropriate measures and follow up for a profitable operation were lost.

Audit further noticed that the Company in its petitions to JSERC for true up of tariff orders for the years 2011-12 to 2013-14 submitted the provisional accounts for the respective years stating these as audited accounts of the Company. JSERC issued the true up orders based on the expenditures as per these accounts. Submission of provisional accounts as audited annual accounts by the Company was improper.

Financial Position

2.1.8.2 The financial position of the Company for 2011-12 to 2015-16 based on the provisional Accounts of the Company is given in ***Annexure 2.1.1.*** As on 31 March 2016, the unsecured loans of the Company were ₹ 3016.09 crore. This included loan of ₹ 608.89 crore from Government of

[11] Ranged between *95 per cent* to 96 *per cent* of total earnings.

Bihar and ₹ 57 crore from Government of Jharkhand (GoJ). No repayment of the loans has been made by the company which has resulted in accrual of interest payble over the years. Outstanding interest on the loans as of 31 March 2016 was ₹ 2181.79 crore.

Audit noticed that the Company, in its tariff petition filed (August 2015) with JSERC, stated that it has not been able to make repayments of its loans due to outstanding dues from Jharkhand Urja Vikash Nigam Limited (JUVNL). JSERC however, was of the view that repayment of loans should not be linked with the recovery of dues. Due to failure in repayment of loan, JSERC disallowed interest of ₹ 36.73[12] crore as an expenditure item in the Annual Revenue Requirement for the years 2012-13 to 2015-16 thereby lowering the tariff of the Company.

Audit further noticed that the Company requested (January 2017) Government of Jharkhand for conversion of loan of ₹ 665.89 crore and accumulated interest of ₹ 1334.01 crore into equity share capital. It was also requested to waive/adjust the remaining accrued interest along with penal interest of ₹ 845.74 crore, with the outstanding dues of JUVNL. However, no further action has been initiated in this regard so far.

As of 31 March 2016, the Company has accumulated losses of ₹ 824.53 crore which was mainly caused by failure in achieving the JSERC norms in respect of Plant Load Factor (PLF), Plant availability Factor, auxiliary power consumption, excess consumption of coal and oil due to its failure to undertake proper repair and maintenance of the plant.

Working Results

2.1.8.3 The details of working results of the Company as per the provisional accounts of the company are given in the ***Annexure 2.1.2*****.** The revenue from operations of the Company was ₹ 490.38 crore in 2011-12, ₹ 810.86 crore in 2012-13, ₹ 612.60 crore in 2013-14, ₹ 741.38 crore in 2014-15 and ₹ 815.03 crore in 2015-16. Thus, annual revenues increased during the period, though it did not grow consistently.

The Company incurred loss per unit of energy sold of ₹ 0.66 in 2013-14, ₹ 0.07 in 2014-15 and ₹ 0.86 in 2015-16.

The Company earned a profit of ₹ 4.73 crore and ₹ 86.05 crore during the year 2011-12 and 2012-13 respectively. It however, registered a loss of ₹ 131.53 crore, ₹ 14.78 crore and ₹ 200.36 crore in the years 2013-14, 2014-15 and 2015-16 respectively. The profit per unit of energy sold was ₹ 0.02 per unit in 2011-12 which increased to ₹ 0.33 per unit generated in 2012-13 as the highest generation of power was achieved in 2012-13. The loss per unit of energy sold was ₹ 0.66 in 2013-14, ₹ 0.07 in 2014-15 and ₹ 0.86 in 2015-16 which was mainly due to steep increase in provision made for penal interest on loans in 2013-14 and prior period adjustments in the figures of provision for depreciation, revenue from sale of energy, outstanding dues, loans payable and stores and spares etc. made in the accounts of 2014-15 and 2015-16.

Audit noticed that the expenses of repair and maintenance, depreciation and interest and finance charges together constituted 21.88 *per cent* to 55.19 *per cent* of total expenditure during 2011-12 to 2015-16. The interest and finance charges comprising of interest on long term loans taken from Government of Bihar and Jharkhand increased from ₹ 83.14 crore (11.51 *per cent* of total

[12] Calculated at 13 *per cent* on the amount of ₹ 282.56 crore due for repayment in the years 2012-13 to 2015-16.

expenditure) in 2012-13 to ₹ 324.87 crore (41.84 *per cent* of total expenditure) in 2013-14 due to provision of penal interest of ₹ 221.72 crore on the loans. Interest and finance charges however, declined to ₹ 103.06 crore in each year during 2014-15 and 2015-16.

Policy/guidelines for investment of funds not framed

2.1.8.4 The Company had cash and cash equivalents ranging from ₹ 303.87 crore to ₹ 427.01 crore at the end of the years 2011-12 to 2015-16. However, it had not framed policy/guidelines for investment of funds, though it kept substantial funds[13] in banks as short term deposits at the end of the years 2011-12 to 2015-16. Audit noticed that the funds were invested in short term deposits on the basis of the rate obtained from some nationalised/private banks and avenues for better investment of funds was not explored. Thus, in absence of documented policy/guidelines for investment of funds, optimum return on investment of available funds was not ensured.

The Company stated (June 2016) that funds were kept in short term deposits to utilise it in the projects of capacity expansion and that the deposits were made after tendering.

The reply is not acceptable as funds were invested in short term deposits on the basis of the rate offers called for from some selected banks without open tendering giving fair and equal opportunity of participation to all banks.

Penalty imposed due to failure to deduct TDS on payment of coal bills

2.1.8.5 As per Section 45(1) Jharkhand Value Added Tax Act 2005 (Act), the Company was to deduct Jharkhand Value Added Tax at Source (TDS-JVAT) at the rate of two *per cent* of the price payable to Central Coalfields Limited (CCL) for purchase of coal. In case of contravention of the above provision penalty of twice the amount of the tax deductible was to be recovered from the Company. Further, as per Section 79(4) of the Act, every appeal against the demand for tax or penalty under the Act shall be filed within 30 days of the receipt of the notice of demand but where the appellate authority is satisfied that the appellant has sufficient reason for not preferring appeal within time, it may condone the delay.

Audit noticed that the Company did not deduct TDS-JVAT in payment of the invoices of CCL for the period 2011-12 and 2012-13. The Commercial Taxes Department (CTD) raised (March 2015) a demand for TDS-JVAT of ₹ five crore and a penalty of ₹ 10 crore for the year 2011-12. Another demand for TDS-JVAT of ₹ 7.35 crore and penalty of ₹ 14.69 crore for the year 2012-13 was also raised (March 2016). The Company has not deposited the amount so far (November 2016). On being enquired by audit, the Company stated that CCL had deposited JVAT at the rate of five *per cent* to CTD on the price of coal supplied to the Company and they have requested CCL to provide supporting documents showing deposit of tax for filing appeal against the demand. However, audit noticed that the copy of the challans for JVAT payment were not collected from CCL by the Company and no appeal was filed against the demand in the appellate authority within permitted time period of 30 days of receipt of demand under the Act. Thus, the penalty of

[13] ₹ 275.26 crore in 2011-12, ₹ 314.52 crore in 2012-13, ₹ 319.64 crore in 2013-14, ₹ 364.16 crore in 2014-15 and ₹ 392.41 crore in 2015-16 invested at the end of respective years from 2011-12 to 2015-16.

₹ 24.69 crore (₹ 10 crore and ₹ 14.69 crore) would have to be paid by the Company due to its failure in deducting TDS.

The Company stated (July 2016) that the documentary evidences *i.e.* copy of the challans for JVAT deposited and the returns filed by CCL in 2011-12 and 2012-13 are being collected for filing appeal against the demand. It further stated that the TDS-JVAT on payments made to CCL in 2013-14 and 2014-15 has been deposited to the CTD in June 2016 and the TDS-JVAT is being deducted and deposited from April 2015 as per provision of the Act.

The reply is not acceptable as the company failed to comply with provisions of Act due to which penalty of ₹ 24.69 crore was levied on it. The Company also failed to file appeal against JVAT demand within the permitted period of 30 days of the receipt of demand as required under Section 79(4) of Act and any appeal filed at this stage may not be accepted being time barred.

Failure to follow terms and conditions of Power Purchase Agreement

2.1.8.6 The Company sells its entire power generated to JUVNL as per the tariff decided by JSERC. The Power Purchase Agreement (PPA) entered into in 2005 with erstwhile Jharkhand State Electricity Board (JSEB) did not contain a payment security mechanism and the Company failed to realise full payment for energy supplied. Consequently, ₹ 1820.27 crore remained outstanding against JUVNL towards energy charges and Delayed Payment Surcharge (DPS) as of October 2012.

The Company entered into fresh PPA with JSEB on 31 October 2012 *i.e.* after 27 months of expiry (August 2010) of the earlier PPA. As per the PPA, JSEB was to open an irrevocable and revolving letter of credit (LC) equivalent to 105 *per cent* of estimated amount for energy supplied in a month and the amount of LC was to be enhanced or reduced every six months on the basis of average billing in the previous 12 months. Also, as per the Tariff Policy (January 2006) of Ministry of Power, GoI, the PPA should ensure adequate and bankable payment security arrangement to generating companies.

Provision in the PPA relating to payment security mechanism was not enforced which resulted in accumulation of dues of ₹ 3082.72 crore against JUVNL.

JUVNL opened LCs[14] for ₹ 40 crore which covered only 78 *per cent* of the average monthly energy bill of ₹ 51 crore in 2013-14. Audit noticed that the LC amount was not enhanced even when the average energy bills increased to ₹ 67.92 crore in 2015-16. Further, the LCs were never invoked for realising payment against the monthly energy bills although JUVNL was not paying the bills in full. As a result, the total outstanding dues increased to ₹ 3082.72 crore[15] as of March 2016**.** Thus, the provision in the PPA relating to payment security mechanism was not enforced resulting in accumulation of dues against JUVNL. Audit also noticed that the Company has not approached the JSERC for realisation of the outstanding dues of JUVNL and did not file any petition in this regard before the Commission.

Further, in the interview taken by audit team (November 2016), the MD of the Company stated that the outstanding dues with JUVNL was serving as a bottleneck in the capacity expansion of the plant. The GM, TTPS also stated that outstanding dues were affecting the planning and execution of operation and maintenance works at TTPS. Thus, it is clear that outstanding dues of the

[14] LC dated 10 May 2012 for ₹ 15 crore and LC dated 28 February 2013 for ₹ 25 crore.

[15] Comprised of energy charges ₹ 1186.85 and Delayed Payment Surcharge ₹ 1895.87 crore (at 1.25 *per cent* per month as decided by JSERC).

Company was adversely affecting the operational performance and expansion plans of the company.

The Company in its reply stated (July 2016) that the issue of recovery of outstanding dues was taken up regularly with the GoJ/JUVNL. It further stated that JUVNL has paid (March 2016) ₹ 563.05 crore directly to CCL against the amount outstanding for coal supply to the Company under Ujwal DISCOM Assurance Yojana (UDAY) Scheme of GoI. Further, in the exit conference, the Additional Chief Secretary stated (November 2016) that the Government will consider the matter and take a view for the realisation of dues of the Company.

The fact, however remains that ₹ 3082.72 crore remained unrealised from JUVNL as the Company failed to exercise the payment security mechanism available in PPA. The GoJ was however yet to take a definite action on this issue.

Sale of power to other licensees not done as per the Power Purchase Agreement

2.1.8.7 The Company decided to sell (November 2011) 50 MW power to NTPC Vidyut Vyapar Nigam Limited (NVVNL) and accordingly 5.23 Million Units (MU) of power was sold in November/December 2011 and it realised ₹ 2.01 crore from this sale. However, due to outage of one unit of TTPS and considering the power crisis of Jharkhand State, an administrative decision was taken by GoJ to suspend the sale of power to other licensees in December 2011.

Audit observed that as per the PPA (31 October 2012) with JSEB, the Company was allowed to sell 50 MW power to other licensees/consumers and if energy dues of erstwhile JSEB went beyond three months of energy charges, it was free to sell power to other licensees/consumers to the extent considered necessary. However, no effort was made by the company to sell power to any other consumers during 2012-13 to 2015-16, despite failure in payment of energy dues by JUVNL which stood at ₹ 3082.72 crore as of 31 March 2016 breaching the condition of PPA. Thus, the Company did not take effective action to augment its revenue even though it was not able to meet its operational expenditure *viz*. purchase of coal, capital overhauling as well as repair and maintenance of the plant. This indicates that it failed to safeguard its financial interests.

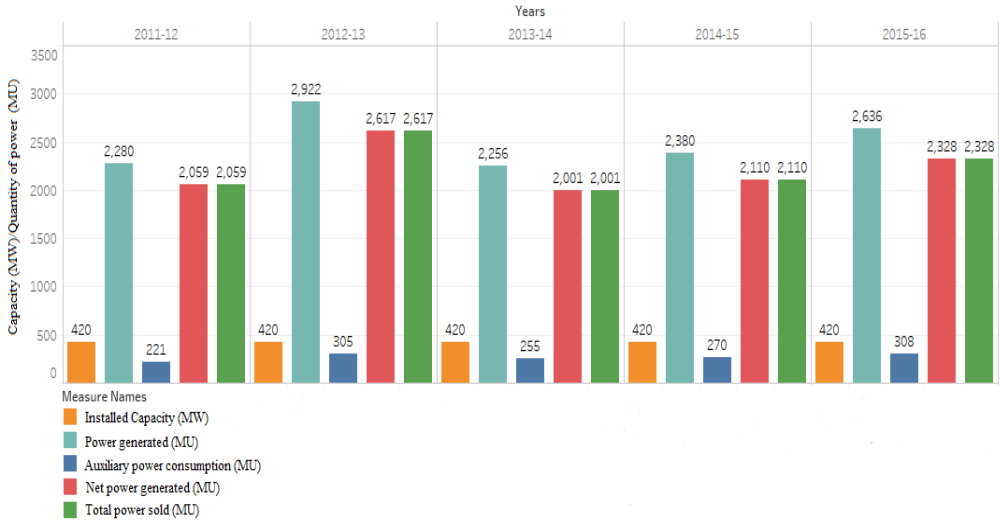
In the exit conference, the Additional Chief Secretary stated (November 2016) that the Company may sell power to CCL and adjust the power supply bills against the cost of coal supplied by CCL. The Company stated (December 2016) that they were in process of finalisation of sale of power to CCL against supply of coal by them.

The fact, however remains that the Company did not sell power to other licensees despite huge outstanding dues against JUVNL which affected the operational performance and profitability of the plant.

2.1.9 Operational Performance and maintenance activities

The operational performance of the Company for the five years ending 2015-16 is given in the **Chart 2.1.2** below:

Chart 2.1.2: Operational Performance during 2011-12 to 2015-16



The operational performance was evaluated on various operational parameters as discussed in the subsequent paragraphs.

PLF approved by JSERC not achieved

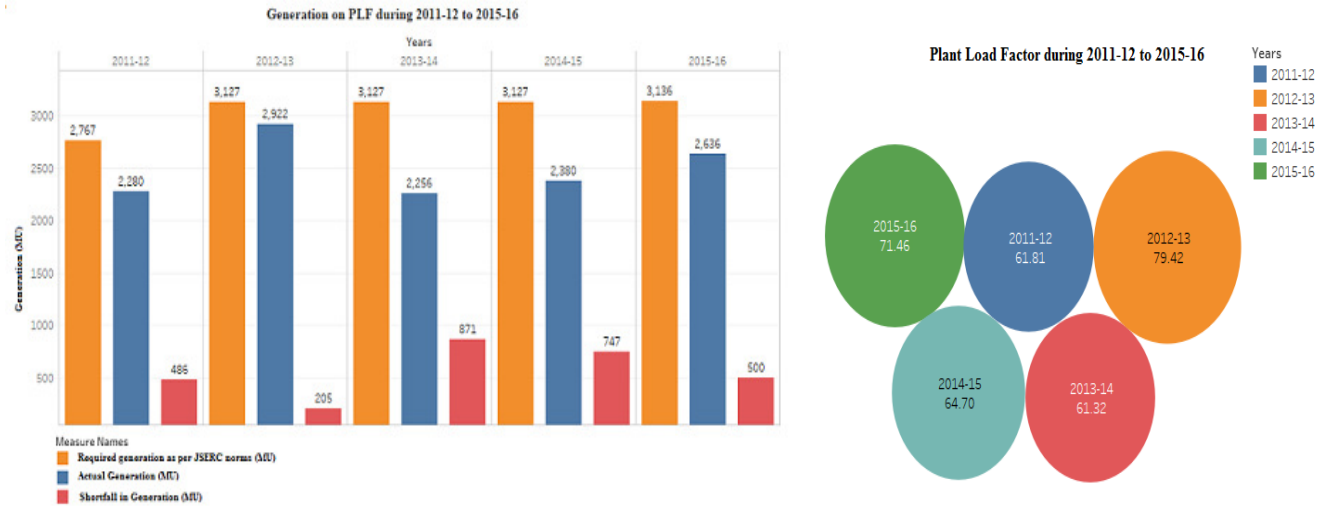
2.1.9.1 Plant Load Factor (PLF) is a measure of the output of a power plant as compared to the maximum possible generation at installed capacity. A higher load factor usually means more output and a lower cost per unit as fixed costs are spread over more units of output. The company in its tariff petition projected a PLF of 75 *per cent*, 76 *per cent*, 77 *per cent*, and 78 *per cent* for the years 2012-13 to 2015-16 respectively. However, JSERC fixed the PLF of 75 *per cent* in 2011-12 though in the Multiple Year Tariff order for the year 2012-13 to 2015-16, JSERC fixed 85 *per cent* PLF for thermal power generation at TTPS. The actual PLF achieved and the loss of revenue due to lower PLF during the years 2011-12 to 2015-16 is shown in the **Table 2.1.1** and **Chart 2.1.3**:

Table 2.1.1: PLF of TTPS during 2011-12 to 2015-16

Sl. No	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	Energy Generation as per design (MU)	3689.28	3679.20	3679.20	3679.20	3689.28
2	Required generation as per JSERC Norms (MU)	2766.96	3127.32	3127.32	3127.32	3135.89
3	Actual Generation (MU)	2280.42	2922.00	2256.14	2380.46	2636.31
4	JSERC Norms for PLF (percentage)	75.00	85.00	85.00	85.00	85.00
5	Actual PLF (percentage)	61.81	79.42	61.32	64.70	71.46
6	Shortfall in PLF (percentage)(4-5)	13.19	5.58	23.68	20.30	13.54
7	Shortfall in Generation(MU) (2-3)	486.54	205.32	871.18	746.86	499.58
8	Contribution (₹/KWH)	0.87	1.35	1.36	1.54	0.99
9	Contribution on shortfall in generation (₹ in crore)	42.33	27.72	118.48	115.02	49.46

(Source: Data compiled from the information furnished by the Company)

Chart 2.1.3: Power Generation and PLF during 2011-12 to 2015-16



It may be seen from the above table and chart that the PLF during the years ranged between 61.32 *per cent* and 79.42 *per cent* which was lower than the JSERC approved PLF of 75 *per cent* for 2011-12 and 85 *per cent* for the years 2012-13 to 2015-16. Also, the Company failed to achieve its projected PLF except in the year 2012-13. The company attributed evacuation system constraints due to which one unit of TTPS remained shut down for 120 days in 2011-12 and for 183 days in 2013-14, outages due to lack of preventive maintenance, obsolete machines and poor grade coal as the reasons for the low PLF.

Audit noticed that the plant achieved the highest PLF of 79.42 *per cent* in 2012-13 mainly due to availability of evacuation system, transmission lines and good quality of fuel in adequate quantity throughout the year accompanied by better management of the plant in association with the consultancy team of National Thermal Power Corporation Limited (NTPC) which was deputed upto August 2011. Had the operating parameters of 2012-13 also been maintained in the subsequent years, the Company could have achieved higher PLF in 2013-14 to 2015-16.Thus, due to failure to achieve PLF target fixed by JSERC, the Company suffered loss of power generation of 2809.48 MU valued at ₹ 870.78 crore and was deprived of contribution of ₹ 353 crore. The low PLF also caused financial losses to the Company as tariff had been calculated taking into account the PLF as 85 *per cent* instead of the actual PLF being worked out each year. Thus, during 2015-16, the Company suffered a financial loss of ₹ 0.446 per unit on 2328.28 MU of energy generated as compared to the tariff

A comparison of the PLF achieved by power plants operated by Damodar Valley Corporation (DVC), National Thermal Power Corporation Ltd. (NTPC) and State power generation Companies of Jharkhand and four neighboring States (Bihar, Chhattisgarh, Odisha and West Bengal) revealed that out of total 16 plants (five plants of DVC, six plants of NTPC, five State run plants) only three plants of NTPC (two plants in Odisha and one plant in Chhattisgarh) achieved the PLF of 85 per cent during 2015-16.

The Company failed to achieve the Plant Load Factor fixed by JSERC and suffered loss of power generation of 2809.48 MU and revenue loss of ₹ 870.78 crore.

which was worked out with 85 *per cent* PLF instead of the actual PLF of 71.46 *per cent*. The actual loss in 2015-16 were even more at ₹ 0.86 per unit. It was also observed that the Company failed to apprise JSERC that 85 *per cent* PLF was on the higher side and it had never been able to achieve this. The failure to finalise accounts since 2011-12 meant that higher cost of debt servicing (higher penal interest on loan) and prior period adjustments etc. could not be considered by JSERC while fixing the tariff.

The Company stated (June 2016) that the target of 85 *per cent* PLF approved by JSERC could not be achieved due to various constraints and lack of maintenance as shut down for capital overhauling was not permitted by GoJ and JUVNL. In the exit conference the Additional Chief Secretary, Department of Energy, GoJ stated (9 November 2016) that a comprehensive proposal for restructuring of the Company, improvement in PLF, capital overhauling and maintenance of the plant will be submitted to the Government for consideration and sanction of funds. However, no action in this regard was taken by the Company/Government as of December 2016.

The reply is not acceptable as the shut down of the units should have been allowed by the GoJ for proper maintenance and sustainable operation of the plant. Further, the Company has not conducted overhauling of boiler and turbine and their auxiliaries. Upgradation of its switchyard to 400 KV was also not completed which affected the PLF adversely.

Plant Availability Factor lower than that approved by JSERC

2.1.9.2 Plant availability means the ratio of actual hours operated to maximum possible hours available during certain period. JSERC has fixed Plant Availability Factor (PAF) of 85 *per cent* for the years 2011-12 to 2015-16. The details of total hours available, actual hours operated, excess outage hours and actual PAF are shown in the **Table 2.1.2**

Table 2.1.2: Outage hour of plant during 2011-12 to 2015-16

Sl. No	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	Total hours available	17568	17520	17520	17520	17568
2	Availability hours as per JSERC norm of 85 *per cent* PAF	14933	14892	14892	14892	14933
3	Actual Operated hours	11199	15397	12464	13959	15345
4	Excess outage hour (2-3)	3734	0	2428	933	0
5	Actual PAF(*per cent*)	63.75	87.88	71.14	79.67	87.35
6	Excess outage (*per cent*)	21.25	0.00	13.86	05.33	0.00

(Source: Data compiled from the information furnished by the Company)

Due to excess forced outages over JSERC norm, the power plant suffered generation loss of 1490 MU valuing ₹ 409.10 crore depriving it of contribution of ₹ 167.73 crore.

It may be seen from the above table that the actual PAF achieved by the plant during 2011-12 to 2015-16 ranged between 63.75 *per cent* to 87.88 *per cent*. The PAF was lower than the JSERC norm by 21.25 *per cent* in 2011-12, 13.86 *per cent* in 2013-14 and 5.33 *per cent* in 2014-15, though it achieved the PAF of 87.88 *per cent* in 2012-13 and 87.35 *per cent* in 2015-16 which were higher than the target of 85 *per cent* fixed by JSERC. Thus, forced outages of 7095 hours during 2011-12 to 2015-16 were suffered by the plant in excess of the JSERC norm. The forced outages were due to frequent tube leakages, low pressure in boiler, sparking from generator rotor slip ring, very high and low drum level *etc*. Due to excess forced outages over JSERC norm, the plant suffered generation loss of 1490 MU valuing ₹ 409.10 crore depriving it of contribution of ₹ 167.73 crore.

The Company stated (July 2016) that running of units at its critical condition led to its frequent breakdown causing excess outages of the plant. But the major problems could not be rectified during such periods of break down as planned programmes, spares and the required fund did not exist.

The reply is not acceptable as the Company should have planned the programme and the schedules for preventive maintenance of the plant and equipment better to reduce the breakdown of the plants. Also, JSERC had approved total expenditure of ₹ 489.99 crore on repair and maintenance for the years 2011-12 to 2015-16 against which the actual expenditure made by the Company was ₹ 270.46 crore during the above period, which indicates that adequate repair and maintenance of the plant was not done by the Company. It was observed that during 2011-16, the Company kept funds ranging from ₹ 275.26 crore to ₹ 392.41 crore under Short Term Deposits which could have perhaps been utilised. The Company earned interest of ₹ 144.98 crore on the Short Term Deposits during 2011-16 whereas the revenue loss suffered on account of excess PAF was ₹ 409.10 crore.

JSERC while truing up the Aggregate Revenue Requirement (ARR) for 2012-13 and 2013-14 stated that the Company has not incurred the repair and maintenance expenses on its generation units in line with approval granted in the Multi Year Tariff (MYT) order.

Excess auxiliary power consumption

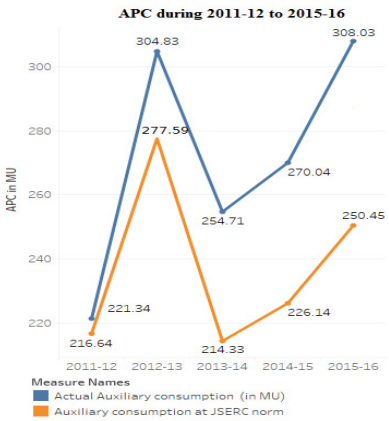
2.1.9.3 Auxiliary power consumption (APC) is the energy consumed by the power station itself for running its equipment and for common services. Higher APC reduces the net power generation of a generating station. JSERC had prescribed the norm for the APC of 9.5 *per cent* for the years 2011-12 to 2015-16. The actual APC in TTPS during 2011-12 to 2015-16 was as shown in the **Table 2.1.3**.

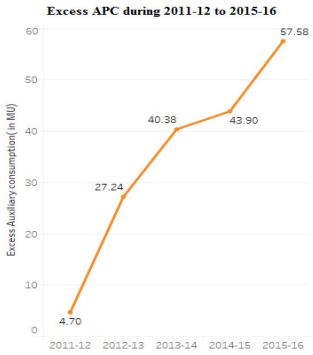
Table 2.1.3: Auxiliary power consumption during 2011-12 to 2015-16

Sl.No	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	Energy Generation (MU)	2280.42	2922.00	2256.14	2380.46	2636.31
2	Actual Auxiliary consumption (in MU)	221.34	304.83	254.71	270.04	308.03
3	Auxiliary consumption at JSERC norm of 9.5 *per cent*	216.64	277.59	214.33	226.14	250.45
4	Actual Auxiliary consumption (in *per cent*)	9.71	10.43	11.29	11.34	11.68
5	Excess Auxiliary consumption above JSERC norm (in *per cent*)	0.21	0.93	1.79	1.84	2.18
6	Excess Auxiliary consumption (in MU)	4.70	27.24	40.38	43.90	57.58
7	Contribution (₹/KWH)	0.87	1.35	1.36	1.54	0.99
8	Contribution on Excess Auxiliary consumption (₹ in Crore)	0.41	3.68	5.49	6.76	5.70

(Source: Data compiled from the information furnished by the Company)

Chart 2.1.4: Showing actual APC, normative APC and excess APC during 2011-12 to 2015-16





It may be seen from the **Table 2.1.3** and **Chart 2.1.4** that against the JSERC norm of 9.5 *per cent*, the actual APC was 9.71 *per cent* in 2011-12 which increased consistently to 11.68 *per cent* in 2015-16. The reasons for high APC were ageing of machines, failure to undertake overhauling of the machines in time, reduced operating load due to backing down of generation unit, frequent tripping of transmission lines and inefficient working of equipment like feed pumps, cooling water pumps, air fans, coal grinding mills, ash handling equipment *etc*. Audit noticed that JSERC has not approved the higher APC of the plant while truing up the ARR for the years 2011-12 to 2013-14, as it was a controllable parameter as per the Generation Tariff Regulations, 2010.

Audit further noticed during joint physical verification with the representatives of the Company that four Unit Auxiliary Transformers[16] (UAT) have not been commissioned since the initial commissioning of the plant which could have reduced the APC. The reason stated for the same was paucity of funds.

Unit Auxiliary Transformers lying unutilised in TTPS

The Company consumed excess auxiliary power of 173.80 MU valuing ₹ 56.79 crore over the JSERC norm and was deprived of a contribution of ₹ 22.04 crore during 2011-12 to 2015-16.

Thus, the Company consumed excess auxiliary power of 173.80 MU valuing ₹ 56.79 crore over the JSERC norm and was deprived of a contribution of ₹ 22.04 crore during 2011-12 to 2015-16.

The Company stated (June 2016) that the JSERC fixed the target of Auxiliary Power Consumption considering 85 *per cent* PLF for both the units, although they operated at reduced load due to various technical reasons like backing

[16] The Power Transformer which provides power to the auxiliary equipment of a power generating station during its normal operation.

down of generation unit, poor quality of coal, ageing of machines, overhauling not done timely, frequent tripping of transmission lines *etc*. which leads to high APC. It also stated that UATs will be commissioned when the fund will be made available.

The reply of the Company does not suffice as a valid reason for high rate of APC as the Company could have controlled most of the factors attributed for high APC through efficient management of the plant, timely repair and maintenance and by commissioning the UATs. Management's contention regarding lack of funds for commissioning of UATs is also not acceptable as the Company should have utilised its available funds kept in short terms deposits for carrying out this essential work.

Delay in carrying out capital overhaul of the plant

2.1.9.4 Efficiency of the plant and equipment and their availability for power generation is dependent on strict adherence to annual maintenance and equipment overhauling schedules. Failure to adhere to these schedules results in higher consumption of coal, fuel oil and higher forced outages and resultant increase in the cost of power generated. As per the manual of the Original Equipment Manufacturer (OEM) Bharat Heavy Electricals Limited (BHEL), capital maintenance of plants should be done within 25000 running hours. TTPS had conducted the last capital overhauling of Unit I in June 2008 and that of Unit II in May 2010 and the same had become due again from May 2012 and July 2014 respectively.

Audit noticed that the Company had planned the capital overhauling of Unit I during July, 2013 which was rescheduled to July 2014 and was again planned in June 2015. However, the capital overhauling was not conducted as per the schedule. Audit further noticed that Unit I had run for 53037 hours and Unit II had run for 40917 hours up to the end of May 2016 against stipulated 25000 running hours for carrying out capital overhaul. The boiler of Unit I suffered several break downs during April and June 2014 due to boiler tube leakages with forced outages for five days. Also, the unit suffered 53 days of forced shut down from 12 July 2014 due to damage of Generator Rotor Slip Ring and for want of replacement of the Rotor. In October 2014, Unit I was again shut down for about 25 days due to boiler tube leakages.

Despite the fact that the work order for complete overhauling of the Generator was already placed on BHEL and that the unit suffered 78 days of forced shut down, the capital overhauling was not undertaken due to lack of planning and preparedness to carry out the capital overhauling. Again overhauling of both the units planned during subsequent period *i.e.* May 2015 to August 2015 was also not done, the reasons for which were stated to be lack of permission from JUVNL for shut down and funds constraint. In absence of Capital Overhauling, Unit I suffered 102 trippings resulting in forced shut down of 5811 hours during 2013-14 to 2015-16. Similarly, Unit II suffered 100 trippings and forced shut down of 4291 hours during the same period. However, the Company has not approached JSERC explaining the critical conditions of the units and difficulties faced by it in conducting the capital overhauling. The capital overhauling of Unit I was finally taken up only in July 2016. Thus, overdue capital overhauling of Unit I was taken up after a delay of 49 months and that of Unit II was yet to be taken up though overdue for 28 months (November 2016). Besides, the upgraded Control and Instrumentation system for Unit I procured in December 2012 at a cost of

Unit I suffered 102 trippings resulting in forced shut down of 5811 hours during 2013-14 to 2015-16 and Unit II suffered 100 trippings and forced shut down of 4291 hours during the same period.

₹ 13.81 crore which was to be commissioned during capital overhauling of the Unit could also not be commissioned (October 2016).

The Company stated (July 2016) that the Capital overhauling scheduled from 17 June 2014 to 31 July 2014 was not taken up as JUVNL did not agree to shutting down the plant and also due to fund constraints.

The reply is not acceptable as capital overhauling of plant was necessary for longer life and efficient operation of the plant and timely execution of the same was the responsibility of the Company. As such the decision for the same should have been taken by the Company itself. Moreover, the schedule for the capital overhauling of the units was fixed and intimation for the same was given well in advance to JUVNL. The contention of funds constraints is also not acceptable as the actual expenditure on repair and maintenance was much less than the expenditure for repair and maintenance approved by JSERC in the tariff order for the years 2011-12 to 2015-16. Further, the Company had kept significant funds in short term deposits during this period.

Here it is pertinent to mention that in the interview taken by Audit Team, the General Manager, TTPS stated that renovation and modernisation of the plant was necessary and that many of the pumps, fans, motors, ducts and pipe lines had deteriorated. Timely overhaul of the equipment and the units should have been done.

Recommendations of the Consultants for Performance Improvement not implemented

2.1.9.5 The company had placed (May 2009) work order for ₹ 6.79 crore on NTPC for consultancy services for Operation and Maintenance management support for the units in the fields of mechanical and electrical maintenance, Control and Instrumentation (C & I), maintenance planning *etc*. for 24 months. Also, another work order for ₹ 20 lakh was placed (May 2009) on NTPC for consultancy services for technical audit, gap analysis and performance improvement plan (PIP). Under this, a report on gap analysis and PIP was to be submitted to the Company after complete study of the power station.

Audit noticed that the NTPC consultancy team *inter alia* suggested measures for reduction of tripping, boiler tube leakage, unburnt carbon in ash, improvement in heat rate *etc*. during May 2009 to August 2010. It however stated (September 2010) that only 25 *per cent* of their recommendations were implemented by the Company which was not satisfactory. Also, the implementation of the road map for PIP and fixation of targeted performance level in short term and long term was not on record which indicated that action for implementation of the suggestions of the consultant in the short term and long term was not taken. Further, the Unit Auxiliary Transformers, Automatic Turbine Testing (ATT) system, Electro Hydraulic Governing (EHG) system, Auto loop and Master Fuel Controller which were not commissioned since inception of the plant were also not commissioned under the supervision of the consultant. Thus, the desired performance improvement of the plant was not achieved despite incurring an expenditure of ₹ 6.06 crore in consultancy services.

The Management stated (July 2016) that remedial action as suggested by NTPC for short term and long term was taken in a piecemeal basis. Action was taken for reduction of unburnt carbon, and heat rate in the TPS has improved.

The reply is not acceptable as coordinated action was not taken for implementation of the PIP; as a result the improvement in performance achieved in 2012-13 could not be sustained. This is also evident from the fact that the percentage of unburnt carbon and APC had increased in the subsequent years. Further, the Company has prepared the action plan only in November 2016 for improvement in PLF, reduction in APC, number of trippings and unburnt carbon in ash, for preventive maintenance of plant and equipment, ash handling, finance management, human resource management, *etc*. on the basis of recommendations of NTPC. However, these are yet to be implemented.

2.1.10 Optimum utilisation of existing plants and equipment

A plan needs to be in place for optimal utilisation of existing plants and equipment besides timely repair/maintenance. The projects undertaken for upgradation of plant by the company are discussed in the following paragraph.

Under-utilisation of capacity due to failure to upgrade 400 KV Switchyard

2.1.10.1 The power generated from the TPS was to be evacuated by two 400 KV transmission lines *viz*. TTPS to Bihar Sharif Grid of Bihar State Electricity Board and TTPS to Patratu Thermal Power Station (PTPS) Grid of JUVNL. However, both the lines were operating at 220 KV as the capacity of the switchyard was 220 KV. In the event of one transmission line going down the energy generated at TTPS could not be evacuated in full causing it to back down its power generation.

The construction of 400 KV switchyard as per the DPR of TTPS was left incomplete by Bharat Heavy Electricals Limited (BHEL) after initial commissioning of TTPS (September 1996) and the equipment valued at ₹ 8.60 crore supplied by it including 250 MVA[17] Inter Connecting Transformer (ICT) was lying unused (October 2016) in the plant premises for last 20 years.

To overcome this power evacuation constraint, the Company awarded (July 2010) the work of construction of five 400 KV bays in the switchyard of TTPS to Power Grid Corporation of India Limited (PGCIL) on cost plus basis at an estimated cost of ₹ 22.70 crore, excluding consultancy fee at 15 *per cent*. The scope of the work included design, engineering, tendering, procurement, erection and project management and testing and commissioning. The work was to be completed within 24 months *i.e.* by July 2012. However, PGCIL took 20 months in awarding (March 2012) the work to contractor, M/s Sterling & Wilson Ltd. in March 2012 at a contract price of ₹ 16.49 crore. Audit noticed that there was no penal provision in the contract with PGCIL for delay in completion of the work and thus no safeguard was available to the company against delay in completion of the work.

The contractor started the work in May 2013 *i.e*. after 13 months of award of the work. As per the work order, five bays of 400 KV were to be constructed and one ICT of 250 MVA was to be installed. The ICT was to be procured by the Company for which the Company placed purchase order (September 2011) for ₹ 8.60 crore on BHEL and supply of the equipment was completed in December 2013. However, the provision of five bays with one ICT was found (June 2013) inadequate to evacuate the entire power generated from TTPS and the Company decided (June 2013) to install one more ICT of 250 MVA and to

[17] Megavolt Amperes (MVA) is a unit used for measuring apparent power *i.e* total current and voltage in an electrical circuit.

construct one additional bay for it. As such the scope of work was revised to include construction of one additional bay and commissioning of the old ICT and one 50 MVAR Shunt Reactor[18]. Accordingly, the contract price was revised (December 2015) to ₹ 20.18 crore. Thus, the scope of work was revised after 64 months of award of the work to PGCIL.

Audit noticed that the progress of the work was not satisfactory due to delay in completion of foundation work, delay in erection of the new ICT as the supplier BHEL has not deputed its engineers for commissioning of the ICT, and delay in payment to PGCIL by the Company. Also, on inspection (June 2016) of the old ICT and the shunt reactor internal problems were reported which were yet to be rectified.

Due to defective planning and change in the scope of work, upgradation of the switchyard was delayed by 52 months.

Thus, due to defective planning and change in the scope of work upgradation of the switchyard was delayed by 52 months and has not been completed so far (November 2016). As a result, Company suffered loss of power generation of 971 MU due to backing down of generation units and was deprived of revenue of ₹ 267.51 crore on which loss of contribution (sale price less variable cost) of ₹ 107.15 crore was suffered during 2011-12 to 2015-2016.

Incomplete bays of Switchyard at TTPS

The Management stated (July 2016) that the upgradation of switchyard was not completed due to technical changes and modification in the scope of work from five bays to six bays and the delay in payment was due to financial constraints. Management further stated that the work would be completed by March 2017.

The fact however remains that the work was not executed in a planned and time bound manner as scope of work was revised after 64 months of award of the work. Further, the Company should have provided funds for the works as allocation of ₹ 20 crore and ₹ 14.61 crore was already made in the budget for 2014-15 and 2015-16 and Company had kept substantial funds in short term deposits in the banks. JSERC also directed (September 2016) the Company to complete the upgradation of the switchyard to operate the transmission line at 400 KV as against the existing operating voltage of 220 KV.

2.1.11 Consumption of fuel

Excess consumption of coal due to high unburnt carbon in ash

2.1.11.1 TTPS was designed for two *per cent* unburnt carbon in bottom ash and 0.5 *per cent* unburnt carbon in fly ash. Audit noticed that actual unburnt carbon in bottom ash during the period 2011-12 to 2015-16 ranged from 9.96 *per cent* to 12.66 *per cent* and unburnt carbon in fly ash ranged between 4.87

[18] 50 MVAR Shunt Reactor which was disconnected in March 2014 was to be commissioned in 400 KV switchyard.

per cent to 5.53 *per cent* resulting in 1,68,545 MT excess unburnt carbon during the above years.

Excess unburnt carbon in bottom ash and fly ash than the design norm of the power plant resulted in excess consumption of 1,68,545 MT coal valued at ₹ 35.10 crore.

It was noticed that the consultancy team of NTPC engaged for performance improvement of the plant had recommended (August 2010) actions to be taken for reduction of unburnt carbon in ash *i.e* removal of foreign materials from coal ensuring reliable operation of milling plant, identification of new or replacement of defective instruments, inspection and testing of ash sample daily, calibration of instruments and replacement of eroded coal burners and other parts in boilers *etc*. However, action on the suggestions taken by TTPS was not on record and no improvement was achieved in the percentage of unburnt carbon in ash. Thus, unburnt carbon in ash in excess of the designed parameter resulted in excess consumption of 1,68,545 MT of coal valued at ₹ 35.10 crore.

The Company stated (July 2016) that action was taken as per suggestion of NTPC team and improvement in heat rate has been achieved.

The heat rate is a factor of the calorific value of the coal supplied and could be attributed to availability of better coal. However, the percentage of unburnt carbon in bottom ash is a function of other factors as delineated by the NTPC consultant. Thus, unburnt carbon in Unit I has increased from 10.68 *per cent* in 2012-13 to 15.23 *per cent* in 2015-16 and in Unit II, the same has increased from 9.24 *per cent* to 10.09 *per cent* during the same year which meant that the Company has not taken adequate measures for removal of foreign matter from the coal, improvement in burners and better instrument quality. In the interview taken by the audit team the General Manager, TTPS also mentioned that high unburnt carbon in fly ash and bottom ash affected the operational performance of TTPS.

Excess consumption of Fuel Oil

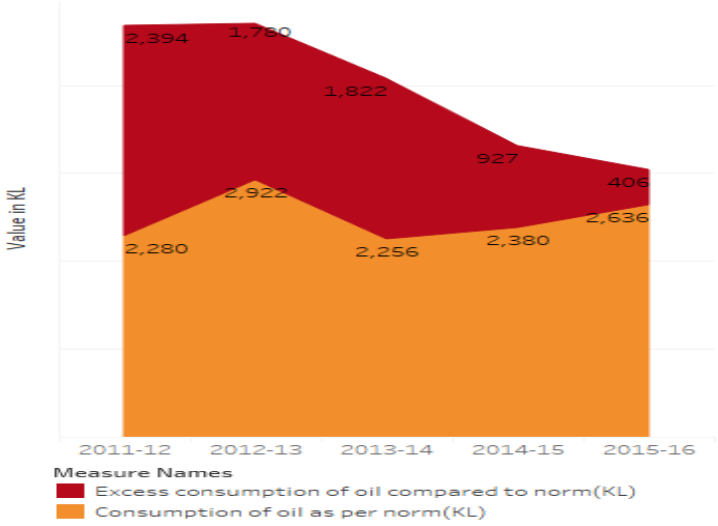
2.1.11.2 Light diesel oil (LDO) is required for lighting up of the boiler and controlling instability of flame as a supplement to coal. As per the norm fixed by JSERC for the year 2011-12 to 2015-16, consumption of LDO should not exceed one millilitre (ml) per KWH. However, consumption of LDO was not within the prescribed limit during the period 2011-12 to 2015-16 as indicated in the **Table 2.1.4** and **Chart 2.1.5.**

Table 2.1.4: Consumption of LDO during 2011-12 to 2015-16

Sl.No	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	Unit generated(MU)	2280.42	2922.00	2256.14	2380.46	2636.31
2	Actual fuel oil consumption(KL)	4674.00	4702.21	4138.30	3307.80	3042.10
3	Consumption of oil as per norm(KL)	2280.42	2922.00	2256.14	2380.46	2636.31
4	Actual Oil Consumption (ml per KWH)	2.05	1.61	1.83	1.39	1.15
5	Excess consumption of oil compared to norm (KL)	2393.58	1780.21	1822.16	927.34	405.79
6	Average procurement cost per KL (in ₹)	55195.82	62447.96	64933.24	58350.44	42506.15
7	Total value of excess consumed oil (₹in crore)	13.21	11.12	11.83	5.41	1.72

(Source: Data compiled from the information furnished by the Company)

Chart 2.1.5: Excess Consumption of LDO against norm



It may be seen from the table and chart that the company could not achieve JSERC norm of one ml per KWH during 2011-12 to 2015-16 and the actual LDO consumption ranged between 1.15 to 2.05 ml per KWH. As a result there was excess consumption of 7329.08 KL oil over the norm valued at ₹ 43.29 crore.

The reasons for the oil consumption in excess of JSERC norm were frequent tripping of the units due to poor quality of coal, tripping of transmission lines and backing down of generation unit due to maintenance problems in transmission lines. It was noticed that JSERC, in the true-up order of the Tariff of the Company for 2011-12 has disallowed the expenditure of ₹ 8.49 crore due to excess consumption of LDO. Thus, the Company had already suffered a loss of ₹ 8.49 crore in 2011-12 and further stands to suffer a loss of ₹ 30.08 crore due to excess consumption of LDO during 2012-13 to 2015-16, if JSERC were to yet again disallow the expenditure over and above the norm.

The Company stated (July 2016) that tripping of units due to failure of transmission lines and lack of timely preventive maintenance resulted in excess oil consumption.

The reply confirms the audit observation.

2.1.12 Input efficiency

Operating efficiency of a generating company is dependent on input efficiency which consists of material and manpower, issues relating to which are discussed in the succeeding paragraphs.

Loss of power generation due to shortage/poor quality of coal

2.1.12.1 The units of the Company had tripped 15 times during the years 2011-12 to 2015-16 owing to shortage of coal and poor quality of coal supplied by CCL. As a result, 1554 plant working hours were lost and the company suffered generation loss of 326.39 MU valued at ₹ 50.24 crore and a loss of contribution of ₹ 21.68 crore.

The Company stated (July 2016) that main reasons for procurement of lesser quantity of coal was its inability to pay for purchase of coal and that requirement of coal was less during that period. Also, supply of coal was stopped in 2011-12 as the required grade of coal was unavailable and

transportation of coal from West Bokaro collieries was interrupted in 2014-15 due to local problems.

The reply is not acceptable as coal being the prime requirement for power generation, procurement and storage of adequate quantity of coal should have been ensured by the Company.

Failure in realisation of claim for poor quality of Coal

2.1.12.2 Each thermal power station is designed for usage of particular grade of coal. Usage of envisaged grade of coal ensures optimisation of power generation and economy in cost.

As per the Fuel Supply Agreement (FSA), CCL was to make arrangement to assess the quality of coal supplied and to monitor the same. For assessment of quality of Coal, sample was to be collected at the loading point by the seller and purchaser and analysed for determination of Moisture, Ash and Gross Calorific Value (GCV). Accordingly, the quality of coal received by the Company was to be adjusted for the excess moisture[19] and the grade of coal. The amount of claims on settlement of the disputed bills was to be paid in each month.

Audit noticed that the average GCV of Coal received was 4041 Kcal/kg in 2012-13, 3878 Kcal/kg in 2013-14, 3589 Kcal/kg in 2014-15 and 3614 Kcal/kg in 2015-16 as per test reports of laboratory of TTPS. This was lower than the design requirement of 4200 Kcal/kg of GCV of TTPS.

The Company in its tariff petition for MYT 2012-13 to 2015-16 intimated JSERC that quality of coal supplied by CCL was very poor. JSERC in the MYT order (May 2012) had directed the Company to negotiate with CCL for procurement of good quality of coal and report the outcome. The Company in its compliance had intimated JSERC that the FSA has been signed with CCL in May 2012. Audit noticed that quality of coal supplied by CCL remained poor during 2012-13 to 2015-16 even after signing FSA which *inter alia* included provision specifying the required quality of coal. However, Company had not taken up the matter before JSERC again and as such no remedial action could be taken by JSERC.

Audit noticed cases when joint sampling was not being done by CCL as per the FSA clause. CCL had engaged a third party at some collieries for sampling at the loading ends. However, the sampling work was not conducted properly and the Company accepted that TTPS representatives though required were not present when sampling was being done. On being enquired, CCL also confirmed in its reply that in many cases TTPS did not participate in joint sampling at loading points.

Further, analysis of coal samples from TTPS coal yard was being done in TTPS laboratory. However, the test results of TTPS laboratory did not match with the grade of coal billed by CCL with regard to ash content, GCV and moisture content in the coal sample. As the coal received at TTPS was of lower grade than the grade for which CCL billed in most cases, the Company had lodged claims of ₹ 27.46 crore towards grade slippage and ₹ 22.16 crore for high percentage of moisture during May 2012 to September 2015. However, CCL did not accept the claims lodged by the Company on the basis

[19] If the monthly weighted average of surface moisture in coal exceeded 7 *per cent* during October to May and 9 *per cent* during June to September.

of analysis of coal at laboratory and admitted only ₹ 1.29 crore for grade slippage and only ₹ 2.17 crore on higher percentage of moisture.

The Company had also lodged a claim of ₹ 6.40 crore towards oversized stones/boulders in the coal received by road during 2012-13 to 2015-16. However, CCL did not agree (March 2015) to the claim citing lack of provision in the FSA for payment of claim for oversized stones in case of supply of coal by road. Audit noticed that the work orders for transportation of coal by Road provided that loading of coal was to be made by the transporters after segregating stones and if stone is supplied along with the coal, the price of the same was to be recovered from the bills of transporters. However, the Company did not recover the price of coal for stone supplied against coal from the transporters. As such the claim was not realised either from CCL or from the transporters.

The Company failed to realise the claim for ₹ 56.02 crore for grade slippage, higher percentage of moisture and supply of oversized stones in coal.

Thus, the Company failed to realise the claim for ₹ 56.02 crore for grade slippage, higher percentage of moisture, and supply of oversized stones in coal all of which resulted in increase in the cost of generation.

The Company in reply stated (July 2016) that sampler was not appointed by CCL for analysis of coal in most of the collieries and Company was lodging the claims on the basis of test reports in its laboratory at TTPS. As per the Ministry of Coal (MoC), Government of India (GoI) guidelines (November 2015), the Company has appointed (October 2016) the Central Institute of Mining and Fuel Research to conduct sampling at loading point. It further stated that the claim for oversized stone was not emphasised by the Company as the amount of the claim if realised was to be transferred to the transporters.

The fact remains that the Company failed to appoint its sampler at the loading point as per the provision in the FSA. Further, the Company has not recovered the price of coal against stone either from the transporters or from CCL so far. The Company also failed to report the matter of poor quality of coal supplied by CCL to JSERC for remedial action.

Failure in lifting coal as per Annual Contracted Quantity

2.1.12.3 As per FSA, if for a year, the level of delivery of coal by the seller, or the level of lifting by the purchaser falls below 90 *per cent* of the Annual Contracted Quantity (ACQ), the defaulting party was liable to pay compensation to the other party for such shortfall in level of delivery or level of lifting as the case may be. Similarly, if the seller delivered coal to the purchaser in excess of 90 *per cent* of the ACQ, the purchaser was to pay the seller a performance incentive as per prescribed formula.

The position of coal linkages fixed and coal received during the period from 2011-12 to 2015-16 is given in **Table 2.1.5.**

Table 2.1.5: lifting coal as per Annual Contracted Quantity

Sl. No	Particulars	2012-13	2013-14	2014-15	2015-16
1	Coal Linkage/FSA quantity (lakh MT)	20.00	20.00	20.00	20.00
2	Quantity of coal received (lakh MT)	20.69	17.50	16.75	21.47
3	Shortfall(-)/excess (+) in quantity of coal received (lakh MT)	(+)0.69	(-)2.50	(-)3.25	(+)1.47
4	Percentage of shortfall (-) /Excess (+)	(+)3.45	(-)12.50	(-)16.25	(+)7.35
5	Quantity of coal consumed (lakh MT)	21.17	16.02	18.70	19.95

(Source: Data compiled from the information furnished by the Company)

It would be seen from the above table that in the years 2013-14 and 2014-15, there was shortfall of 12.5 *per cent* and 16.25 *per cent* in lifting quantity of coal as compared to the ACQ whereas the coal quantity procured was in excess of the ACQ by 3.45 *per cent* in 2012-13 and 7.35 *per cent* in 2015-16. Audit noticed that TTPS failed to lift 5.75 lakh MT of coal allocated to it in 2013-14 and 2014-15 and the Company had to pay (March 2016) a compensation of ₹ 2.45[20] crore for lifting less than 90 *per cent* of the ACQ as per the FSA. Thus, the avoidable loss of ₹ 2.45 crore was incurred because of the failure to lift the quantity of coal as agreed to in the FSA.

The Company stated (October 2016) that main reason for less off take of coal was lesser requirement of coal during that period.

The reply is not acceptable as coal consumption (18.70 Lakh MT) was more than the quantity of the coal received (16.75 Lakh MT) in 2014-15. Also, the full ACQ quantity of coal, if lifted, could have been utilised in 2015-16 in which quantity of coal received (21.47 Lakh MT) was more than the ACQ on which performance incentive would have to be paid as per the FSA.

Transportation of Coal by Rail less than the target

2.1.12.4 Coal allocated by CCL from the mines of East & West Bokaro area at a distance of 23 to 50 km is being transported by road. On commissioning of the MGR system, Board of Directors of the Company decided (October 2015) to procure 1.20[21] lakh MT coal per month (72 *per cent* out of FSA quantity of 1.67 lakh MT) from mines in Piparwar[22] area and transport it through rail. However, TTPS transported only 3.61 lakh MT of coal by rail against a target of 6 lakh MT during November 2015 to March 2016 whereas 6.87 lakh MT was transported by road during the same period. Thus, only 34 *per cent* of entire quantity of coal transportation was made by rail against the target of 72 *per cent***.**

Failure to transport the targeted quantity of coal by rail resulted in avoidable expenditure of ₹ 8.32 crore.

The average landed cost[23] of the coal by Road was between ₹ 2494 per MT to ₹ 2951 per MT whereas the average landed cost by Rail ranged between ₹ 2001 per MT to ₹ 2453 per MT which implies that landed cost of coal by Rail from Piparwar Mines was lower than those transported by road from East and West Bokaro mines ranging between ₹ 132 to ₹ 610 per MT. Thus, failure to transport the targeted quantity of coal by rail resulted in avoidable expenditure of ₹ 8.32 crore.

The Company stated (October 2016) that though the landed cost of coal from Piparwar mines transported by rail was lower than the landed cost of coal from East and West Bokaro mines, but heat value of the coal from Piparwar mines was less than that from East and West Bokaro mines. It also stated that CCL did not permit dispatch of full quantity of Piparwar coal as desired by the Company.

The reply is not acceptable as the target for quantity of coal to be transported by the MGR system from Piparwar Mines was fixed by the Board of the Company taking above factors into consideration.

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[20] ₹ 0.76 crore in 2013-14 + ₹ 1.69 crore in 2014-15.
[21] Out of FSA quantity of 1.67 Lakh MT *i.e.* about 72 *per cent* of FSA quantity.
[22] Piparwar is situated at a distance of about 100 km from TTPS.
[23] During November 2015 to March 2016.

Failure to claim for shortage of coal in Tariff Petition

2.1.12.5 As per recommendation of a committee constituted by TTPS in July 2005, the Coal Handling Plant (CHP) provides for loss of coal at 0.4 *per cent* on the monthly closing stock of coal due to wind, rain and evaporation of moisture *etc*. Accordingly, the CHP worked out a loss of 43,857 MT on the stock of coal for 2011-12 to 2015-16. Audit noticed that the Company had not claimed for the above loss in the stock of the coal in the Tariff petitions filed to JSERC which has resulted in increase in the cost of generation by ₹ 8.14 crore.

The Company accepted (July 2016) that the loss in coal stock was not taken into account in ARR stating that the same was taken into account as consumption of coal.

The reply is not acceptable as the consumption of coal worked out by the CHP did not include the quantity of loss in coal stock.

Failure to install device for measuring the consumption of water

2.1.12.6 TTPS draws water from Tenughat Dam reservoir of Water Resources Department, GoJ through four Clarified Water (CW) Pumps of 16000 m^3 /hour capacity for use in the TPS and its colony. A major portion of water after getting utilised in cooling the condensers gets discharged into the reservoir through open channel. However, no devices were installed by TTPS to measure water intake and exit from the TPS and there was no agreement with the department regarding drawal of water and payment of water charges.

The Energy Department, GoJ constituted (March 2011) a committee to assess the consumption of water by TTPS. The committee after visiting Super Thermal Power Plant of NTPC at Farakka recommended (June 2015) the payment of water charges for 15.50 Million Cubic Meter (MCM) of water *per annum* by TTPS on the basis of design parameters of the plant and 0.74 MCM *per annum* for consumption in its colony. As per the recommendation of the committee, total water charges of ₹ 31.40[24] crore was payable (March 2016) by the Company since the inception of the plant.

Audit noticed that Tenughat Dam Division, Tenughat raised a claim (March 2015) of ₹ 1961.81 crore for the period August 1996 to February 2015 on the basis of capacity of CW pumps. The Company had paid ₹ 97.85 lakh as water charges for the period October 2009 to February 2015 on the basis of its own assessment. The company placed a work order (October 2015) to M/s Central Water and Power Research Station (CWPRS), Pune to identify the requirement of flowmeter for measuring the actual consumption of water and to supervise the installation of the flowmeters in six months. However, the flow meters has not been installed so far (November 2016). Thus, due to failure to install the device for measuring the actual quantity of water consumed by TTPS the Company would have to pay at least ₹ 30.42 crore towards water charges even though a major portion of water was not actually consumed considering the high plant outages and low PLF of the plant during the above years.

Due to failure to install device for measuring the actual quantity of water consumed, the Company incurred a liability of ₹ 30.42 crore.

The Management stated (July 2016) that it has engaged CWPRS to suggest the specification of flowmeters on receipt of which the meters will be installed. It further stated that water charges for 16.24 MCM *per annum* calculated on the

[24] ₹ 1.61crore *per annum* (16.24 MCM x 1000000 x 219.97 gallons x ₹ 4.50/1000) x 19.5 years.

basis of design parameters will be payable from 1 April 2016 till installation of flow meters as suggested by the Committee.

The reply is not acceptable as the Company failed to enter into an agreement with the Water Resources Department specifying the terms and conditions for consumption of water. Further, the devices for water consumption to measure the actual water consumed were also not installed by the Company.

Human Resource Management

2.1.12.7 Management of Human Resources (HR) is important for achieving the objectives of an organisation. For ensuring better management of human resources, a proper HR policy should be put in place.

Audit noticed that the Company followed the Service Rules of the erstwhile Jharkhand State Electricity Board (JSEB) upto January 2014. However, after unbundling of JSEB in January 2014 into four companies, the Company has not formulated its HR policy. No HR manual has been prescribed and the Company had no codified rules and regulations for its personnel management. The status of sanctioned manpower vis-à-vis actual manpower of the Company is indicated in the **Table 2.1.6**

Table 2.1.6: Sanctioned strength vis-à-vis actual manpower

Sl.No	Category of staff	Sanctioned Strength	Actual Manpower
1	Technical staff	510	258
2	Other than technical staff	162	338
Total		**672**	**596**

(Source: Data furnished by the Company)

It can be observed from the above table that the sanctioned strength of employees as of 31 March 2016 was 672 against which the actual manpower deployed was 596. Against the sanctioned strength of 510 technical manpower, the actual manpower deployed was 258. Thus, there was shortage of 252 employees in technical category.

Audit noticed that seven posts of Electrical Executive Engineer, 32 posts of Junior Engineer and all the 44 sanctioned posts of Operators were vacant as of 31 March 2016. Also, all the three posts of Director Accounts and Deputy Director Accounts and seven posts of Accountant/Accounts Assistant remained vacant as of 31 March 2016. Thus, adequate technical manpower was not in place for crucial operations of the plant and for managing the finance and accounting function of the Company. Also, against the sanctioned strength of 162 for other than technical cadres, the actual manpower was 338 *i.e.* surplus manpower of 176 employees deployed.

Thus, the Human Resource management of the Company was deficient. The vacant positions in the Technical cadre could have adverse impact on the operational performance of the Company.

The Company stated (November 2016) that appointment of 462 persons from whom land was acquired by the Company was done as per the order of SC. It further stated that the vacant posts in Finance Department will be filled up soon.

Reply was however silent on filling up of the vacant posts of technical staff which was necessary for the effective functioning of the company.

2.1.13 Capacity expansion and other projects

Planned Capacity Expansion of the power plant not achieved

2.1.13.1 The Detailed Project Report (DPR) of TTPS envisaged its capacity expansion by setting up additional three units of 210 MW each in stage II and one unit of 500 MW in stage III of the project. The company had made initial investment of ₹ 359 crore towards building, plant & machinery, Merry-Go-Round (MGR) railway line, railway siding, switchyard, removal of hillock *etc*. at the time of construction of the plant considering the future expansion plans.

Accordingly, the Company had floated (August 2003) a global tender for setting up three units of 210 MW each at an estimated cost of ₹ 2365 crore and finalised the lowest tender. Power Finance Corporation (PFC) sanctioned (November 2005) a loan of ₹ 1892 crore for the project. However, GoJ did not furnish the Government guarantee for the loan as demanded by PFC as the ownership issue of the Company was subjudice and the tender was cancelled in May 2009.

Audit noticed that the Company planned to expand its capacity through Joint Venture (JV) route in November 2011. However, in view of Hon'ble SC order (August 2008) in the ownership issue to maintain status quo, the Company and the Energy Department, GoJ both filed interim applications (IAs) in November 2011 before the SC to permit it to enter into a JV to undertake the expansion of the Company. The IA of the Company was disposed of in November 2012 and the IA of Energy Department in August 2014 without modification of the interim order.

In the meantime, the Company obtained (May 2012) a legal opinion which held that the Company can take up expansion project on its own without inducting a Joint Venture partner. However, this was not acted upon by the Board of Directors which delayed according administrative approval (December 2015) for setting up 660 MW x 2 units Coal fired Supercritical units at TTPS. The estimated project cost of ₹ 6500 crore was to be financed by 70 *per cent* loan from financial institutions and 30 *per cent* equity by the Company. However, proposed financing has not been tied up so far (November 2016). The GoJ has accorded in principle approval for the project in March 2016. This delay in taking decision by the Government and the Company led to the delay of six years during 2009 to 2015 in taking up the capacity expansion. The estimated cost in the meanwhile has risen from ₹ 2365 crore in 2004 to ₹ 6500 crore in 2016.

The Company did not undertake the envisaged capacity expansion project even after 19 years of commissioning of TTPS.

Thus, due to failure of the GoJ and the Company in taking appropriate decision in time the envisaged capacity expansion of the Company could not be undertaken even after 19 years of commissioning of TTPS.

The Company accepted (November 2016) the audit observation. During exit conference (November 2016) Government stated that the transaction adviser for the proposed expansion of TTPS has been appointed and the tendering for appointment of consultant is under finalisation.

The fact remains that due to deficient planning and indecision by the GoJ/Company the expansion project was not undertaken even after 19 years of commissioning of TTPS. Failure of the Company in augmenting the power generation contributed to poor condition of power supply in the state which could adversely affect the availability of cheap power and have a negative impact on overall business environment in the state. Consequently the state

may find it difficult to hold its seventh rank in 'Ease of Doing Business' obtained in the World Bank's assessment report as of June 2016.

Development of Coal blocks

2.1.13.2 The Ministry of Coal, GoI had allocated three coal blocks[25] to the Company during the years 2003 to 2006 to meet the fuel requirement for its capacity expansion. The Company formed (January 2004) a Joint Venture (JV) company *viz*. Tenughat-EMTA Coal Mines Ltd. with EMTA (a private company) for development of Badam coal block; subsequently the Gondulpara coal block also was entrusted to it for development. As per the agreement entire expenditure for development of the coal blocks was to be met by the JV Company. Rajbar E&D Coal block was to be developed by the Company itself for which exploration and preparation of geological report was completed in May 2012 through Department of Mines & Geology, GoJ at an expenditure of ₹ 9.28 Crore.

Audit noticed that development of all the coal blocks was not complete (August 2014) as per schedule and mining was not started even after eight to eleven years of their allocation as of August 2014. Meanwhile, all the coal blocks of the Company were de-allocated by MoC, GoI as per order of the SC dated 24 September 2014.

Subsequently, the MoC, GoI has re-allocated (June 2015) the Rajbar E&D coal block to the Company under the Coal Mines (Special Provisions) Second Ordinance, 2014 to meet the requirement of fuel for the proposed expansion project of 660 MW x 2 units thermal power plant.

Audit noticed that approval of mining lease and mining plan of the coal block from GoJ and MOC, GoI has not been obtained so far. Application for forest clearance and environmental clearance which were due for submission in May 2016 was not submitted by the Company (November 2016). The time limit for grant of mine opening permission was 44 months from allotment (June 2016). However, the completion of the activities as per the approved schedule was already delayed by six months.

Delay in Commissioning of Merry-Go-Round Rail System

2.1.13.3 The project for setting up a Merry-Go-Round (MGR) rail system for transportation of construction materials and of components during construction stage and of coal, fuel oil and heavy stores materials during generation stage of the plant was taken up in 1986. The estimated cost of the project was ₹ 49.41 crore. M/s Rail India Technical and Economic Service (RITES) was entrusted (September 1988) the project management at a cost of ₹ 27.06 crore. The project was to be completed in 30 months. However, the project was much behind the schedule due to delay in acquisition of land for the railway line, law and order problems, fund constraints *etc*.

Audit noticed that the major works for the MGR system were complete in 2011. However, work order for the residual works and rectification of defects in the railway track of the MGR System was issued (July 2012) for ₹ 14.25 lakh. However, the work order was not accepted by the contractor and value of the work order was revised (January 2013) to ₹ 24.27 lakh. The work was

[25] Badam coal block was allocated in January 2003 for 210 MW x 3 units thermal power plant, Gondulpara Coal block was allocated jointly with DVC in January 2006 for 3rd phase expansion with one unit of 500 MW and Rajbar (E&D) Coal blolck was allocated in August 2006 for 660 MW x 2 units thermal power plant.

completed in June 2014. Further, some other works like additional quantity of ballast, providing fish plates and bolts *etc*. were done as advised during site inspection (December 2012) by Railways and RITES.

Audit observed that delay in completing the residual works for the MGR system led to a delay of two years and it was ready for use only in June 2014, after trial run. However, a time of further 16 months was taken in signing a siding agreement (September 2015) with the East Central Railway to operationalise the MGR system (28 October 2015). The total expenditure incurred on the MGR system was ₹ 127.81 crore.

The Company commissioned the MGR System after delay of 24 years from the original completion schedule with an additional cost of ₹ 51.34 crore.

Thus, the MGR rail system was commissioned after a delay of 24 years from the scheduled date of completion at an additional cost of ₹ 51.34 crore over the original estimated cost. During this period the fuel requirement for TTPS had to be met by transportation by road at higher cost.

The Company stated (November 2016) that completion of the MGR system was delayed mainly due to administrative reasons and fund constraints.

The fact remains that the execution of the project was not planned and executed properly as four years were taken in commissioning the MGR system after completion of major works leading to an increase in the cost.

Failure in taking delivery of wagons for the MGR system

2.1.13.4 The Company had placed (March 1989) a purchase order on CIMMCO Ltd for 34 rail wagons for transportation of coal through the MGR rail system at a price of ₹ 3.38 crore. As construction of MGR was delayed, delivery of the wagons was not taken by the Company although payment of ₹ 2.88[26] crore was made to M/s CIMMCO Ltd upto May 1998 by TVNL, Patna. Audit noticed that a settlement was reached (June 2012) with CIMMCO Ltd. according to which an amount of ₹ 4.13 crore (including storage charges of the wagons upto June 2012) was to be paid to CIMMCO Ltd. to get the delivery of wagons. Thus, the cost of wagons had increased to ₹ 7.01 crore (₹ 2.88 crore and ₹ 4.13 crore).

Audit noticed that preliminary inspection of the wagons at the works site of CIMMCO was conducted (May 2013) by M/s RITES on behalf of the Company which found 26 wagons in satisfactory condition except some minor defects and in remaining eight wagons operating mechanisms were inoperative due to some missing components. CIMMCO demanded release of ₹ one crore to carry out the works and requested to open letter of credit towards payment of the balance amount. However, payment and opening of letter of credit as demanded by CIMMCO was yet to be submitted to Board of the Company for approval and delivery of the wagons was not taken so far (November 2016) even though the MGR system has been commissioned in October 2015. Thus, despite the commissioning of the MGR system, the Company was unable to obtain the 34 wagons for coal transportation through MGR and resultant saving in transportation cost. It was also observed that though MGR rail system was commissioned in October 2015, transportation of coal is still being done partially by road due to shortage of wagons. However, the Company did not take delivery of 34 wagons despite payment of advance of ₹ 2.88 crore in 1998.

[26] Comprising of 30 *per cent* advance - ₹ 0.99 crore; cost of 14 wagons - ₹ 1.31 crore; escalation & exchange rate variation - ₹ 0.54 crore and storage charges upto February 1998 - ₹ 0.04 crore.

The Company stated (October 2016) that delivery of wagons was not taken earlier as the MGR system was not commissioned and also due to financial constraints. It further stated that delivery of the wagons will be taken by December 2016 after making the outstanding payment.

The fact, however, remains that delivery of not even a single wagon was taken even after one year of commissioning of the MGR system and the Company was deprived of savings it would have had by deploying the wagons for transportation of fuel by MGR. Further, the present value of ₹ 2.88 crore would now work out to ₹ 26.59[27] crore. As such, the cost of 34 wagons at present has in effect become ₹ 30.72[28] crore against the original purchase price of ₹ 3.38 crore.

2.1.14 Environment Management

Jharkhand State Pollution Control Board (JSPCB) is the main regulating agency to ensure compliance with the provisions of environmental acts, rules and regulations. Audit scrutiny of compliance by the Company with various environmental acts and rules revealed the following:

Ash disposal

2.1.14.1 Ministry of Environment and Forest issued (September 1999) direction for utilisation of dry ash in brick and other construction activities by the thermal power stations. The Central Electricity Authority also directed (February 2006) every thermal power station to construct a SILO system for collection of dry fly ash. The Central Pollution Control Board (CPCB) directed (April 2012) the Company to submit a time bound action plan for compliance of environmental norms including dry ash disposal.

The Company had sanctioned[29] (September 2009) a DPR for the construction of SILO system at an estimated project cost of ₹ 30.50 crore. Although Administrative approval for floating NIT was accorded by the Board in September 2012, the NIT was issued in March 2015 due to delay in finalising the qualifying requirements. Two offers were received in the tender and the lowest offer was accepted at a price of ₹ 37.80 crore. However, the Company cancelled the tender citing poor participation of bidders and that the lowest price was higher by 25.57 *per cent* than the DPR cost.

Dry fly ash collection system was not installed even after eight years of approval of the Board of Directors.

Audit observed that cancellation of tender after evaluation was not justified as the lowest price was less than the updated DPR cost. As a result the dry fly ash collection system has not been installed so far. Thus, the Company failed to comply with the above mentioned environmental norms.

The Company stated (June 2016) that the fresh tender on the basis of the DPR for SILO system was under finalisation.

The fact remains that the construction of the SILO system for collection of dry fly ash was yet to be taken up despite a lapse of more than eight years since in principle approval of the Board was obtained in February 2008.

Here it is pertinent to mention that in the interview taken by the Audit team, the Finance Controller, the Company stated (November 2016) that the SILO system need to be installed for removal of dry ash to reduce the expenditure on the present system of ash disposal.

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[27] Worked out at Prime Lending Rate of SBI for the respective year by compounding interest annually.

[28] ₹ 26.59 crore (present value of ₹ 2.88 crore paid in advance) + ₹ 4.13 crore payable.

[29] DPR was prepared by the consultant, MECON in July 2009.

Failure to instal online Continuous Stack Emission Monitoring Systems and online effluent quality monitoring system

2.1.14.2 Thermal Power Plants are highly polluting industries which discharge environmental pollutants directly or indirectly into the ambient air and water, having potential threat to cause adverse effect on the water and air quality. JSPCB directed (March 2014) the Company to install online Continuous Stack Emission Monitoring Systems, online effluent quality monitoring system and to connect and upload the data in a time bound manner to JSPCB/CPCB server. Chairman, CPCB issued a show cause notice (July 2015) to General Manager (GM),TTPS for not installing online emission and effluent monitoring system failing which the plant would be closed down. However, compliance of the directives was not done so far (November 2016).

The Company stated (October 2016) that the procurement of Continuous Stack Emission Monitoring System and online effluent quality monitoring system was in process; meanwhile Central Institute of Mining and Fuel Research is taking the measurement and helping in monitoring and controlling the data.

The fact, however remains that compliance of the directives of CPCB has not been done so far (October 2016).

Failure to comply Water Pollution norms

2.1.14.3 As per the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Thermal Power Stations (TPSs) are required to obtain the consent of JSPCB which *inter-alia* contains the conditions and stipulations for water pollution to be complied with by the TPSs. Total suspended solids (TSS) in effluents from the TPSs should not exceed 100 mg per litre as per norm.

Audit noticed that TSS in effluent discharges from TTPS was higher than standard in 29 months out of the 60 months during 2011-12 to 2015-16 and TTPS was served several show cause notices by CPCB/JSPCB for failure in compliance of the norm. The main reasons for exceeding the TSS standards were inadequate ash handling infrastructure, filled up ash pond, leakage in pipes carrying ash slurry and failure to maintain of the Ash Pond area as per the guidelines.

The Company stated (July 2016) that measures have been taken to keep the value of TSS within the prescribed limit and the same has come down below the normative level.

The reply is not acceptable as effluent discharges exceeded in 29 months during the audit period.

2.1.15 Monitoring and Internal Control

Internal Control is a process designed to provide reasonable assurance about the efficiency of operations, reliability of financial reporting and compliance with applicable rules and regulations. The following deficiencies were noticed in the Internal Control and monitoring system of the Company.

Physical verification of Plant and Stores and spares

2.1.15.1 Physical verification of Plant and Stores and spares is required to be conducted periodically. Audit observed the followings:

- The physical verification of stores was not carried out by the Company during 2011-12 to 2014-15. Further in the physical verification of stores and

spares conducted during January 2016 to March 2016 by a outsourced Chartered Accountants firm unusable spares valuing ₹ 4.62 crore were identified.

Also, during joint physical verification[30] of the stores, Audit noticed that 74 items of spares[31] valued at ₹ 5.31 crore were lying unutilised for more than 15 to 18 years. Most of these spares had now become obsolete as the equipment in which these spares were to be used had been upgraded and replaced with newer models.

The Company accepted the above audit observation and stated (October 2016) that some of the initial spares supplied by BHEL during commissioning of TTPS had become obsolete but these may be utilised after modification. The reply is not acceptable as no effort had been made to utilise the spares in the past.

- The Company conducted a physical verification (May 2015) of its coal stock. According to the report the coal stock was 74,378 MT as of 19 May 2015 whereas the stock of coal as per the records of Coal Handling Plant (CHP) was 95,571 MT *i.e.* a difference of 21,193 MT. In monetary terms this difference in actual coal stock and the stock carried in the books was ₹ 33.23 crore, the reconciliation of which was still to be done.

- Audit noticed that the Company has not prepared its Fixed Asset Register containing the details regarding procurement and cost of the assets, date of commissioning and location of the assets *etc*. Also, physical verification of the fixed assets has not been conducted by the Company so far (November 2016).

- Audit, during joint physical verification of the Plant found that one Inter Connecting Transformer and four Unit Auxiliary Transformers were not commissioned since inception of the Plant. This has been commented in the present report *vide* paragraphs 2.1.9.3. and 2.1.10.1.

Audit further observed that the Chlorination Plant for treatment of the water remained utilised since its installation. One Stacker Reclaimer installed in CHP for handling of bulk quantity of coal for feeding in bunkers of expansion projects has not been operated as the capacity expansion of TTPS had not been done. Also, the complete Heavy Fuel Oil (HFO) firing system including two HFO tanks of 3500 KL capacity installed since the commissioning (September 1997) of TTPS were not utilised and Light Diesel Oil (LDO) was being used in the plant in place of HFO.

The Company stated (December 2016) that the Chlorination plant was not being utilised as bleaching powder is being used for treating water in its place and it had no adverse impact on the plant operation and performance. Regarding not using the HFO system, it was stated that complete system was not commissioned and its reliability is poor than LDO system. Keeping in view its high maintenance cost, high transportation cost HFO was not used by TTPS.

The fact remains that the Company spent huge funds on procurement of these idle equipment without doing proper need analysis and planning for their use.

[30] Audit Team along with Company officials.
[31] With value of spares of rate more than one lakh per unit for each item.

Failure to fill up the post of the Chairman, TVNL and ad-hoc appointment of Managing Director

2.1.15.2 Audit noticed that the post of Chairman of the Company was vacant for last 20 months as of 30 November 2016.

Audit further noticed that the post of Managing Director of the Company fell vacant on 17 September 2012 and the Chairman, JSEB was given additional charge of the post on part time basis. A Search-cum-Selection Committee constituted (11 September 2012) by the GoJ for appointment of Managing Director appointed (9 May 2014) the Additional General Manager, NTPC as Managing Director of the Company. Thus, the Search-cum-Selection Committee took 19 months in selection of MD of the Company during which period the post was held by the Chairman, JSEB, as additional charge on part time basis. Long vacancy and additional charge on part time basis on top management posts may adversely impact the decision making process and functioning of the Company.

Ineffective functioning of Board of Directors

2.1.15.3 As per Section 285 of the Companies Act, 1956 and Section 173 (1) of the Companies Act, 2013 (applicable from April 2014), at least four meetings of the Board of Directors (BoD) of the Company is required to be held every year. However, Audit noticed that only one meeting of the BoD was held in 2014-15 and three meetings were held in 2015-16. Further, no meeting was held during the period 11 July 2014 to 27 July 2015. Audit observed that extension of work orders for transportation of coal valued at ₹ 34.46 crore was issued by the Chairman/MD for which post facto approval of the BoD was obtained. Thus, due to delay in holding the BoD meetings, important decisions relating to operations of the Plant/Company were taken by the Chairman/MD without exercise of supervisory control by the BoD.

Only one meeting of Board of Directors was held in 2014-15 and three meetings were held in 2015-16 as against required minimum four meetings to be held every year.

Audit further observed that, the Company has decided (December 2015) to induct two additional functional Directors *viz*. Director (Technical) and Director (Finance) in the BoD in view of the proposed capacity expansion of the Company and requested (January 2016) the GoJ for appointment of the Directors.

The BoD had also decided (November 2013) to increase the members of the Board by appointing independent directors and to appoint them as members of the Audit committee. However, appointment of the additional Directors and the independent directors has not been made so far (November 2016).

Had the functional directors and the independent directors been appointed, appropriate and timely decision making on the critical issues faced by the Company *viz*. enforcing the PPA provisions regarding payment security mechanism, sale of power to other licensees, recovery of outstanding dues from JUVNL, conducting overdue capital overhauling of the units, capacity addition *etc*. might have been possible.

Audit Committee

2.1.15.4 Section 292A of the Companies Act, 1956 requires that every Public Limited Company having paid-up capital of not less than rupees five crore shall constitute an Audit Committee at the Board level. The main functions of the Audit Committee are to assess and review the financial reporting system, adequacy of the internal control system and evaluates the findings of internal

investigation in case of suspected fraud, irregularities and failures of the internal control system and reports on the same to the Board.

Audit noticed that the Company constituted an Audit Committee in August 2012 comprising three Directors *viz*. Principal Secretary, Energy Department; Principal Secretary, Finance Department and Chairman, JSEB. However, no meeting of the Audit Committee was held since its formation in August 2012. Further, the post of the Chairman, JSEB had ceased to exist due to unbundling of JSEB on 7 January 2014. As no Director in place of Chairman JSEB was nominated for the Audit Committee it has become defunct since then.

The Company stated (December 2016) that as per the Articles of Association, the Company is a private company and formation of Audit Committee is not mandatory for the Company. However, to adopt good corporate governance, the Audit Committee has been constituted.

The reply is not acceptable as the Company had constituted the Audit Committee in August 2012 considering the need of Audit Committee which was not made functional fulfilling the criteria since then. Having constituted the Audit Committee, its regular meetings and effective functioning should have been ensured by the Company.

Deficient and ineffective Internal Audit System

2.1.15.5 The Company have no internal audit wing of its own and it had also not prepared an internal audit manual (November 2016). The internal audit function was outsourced[32] to the Chartered Accountants (CA) whose scope of work included preparation of accounts, verification of cash book, stores transaction and other accounting works. However, core activities of the company relating to operation and maintenance of Plant, Sale of Power, purchase of fuels, equipment and materials *etc*. were not covered in the scope of work for Internal Audit.

Audit also noticed that the internal auditors did not submit any report during 2011-12 to 2015-16 which implied that no internal audit of the company was conducted**.**

The Company accepted (October 2016) the observation of audit.

In the interview conducted by the audit team, the Finance Controller stated that internal Audit wing will be setup after more posts in Finance and Accounts cadre are sanctioned.

Conclusion

Audit concluded that:

- **The Company is unable to carry out its operations in an economical and effective manner owing to poor governance and apathy of the stakeholders. Consequently, the accumulated losses of Company are mounting year after year and stood at ₹ 824.53 crore as of 31 March 2016 mainly due to poor operational performance.**
- **The Company failed to finalise its accounts for several years now and has lost the opportunity for exercising better control over its resources and the lack of finalised accounts contributes to an incorrect projection in matters such as penal interest imposed *etc.* before the JSERC leading to unfavourable award of tariff.**

[32] At a cost of ₹ 5.99 lakh.

- **The strict PAF and PLF norms of JSERC were difficult to achieve by the Company owing to its failure to carry out essential and periodical capital/operational maintenance as recommended by the original equipment manufacturers (BHEL) and Consultants (NTPC). However, the Company has not made any further representation before the JSERC in this regard.**
- **Failure to carry out repair and maintenance led to several tripping of the networks, leakage and unscheduled shutdown of the operations for long periods. This in turn has led to substantial fall in the PLF (2809.48 MU valued at ₹ 870.78 crore), PAF (1490 MU valued at ₹ 409.10 crore) and excess auxiliary consumption (173.80 MU valued at ₹ 56.79 crore) resulting in loss of generation and revenue realisation.**
- **The State Government had not taken any proactive steps to create a common platform to bring together the Generator and the Distributor (JUVNL) and resolve the payment disputes arising out of outstanding dues of ₹ 3082.72 crore that had resulted in default in repayment of loans and accumulation of avoidable penal interests and losses on the Company. The State Government also failed to adopt the model MoU with the Company for monitoring the operational and financial targets set for the Company.**
- **Unnecessary restraint to use the existing agreement clauses has resulted in inordinate delay in realisation of sales revenue leading to poor debt servicing on Government loans (₹ 665.89 crore) and accrual of interest amounting to ₹ 2181.79 crore. Further, the penal interest and other interest on high cost borrowings from Government (at 13 *per cent*) have contributed to the poor performance of the Company.**
- **The Company had not been effectively pursuing essential requirements for power generation like quality coal, transportation and fulfilling the wagon requirements for its MGR network. The Company also did not take adequate measures for removal of foreign matter from the coal, improvement in burners and better instrument quality.**
- **The Company has neglected the opportunity to expand its sales to others (50 MW) despite available opportunities.**
- **The Company did not have sufficient technical manpower which affected its operational performance.**
- **Effective monitoring of the activities of the Company was not done by the Board of Directors as its meetings were not held regularly. Further, the proposed appointment of the two functional directors and induction of independent directors was not done to strengthen the functioning of the Board.**
- **The Company and the GoJ failed to take appropriate decision in time for envisaged capacity expansion and no capacity addition could be made even after 19 years of initial commissioning of the power plant. This failure in augmenting the power generation in the power deficit state adversely affected the availability of cheap power.**

Recommendations

Audit recommends that:

- **The Company should finalise the pending accounts for the financial year 2011-12 to 2015-16 and get those certified to improve financial accountability at the earliest.**
- **The Company should carry out all mandatory operational and maintenance requirements immediately. To safeguard future energy requirements, expansion works should be taken up on top priority as the existing facility is already 20 years old.**
- **The Company, in close co-ordination with the Government should strive for a solution to realise the outstanding dues of ₹ 3082.72 crore from JUVNL within a realistic period. Adjusting the dues with entities like CCL through supply of power through JUVNL can also be explored as a solution.**
- **The Government may adopt the model MoU suggested by GoI so that the operational and financial targets set for the Company could be monitored and adequate remedial measures could be introduced timely.**
- **The Government seriously needs to examine the restructuring proposal of the Company at an early date for conversion of loan and interest to equity or devise alternate methods to alleviate this financial burden on the Company.**
- **The Company should ensure procurement of the required number of wagons (34) for the MGR network within a stipulated time frame and reduce reliance on other modes of coal transportation.**
- **The Company should appoint necessary coal samplers and coal procured may be tested at mutually acceptable laboratories to reduce losses and disputes.**
- **Government may consider strengthening the operations of the Board, impose additional norms for its effective functioning and ensure better governance and control.**
- **Both the Company and the State Government should strive to convince the Regulatory Commission to take into consideration the vital facts that it will take time and enormous resources for the Company to make a turnaround while seeking approval for its annual operational resources.**
- **Government/management should make all out efforts to safeguard the interest of the Company and enable it to provide economical and quality power supply in the state and thereby contribute to improve Jharkhand's "Ease of doing business" ranking in the World Bank's assessment report of June 2016.**

Accepting the conclusions and recommendations made in audit, the Additional Chief Secretary, Energy Department assured (January 2017) that the Government would appropriately address the issues raised in the report and try to resolve those within a realistic time frame.

Jharkhand Bijli Vitran Nigam Limited

2.2 Audit on Billing and Revenue collection in respect of High Tension Services Consumers

2.2.1 Introduction

The Jharkhand State Electricity Board (JSEB) was responsible for generation, transmission and distribution of electricity within the State as per Section 18 of the Electricity (Supply) Act, 1948. JSEB was unbundled on a functional basis with effect from 06 January 2014, into four successor companies[33]. Distribution of electricity was undertaken by the erstwhile JSEB and after its unbundling by the Jharkhand Bijli Vitran Nigam Limited (JBVNL), which is hereinafter referred as Company.

Jharkhand State Electricity Regulatory Commission (JSERC) framed the tariff with effect from January, 2004, for the High Tension Service (HTS) consumers having contract demand (CD) of 100 Kilo Volt Ampere (KVA) and above and separately for the High Tension Special Service (HTSS) consumers having electric induction furnace with a contract demand of 300 KVA or more.

The details of electricity sold to High Tension consumers and revenue realisation for the period 2011-12 to 2015-16 are given in the **Table 2.2.1** and depicted in **Chart 2.2.1:**

Table 2.2.1:

Details of Electricity sold, Revenue realised and Arrears during 2011-12 to 2015-16

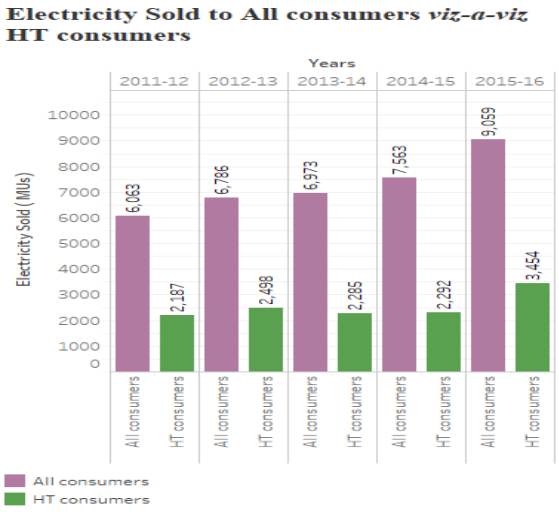
Sl No	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1.	Total electricity sold (MUs)	6063	6786	6973	7563	9059
2	Revenue billed against all consumers (₹ in Crore)	2350	2773	2850	3044	3197
3	Number of HT consumers	1358	1420	1429	1472	1526
4	Electricity sold to HT consumers (MUs)	2187	2498	2285	2292	3454
5	Percentage of electricity sold to HT consumers	36	37	33	30	38
6	Revenue billed against HT consumers (₹ in Crore)	1296	1406	1038[34]	1440	1540
7	Arrear against HT consumers (₹ in crore)	1890	2096	2192	1914	2127
8	Total Demand against HT consumers (₹ in crore)=(6+7)	3186	3502	3230	3354	3667
9	Revenue realisation (₹ Crore)/(*per cent)*	1090 (34)	1310 (37)	1316 (41)	1227 (37)	1425 (39)
10	Balance at the end of the year (₹ Crore)= (8-9)	2096	2192	1914	2127	2242

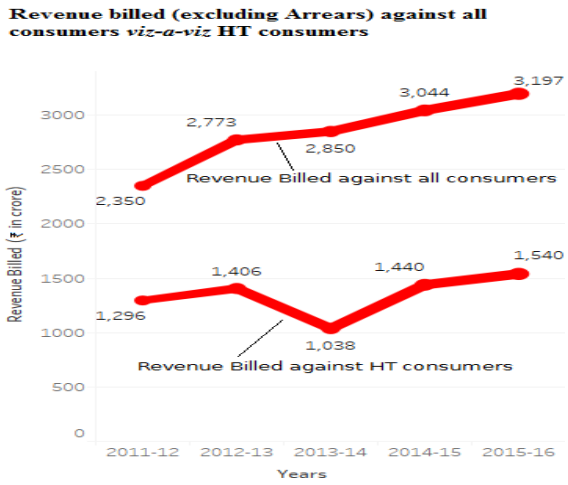
(Source: Data furnished by the Company)

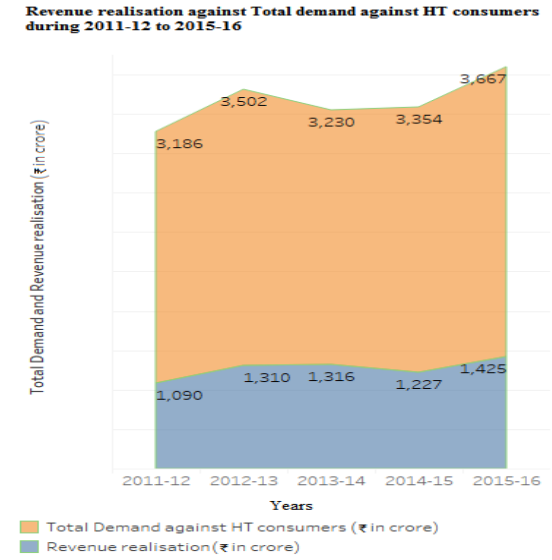
[33] Jharkhand Urja Vikas Nigam Limited (Holding Company), Jharkhand Urja Utpadan Nigam Limited, Jharkhand Urja Sancharan Nigam Limited and Jharkhand Bijli Vitran Nigam Limited (Company).

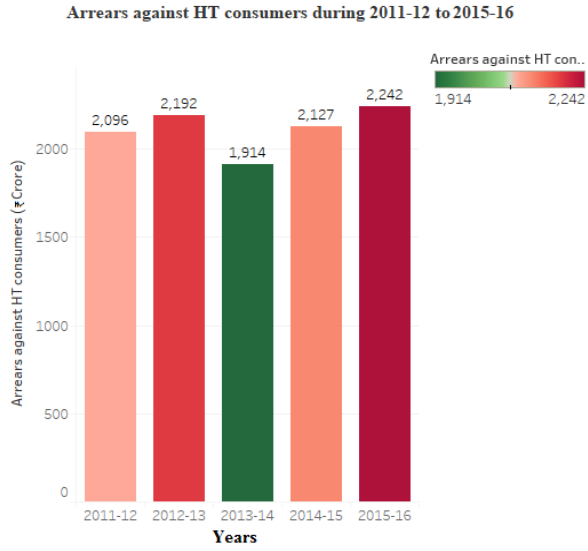
[34] Due to unbundling of JSEB some consumers have been transferred to transmission utility in 2013-14, again in 2014-15 transmission utility transferred all consumers to distribution utility.

Chart 2.2.1:
Status of Electricity sold, Revenue realised and Arrears during 2011-12 to 2015-16









It can be seen from above table and chart that electricity sold to HT consumer ranged between 30 *per cent* and 38 *per cent* of total energy sold and revenue billed against HT consumers ranged between 36 *per cent* and 55 *per cent* of total energy billed during 2011-12 to 2015-16.

The audit was conducted to assess whether due compliance/adherence with the provisions of tariff orders issued by JSERC, JSERC (Electric Supply Code) Regulations 2005 (JSERC Supply Code) as amended time to time was made. Audit verified billing and revenue collection in respect of HTS and HTSS consumers during the period 2011-12 to 2015-16 in selected seven[35] Electric Supply Circles (ESCs) out of 15 ESCs and the office of Chief Engineer (Commercial and Revenue) at corporate office of the Company.

The audit findings were issued to the Management of the Company and the Government on 27 August 2016. Reply of the management has been received (November 2016) and reply of the Government is awaited. Reply of the

[35] ESCs Ranchi, Jamshedpur, Dhanbad, Chaibasa, Deoghar, Chas and Ramgarh.

Company and views expressed by the Government in exit conference (09 November 2016) have been suitably incorporated in the report.

Audit Findings

2.2.2 Categorisation of contract demand as per tariff orders

Failure to segregate the load as per service category (Tariff)

2.2.2.1 As per clause 3.3.2 of JSERC supply code, unless otherwise specified, all service category wise tariffs (HT and LT rates) refer to one point of supply and each separate establishment and service category (tariff) would be given separate point of supply. Further, as per JSERC tariff, HTSS tariff shall apply to all consumers who have a contract demand of 300 KVA or more for an induction/arc furnace and HTS tariff shall apply to consumers having contract demand above 100 KVA. The tariff of HTS[36] consumers is higher than that for HTSS[37] consumers.

During scrutiny of records in three[38] test checked ESCs, audit observed that in following cases consumers were sanctioned load more than the load of induction furnace and the Company had not segregated the load into HTSS and HTS tariff category leading to loss of revenue to the Company:

- M/s Balajee Industrial Product Ltd. (consumer no. HN24) under ESC, Chaibasa had two furnaces of capacity 5.5 tonne and six tonne respectively with connected load of 6900 KVA. The load was reduced to 4000 KVA with effect from 6 February 2010 as one furnace of 5.5 tonne was dismantled. As per the test report of a government contractor, the load of other furnace was only 2222.22 KVA. Thus, the consumer was utilising 1777.78 KVA load for other purposes at lower rates than permitted by the tariff order. However, ESE Chaibasa had not segregated the load into HTSS and HTS tariff and thereby suffered a revenue loss of ₹ 6.72 crore[39] during March 2010 to April 2016.

The management accepted (November 2016) the audit observation and directed the field office to inspect the furnace to check if the consumer was utilising 1777.78 KVA load for other purpose. If that was the case, the load be segregated.

- *Vidyut Upvokta Shikayat Nivaran Forum* (VUSNF) had ordered (January 2011) the reduction of load of a HTSS consumer M/s Ridhi Sidhi Iron Pvt Ltd. (consumer no. NR 540), under ESC Dhanbad to 6471 KVA from 8800 KVA with effect from June 2010 as per manufacturers technical specification of furnace. However, as per request (November 2011) of the consumer that it was utilising 500 KVA other load, the load was reduced to 7000 KVA. The consumer again applied (May 2012) for enhancement of load as he had installed another furnace having load of 2742 KVA.

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[36] Unit charges ₹ 4.35, ₹ 4.90, ₹ 5.40 and ₹ 5.85, fixed charges ₹ 165, ₹ 205, ₹ 235 and ₹ 255 for 2010-11, 2011-12, 2012-13 to 2014-15 and 2015-16 with effect from May 2010, July 2011, August 2012 and January 2016 respectively.

[37] Unit charges ₹ 2.50, ₹ 2.85, ₹ 3.25 and ₹ 3.50, fixed charges ₹ 330, ₹ 370, ₹ 410 and ₹ 440 for 2010-11, 2011-12, 2012-13 to 2014-15 and 2015-16 with effect from May 2010, July 2011, August 2012 and January 2016 respectively

[38] ESC Chaibasa, Dhanbad and Ranchi.

[39] Calculated taking proportionate consumption under HTSS and HTS tariff.

As per report (February 2014) of Division office the consumer was utilising 1000 KVA load, other than the furnace load. Therefore, the load of the consumer was 10242 KVA (9242 KVA[40] + 1000 KVA). But, without considering the report of the Division office, the Electric Superintending Engineer (ESE) Dhanbad energised (March 2014) the load of 9742 KVA instead of 10242 KVA. It was further observed that though the consumer was utilising 1000 KVA load other than the furnace load, the ESE had not segregated the load of furnace under HTSS tariff and 1000 KVA load under HTS tariff resulting in loss of ₹ 2.75 crore[41] during January 2011 to February 2016.

The management accepted (November 2016) the audit observation and directed the ESC Dhanbad to take necessary action for segregation of load.

- M/s T&T Metal (consumer no. AH5180) under ESC, Ranchi had applied (October 2011) for reduction of load from 3600 KVA to 2900 KVA. As per test report for reduction of load, load of one furnace was 2940 KVA and other load was 106 KVA. Accordingly the load should have been charged under HTSS tariff to 2940 KVA whereas 106 KVA qualified for HTS tariff. However, ESE Ranchi reduced (January 2012) the load to 2940 KVA without taking into consideration 106 KVA load being utilised by the consumer for other than furnace purposes. Thus due to not levying charges on 106 KVA under HTS tariff the Company lost revenue of ₹ 37.49 lakh.

The management stated (November 2016) that average demand of the consumer during May 2010 to July 2011 was only 2848 KVA, therefore, load was reduced to 2940 KVA.

The reply of the management is not acceptable as the load of furnace was 2940 KVA and the consumer was utilising 106 KVA load for other purpose which was not considered while reducing the load of the consumer.

- M/s Siyaram Engineering and casting works (consumer no. BRD 597) under ESC Dhanbad was energised (March 2013) at 110 KVA under HTS category. Load of the consumer was enhanced (December 2013) to 310 KVA under HTSS category as the consumer installed a furnace which had, as per manufacturer's specification, a load of only 250 KVA. As per tariff order, the minimum load of a consumer under HTSS tariff should be 300 KVA. Since the furnace load was less than 300 KVA, therefore, the consumer was not entitled to the beneficial tariff under HTSS tariff. However, ESE Dhanbad provided the connection under HTSS tariff instead of HTS tariff resulting in revenue loss of ₹ 5.53 lakh.

The Company had not segregated the load of four HTSS consumers into HTSS and HTS tariff which resulted in loss of ₹ 9.90 crore.

The management accepted (November 2016) the audit observation and directed the ESC Dhanbad to change the tariff of the said consumer.

Thus, four HTSS consumers were given undue benefit by not segregating the load into HTSS and HTS tariff and the Company suffered a loss of ₹ 9.90 crore.

The Government in exit conference (November 2016) assured that in future separation of connection as per tariff order will be done and the Company will

[40] After VUSNF order the load was 7000 KVA – 500 KVA other load + 2742 KVA load of new furnace = 9242 KVA.

[41] Calculated taking proportionate consumption under HTSS and HTS tariff.

explore the possibility to recover losses due to not segregating the load as per service category (tariff).

Irregularity in sanction of load to HTSS consumers

2.2.2.2 As per JSERC tariff order 2010-11, effective from May 2010, all consumers who have a contracted demand of 300 KVA and more for induction/arc furnace were to be categorised under HTSS tariff. The contract demand was to be ascertained based on manufacturer's technical specification of the total capacity of induction/arc furnace and equipment and not on the basis of measurement. This tariff schedule will not apply to casting units having induction furnace of melting capacity of 500 Kg or below.

Audit observed that ESEs Chas and Ramgarh provided connection to eight[42] HTSS consumers without obtaining manufacturer's technical specification of induction/arc furnace and equipment of induction furnace in violation of above tariff order ***(Annexure 2.2.1)***.

Cases where tariff had been changed without obtaining manufacturers technical specification are discussed below:

- M/s Amit Steel Industries Pvt Ltd. (consumer no. BIA9) was availing (November 2004) power under HTS tariff at 300 KVA. Subsequently, the consumer requested (October 2010) the Company to change the tariff from HTS to HTSS as the consumer was going to install 750 Kg induction furnace in place of 500 Kg and accordingly an agreement was executed (November 2010) under HTSS tariff.

Audit observed that neither the consumer had submitted the dismantling report of old furnace, the installation report of new furnace and manufacturer's technical specification, nor ESE Chas demanded the same at the time of changing the tariff. The same was demanded after delay of two years in October 2012 and in May 2013, however, consumer did not furnish the same. Thus, changing of tariff without ascertaining load as per manufacturer's technical specification, ESE Chas might have extended undue benefit to consumer as well as incurred a revenue loss of ₹ 28.25 lakh during the period November 2010 to March 2016.

- M/s Regal Ingot Pvt. Ltd. (cons. no. CH14) and M/s Nanak Ferro Alloy Pvt. Ltd. (consumer no.RRH-10541) under ESC, Chas and Ramgarh were availing power since October 2004 and October 2006 under HTS tariff for 1400 KVA and 3000 KVA respectively. The consumers requested (June 2010) to change its tariff from HTS to HTSS as the arc furnace installed in their units attracted HTSS tariff after implementation of tariff order 2010-11 effective from May 2010. Accordingly, the Company started charging the energy bill under HTSS tariff from May 2010. However**,** the Company had not charged the requisite security deposit under new tariff**.**

Further, the contract demand of M/s Nanak Ferro Alloy Pvt. Ltd. was enhanced to 3823 KVA as the consumer exceeded the contract demand for continuous three months and Company executed (March 2012) an agreement under HTSS tariff by charging security deposit for only 823 KVA on HTSS

[42] One of ESC Chas and seven of ESC Ramgarh.

rate. The load was again enhanced (June 2012) to 6200 KVA under HTSS tariff as the consumer had installed additional plant.

Audit observed that neither the consumers submitted manufacturer's specification in support of load and type of furnace, nor the concerned ESEs had demanded the same. Further, there was neither any order from any competent authority of the Company to change the tariff from HTS to HTSS, nor any agreement to this effect was on record. The concerned ESEs had also not charged enhanced security deposit from the consumer for HTSS tariff. In the absence of any order, agreement and security deposit, the tariff of the consumer should not have been changed.

Irregular change of tariff of three HTS consumers into HTSS tariff resulted in loss of ₹ 10.27 crore.

Thus, by irregularly changing the tariff, the Company had lost revenue of ₹ 2.77 crore and ₹ 6.27 crore during May 2010 to September 2015 and during May 2010 to February 2012 respectively in the case of above two consumers. Further, a theft case was detected in case of M/s Regal Ingot Pvt. Ltd. on 23 September 2015 and the Company levied penal charges amounting to ₹ 1.44 crore. This was done on the basis of HTSS tariff instead of HTS tariff and the amount chargeable should have been ₹ 2.39 crore instead of ₹ 1.44 crore. Thus, the Company short levied penal charges by ₹ 95.23 lakh.

The management accepted (November 2016) the audit observations and directed the ESEs Chas and Ramgarh to submit a comprehensive report mentioning reasons for providing connection without manufacturer technical specification.

2.2.3 Adherence to JSERC Supply Code

Irregular reduction of load

2.2.3.1 As per clause 9.2.2 of JSERC Supply Code, the application for reduction of load shall be accompanied by details of modification, alteration and removal of electrical installation with completion certificate and test report of a licensed electrical contractor, any other reason for reduction of load and details of generator if any installed by the consumer with safety clearance certificate from competent authority as applicable.

M/s Sai Chem Transmeta Pvt. Ltd. (consumer no. HJAP 190) having a contract demand (CD) of 4320 KVA applied (December 2012) for reduction of load to 2400 KVA. The application was submitted without test report of a licensed electrical contractor. Audit observed that consumer had dismantled only two tonne[43] of furnace which would have reduced the load only by 1200 KVA. However, ESE Jamshedpur reduced (February 2013) the load to 2400 KVA.

Thus, the Company had irregularly reduced the load by 720 KVA and benefitted the consumer by ₹ 43.05 lakh[44] during February 2013 to March 2016.

The management stated (November 2016) that concerned officials have been directed to verify the documents of respective consumer. They further stated that there is a provision for penalty for exceeding contract demand by 110 *per cent.*

[43] One tonne = 600 KVA.

[44] Calculated taking demand charge of 75 *per cent* of contract demand 720 KVA x 0.75= 540 KVA x ₹ 235 x 23 months + 540 KVA x ₹ 250 x 3 months = ₹ 4304700.

Reply of the management regarding levy of penalty for exceeding the contract demand is not acceptable as the Company had not adhered to the provisions of JSERC Supply Code.

Delay in giving connection/enhancement of load

2.2.3.2 As per Section 43 (3) of the Electricity Act, 2003, every distribution licensee, shall on an application by the owner or occupier of any premises, provide supply of electricity to such premises. According to clause 6.2.11.1 of JSERC Supply Code, a maximum period of 153 days is allowed for giving new electric connection to an HTS consumer from the date of application. Further, as per clause 9.1.2 the application for enhancement of load shall be disposed of within the time frame as prescribed for new service connection.

Audit observed that the Company had delayed providing new service connection/enhancement of load in following cases:

- M/s Gajanan Ferro Pvt. Ltd., a HTSS consumer (consumer no. DVN 9) under ESC, Jamshedpur, had applied (June 2010) for a new electric connection with a load of 5000 KVA. The connection should have been energised upto November 2010 as per time period allowed under JSERC Supply Code. Audit observed that the load was sanctioned in June 2010. However, ESE Jamshedpur delayed the construction of a dedicated feeder at 33 KV level at GSS Dhalbhumgarh required for energising the connection as its administrative approval was accorded only in August 2011 and work order was issued only in September 2011. Thus due to delay in construction of dedicated feeder, the connection could be energised (October 2011) after a delay of 10 months resulting in loss of revenue of ₹ 1.27 crore[45].

Further, the consumer applied (January 2012) for enhancement of load from 5000 KVA to 10500 KVA. The connection should have been energised upto June 2012 as per time period allowed under JSERC Supply Code. The Company took seven and half months to sanction (September 2012) the load. However, the consumer requested (September 2012) for permission to pay security deposit in instalments which was granted (December 2012) after three months of request. Further, due to unavailability of proper metering unit the connection was further delayed and could be energised only in March 2013. Had the Company completed he formalities within the stipulated time, it could have earned additional revenue amounting to ₹ 1.34 crore[46] as demand charges during July 2012 to February 2013.

The management stated (November 2016) that construction of dedicated feeder was delayed due to public hindrance and enhancement of load and grant of instalments might have been delayed due to improper documentation. They further, stated that there was no revenue loss as the consumer was billed as per meter reading.

Reply is not acceptable as the administrative approval for construction of dedicated feeder was granted after 14 months of sanction of load. Further, management contention regarding improper documentation is also not acceptable as no further documents were requisitioned from the consumer for enhancement of load. Also, if the Company had sanctioned/enhanced the load

[45] Calculated taking demand charge of 75 *per cent* of contract demand 5000 KVA x 0.75 = 3750 KVA x ₹ 330 x 8 months +3750 KVA x ₹ 370 x 2 months = ₹ 12675000.

[46] Calculated taking demand charge of 75 *per cent* of contract demand 5500 KVA x 0.75 = 4125 KVA x ₹ 370 x 1 month + 4125 KVA x ₹ 410 x 7 months = ₹ 13365000.

in due time, it would have earned minimum demand charges of 75 *per cent* of contract demand.

- A HTSS consumer, M/s Ridhi Sidhi Iron Pvt Ltd. (consumer no. NR 540), under ESC, Dhanbad, had applied (May 2012) for enhancement of load from 7000 KVA to 9500 KVA. The connection should have been energised upto October 2012 as per time period allowed under JSERC Supply Code. The Company sanctioned (March 2013) the load of 9742 KVA after 10 months of application due to incomplete feasibility report submitted by the Division/Circle office. As per sanction order (March 2013), the consumer had to deposit security deposit of ₹ 68.08 lakh. The consumer requested (March 2013) for permission of payment of security deposit in instalments which was granted (August 2013) after five months of request. Thus, the Company took 15 months to sanction the load and grant instalments for payment of security deposit. Had the Company completed the formalities within the stipulated time of 153 days, it would have earned minimum additional revenue of ₹ 84.34 lakh [47]as demand charges.

The management accepted (November 2016) that enhancement of load was delayed due to incomplete feasibility report and stated that grant of instalments might have been delayed due to improper documentation. It was also stated that there was no revenue loss as the Company had not supplied power to the consumer.

Reply regarding improper documentation is not acceptable as the application was forwarded to Chief Engineer (Commercial and Revenue) who granted the same without any requisition of further document. Further, the contention of no revenue loss is also not acceptable as had the Company sanctioned/enhanced the load in due time, it would have earned demand charges of 75 *per cent* of contract demand.

Here it is pertinent to mention that the Government directed (November 2016) the management in the Exit Conference to bring the matter into the Board meeting for not granting instalments for payment of security deposit.

- M/s Uranium Corporation of India Ltd (consumer no. HT 76) under ESC, Chaibasa, had applied (April 2012) for enhancement of load from 1000 KVA to 2000 KVA. The connection should have been energised upto September 2012 as per time period allowed under JSERC Supply Code. Feasibility report for the same was submitted in May 2012. However, due to delay in obtaining no objection certificate from concerned Grid Sub-Station the load could be sanctioned and energised (March 2016) only after a delay of 41 months. Had the Company enhanced the load within 153 days as specified in JSERC Supply Code, the Company could have earned ₹ 72.56 lakh[48] as minimum demand charges during October 2012 to February 2016.

The management stated (November 2016) that there was delay in enhancement of load due to transmission constraints.

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[47] Calculated taking demand charge of 75 *per cent* of contract demand 2742 KVA x 0.75 = 2057 KVA x ₹ 410 x 10 months = ₹ 8433700

[48] Calculated taking demand charge of 75 *per cent* of contract demand 1000 KVA x 0.75 = 750 KVA x ₹ 235 x 39 months +750 KVA x ₹ 255 x 2 months = ₹ 7256250

Reply is not acceptable as the feasibility report submitted by the Division office reflected only 28 MVA[49] load against the capacity of 40 MVA power of Grid Sub-Station.

- The Assistant Mechanical Engineer, DW&S, Mechanical Sub-division (consumer no. BIA79) under ESC Chas, had applied (January 2013) for new connection with a load of 3200 KVA. The connection should have been energised upto June 2013 as per time period allowed under JSERC Supply Code. The load and estimate for deposit work for electrical infrastructure required was sanctioned (July 2013) after six month. The consumer deposited (August 2013) ₹ 1.65 crore for deposit work to be carried out by the Company. However, ESE Chas provided connection only in March 2015 due to delayed execution of infrastructural work by the Company. Had the connection been enegised by ESE Chas within the stipulated time of 153 days, it would have earned revenue of ₹ 1.13 crore[50] from July 2013 to February 2015.

The management accepted (November 2016) the audit observation stating that energisation was delayed due to delay in completion of infrastructural work.

- M/s Indian Oil Corporation Ltd. under ESC, Deoghar, had applied (February 2013) for a new connection at a load of 990 KVA. The connection should have been energised upto July 2013 as per time period allowed under JSERC Supply Code. The load was sanctioned in August 2013. However, the connection was energised (March 2014) after a delay of nine months from the due date for providing the electric connection due to delay in completion of infrastructure works. This resulted in a revenue loss of ₹ 12.22 lakh[51] during the period August 2013 to February 2014.

The management stated (November 2016) that the consumer delayed in getting certificate of Electrical Inspector.

The Company delayed in providing new connections/enhancement of load to five consumers resulting in revenue loss of ₹ 5.43 crore.

Reply is not acceptable as the Company took six months to sanction the load and prepare the estimate for deposit work to be carried out. The consumer deposited the required amount for infrastructural work within the stipulated 15 days and Electrical Inspector's certificate was required only after completion of work.

The Management should fix the responsibility for delay in providing connection/enhancement of load in above cases.

Delay in conversion of Low Tension Industrial Services connection into HTS connection

2.2.3.3 In the following two cases, ESCs Dhanbad and Ranchi delayed the conversion of Low Tension Industrial Services (LTIS) into HTS tariff :

- M/s Jagdhatri Coke Manufacturer (consumer No. GRI 95) under ESC Dhanbad had applied (March 2013) for conversion of 105 HP existing Low Tension Industrial Services (LTIS) connection into 130 KVA connection under HTS tariff. The load was sanctioned (November 2013) after a delay of eight months for want of required documents *viz* Memorandum and Articles of

[49] One MVA = 1000 KVA.

[50] Calculated taking demand charge of 75 *per cent* of contract demand 3200 KVA x 0.75 = 2400 KVA x ₹ 235 x 20 months = ₹ 11280000

[51] Calculated taking demand charge of 75 *per cent* of contract demand 990 KVA x 0.75 = 743 KVA x ₹ 235 x 7 months = ₹ 1222235

Association, partnership deed, land deed of premises, license of the factory *etc* though, these documents were already submitted by the consumer at the time of taking the LTIS connection. The connection was energised in March 2014 after delay of seven months from the stipulated time which was upto August 2013 as per JSERC Supply Code. Had the Company energised the service connection under HTS Tariff at 130 KVA within the stipulated time the Company could have earned additional revenue of ₹ 0.94 lakh[52].

The Management accepted (November 2016) the audit observation and directed the ESC Dhanbad to submit a detailed report pertaining to delay in conversion of connection.

- As per clause 8 of the HT agreement with the consumer, the consumer shall not be at liberty to terminate the agreement before the expiry of three years from the date of commencement of the supply of energy.

M/s Shiva Prints Pvt Ltd, a LTIS consumer had applied (December 2012) for enhancement of load from 81 Horse Power (HP) to 300 KVA under HTS tariff. The load was sanctioned (January 2013) and the ESE Ranchi executed the agreement (May 2013) with the consumer. Electrical Executive Engineer (EEE) Doranda was directed (May 2013) to energise the connection, but the service connection with enhanced load was not released by EEE. In December 2013 the consumer requested to reduce the load to 200 KVA. Finally the service connection was energised (March 2015) at reduced load of 200 KVA after signing a fresh agreement. Had the Company energised the connection under HTS tariff within the stipulated time *i.e.* up to May 2013, the Company would have earned the additional revenue of ₹ 8.90 lakh.

Thus due to delay in conversion of two LTIS connections into HTS tariff, the Company suffered a loss of ₹ 9.84 lakh.

The management stated (November 2016) that the ESE Ranchi has been directed to look into the matter and submit a detailed report.

Irregularity in grant of new connection

2.2.3.4 As per clause 5.5 of JSERC Supply Code, 2005, if the applicant in respect of an earlier agreement executed in his name or in the name of a firm/Company with which he was associated either as a partner, director or managing director, has any arrear of electricity dues or other dues for the premises where the new connection is applied for and such dues are payable to the licensee, the requisition for supply of energy on the premises may not be entertained by the licensee until the dues are paid in full.

Shri Santosh Kumar Khetan was the promoter and his brother Krishna Kumar Khetan was the Chief executive of M/s Vaishanvi Steels Pvt Ltd. Electric supply to M/s Vaishanvi Steels Pvt Ltd (consumer no. 7347 HT) under ESC Deogarh was disconnected (December 2010) for not paying outstanding dues of ₹ 36.27 lakh. Subsequently, a new company M/s Vaishanavi Multigrains Pvt Ltd. was incorporated (January 2011) in which Shri Santosh Kumar Khetan, Shri Krishna Kumar Khetan and their brother Pradeep Kumar Khetan were whole time directors. Sri Pradeep Kumar Khetan applied (March 2013) on behalf of M/s Vaishanavi Multigrains Pvt Ltd. for a new connection on

[52] Demand charges and energy charges as per HTS tariff less amount already charged under LTIS tariff.

premises on which dues were outstanding in the name of Vaishanvi Steels Pvt Ltd.

As Company had not taken any action on the application, Vaishanavi Multigrains Pvt Ltd (new consumer) through its director Sri Pradeep Kumar Khetan filed a writ petition in the Hon'ble High Court, Jharkhand for release of new electric connection. The Hon'ble High Court directed (May 2015) the Company to examine the documents and take a decision in this matter within two weeks. The Company constituted (November 2015) a committee to examine the premises of the two companies and business relation among brothers. The committee recommended (December 2015) that premises are different and both the brothers have separate business interest. Accordingly, ESC Deoghar granted (March 2016) the new electric connection to M/s Vaishanavi Multigrains Pvt Ltd.

Audit observed that the committee's recommendation was not appropriate as Shri Santosh Kumar Khetan had taken electric connection for M/s Vaishanvi Steels Pvt. Ltd on plot numbers 484, 485 and 486 and electric connection for M/s Vaishanavi Multigrains Pvt. Ltd. was sought by Shri Pardeep Kumar Khetan on plot numbers 485 (Part) and 486 *i.e.* part of same premises. Further, both the brothers were also related in business as Shri Santosh Kumar Khetan promoter of M/s Vaishanavi Steels Pvt. Ltd and they were also a whole time Director in M/s Vaishnavi Multigrain Pvt. Ltd. Thus, electric connection was irregularly granted ignoring above facts.

The management stated (November 2016) that the connection was released after proper verification that two premises were in different plots and in line of opinion rendered by Additional Advocate General, GoJ.

Reply of the management is not acceptable as Additional Advocate General, GoJ had opined that connection may only be released if the petitioner is in no collusion with his defaulter brother and his ownership and possession over the land in question is found to be separate of his defaulter brother. Audit scrutiny revealed that while taking connection for Vaishanavi Steels Pvt. Ltd, Shri Santosh Kumar Khetan had sought connection on whole premises. Further, promoters and chief executive of M/s Vaishanavi Steels Pvt Ltd were also whole time Directors in M/s Vaishnavi Multigrain Pvt. Ltd.

Acceptance of payment in cheque in contravention of JSERC Supply Code

2.2.3.5 As per JSERC Supply Code, in case a cheque given by the consumer is dishonoured/bounced, action may be initiated by the licensee for disconnection treating it as a case of payment not made. The licensee may not accept payment through cheque from such consumer for a period of one year from the billing month for which the cheque given by the consumer has bounced. For that particular year, the consumer may be required to pay his bill in cash/ by demand draft only.

Audit observed that 56 cheques deposited against energy bills of 11[53] consumers amounting to ₹ 23.73 crore, were dishonored repeatedly. However,

[53] M/s Maa Tara Ispat (P) Ltd (DVM 6), M/s Sukh Sagar metal Pvt Ltd (CKU02),M/s S.S Agro biotech flour Mill (BRD596), M/s Om Shakti Tech (NR 543), M/s Ornet Ispat Pvt Ltd. (BRD 604), M/s Siyaram Engineering (BRD 597), M/s Kumardhubi Metal Processing Ind. (NR 552), M/s Vinod Coke Ind. (NR 553), M/s Divine Alloys, HT 38), M/s Hariom Casting Company Pvt Ltd. (HT85) and M/s Shri Ram Alloy (HT-38).

Electric Superintending Engineers (ESEs) of concerned ESCs continued to accept payment through cheques in violation of the provisions of JSERC Supply Code.

The management accepted (November 2016) the audit observation and stated that direction have been issued to follow the provisions strictly. Further, the Government stated in exit conference (November 2016) that the Company has been directed to file cases against the concerned consumer and publish the names of the consumers in local news paper. It was also directed that action be taken against the employees responsible for lapses.

2.2.4 Billing and Collection efficiency

Deviation from tariff orders

2.2.4.1 As per JSERC tariff 2011-12 effective from July 2011, the billing demand shall be the maximum demand recorded during the month or 75 *per cent* of the contract demand, whichever higher. In case higher actual demands are recorded for three continuous months, the same shall be treated as the new contract demand for the purpose of billing of future months and the consumer will get into a new agreement for the revised contracted demand with the licensee.

The Company failed to increase Contract Demand in case of 61 HTSS consumers as per JSERC tariff which resulted in loss of ₹ 3.42 crore

Audit observed that actual demand of 61 HTS consumers[54] (***Annexure 2.2.2***) in seven test checked ESCs, exceeded the Contract Demand for three continuous months during the period 2011-12 to 2015-16. However, the concerned ESEs had not taken any step to increase the contract demand which resulted in revenue loss of ₹ 3.42 crore.

The management accepted (November 2016) the audit observation and directed the field offices to ensure revision of contract demand and realisation of revenue short realised.

Failure to recover additional security

2.2.4.2 As per JSERC Supply Code, the distribution licensee shall recalculate the amount of security based on the actual billing of the consumer once in each financial year. In case where amount of security deposited by the consumer is less than 90 *per cent* of the such security calculated for the financial year, the licensee shall be entitled to serve notice to the consumer to deposit the amount of shortfall within 30 days and if the consumer fails to deposit the security amount within due date, his service connection may be disconnected.

Audit observed that in cases of 62 HTS consumers[55] in seven test checked ESCs ***(Annexure 2.2.3)*** for the financial year 2014-15, the concerned ESEs had neither recovered additional security deposit of ₹ 54.03 crore, nor disconnected the connection.

The management accepted (November 2016) the audit observation and directed the field officers to take effective measures to realise the additional/insufficient security amount.

[54] Eight at Jamshedpur, three at Dhanbad, two at Deoghar, five at Chaibasa, 30 at Ranchi, five at Chas and eight at Ramgarh electric Supply Circles.

[55] 14 at Chaibasa, five at Deoghar, 11 at Dhanbad, four at Jamshedpur, five at Ranchi nine at Chas and 14 at Ramgarh Electric Supply Circles.

Average billing due to delay in replacement/rectification of meters

2.2.4.3 As per JSERC Supply Code as amended in September 2015, if meter of a consumer becomes defective, then billing is to be done considering average consumption of past 12 months[56], if past consumption pattern was available. The average billing period can be for a maximum period of three months. Further, as per JSERC tariff no connection should be released without proper energy meter.

31 HTS consumers in four ESCs had been billed on average basis for the period of four to 240 months in violation of JSERC Regulations.

Audit observed that 31 HTS consumers[57] in four test checked ESCs as detailed in ***Annexure 2.2.4*** had been billed on average basis for the period ranging between four to 240 months, contrary to the provisions of JSERC Supply Code. Further, the Company had failed to replace/rectify the defective meters within the stipulated time in these cases. It was also observed that the Company released connection to General Manager, R-APDRP consumer no. HJ79, under ESC Jamshedpur, with a contract demand 316 KVA without meter and agreement.

Audit further observed that in cases of nine HTS consumers[58], in five test checked ESCs the average consumption was wrongly calculated resulting in short charge of revenue amounting to ₹ 1.20 crore as detailed in ***Annexure 2.2.5***.

The management accepted the audit observation and stated (November 2016) that defective meters were not changed due to unavailability of meters and will be changed within two to three months. Management also stated that short charged revenue on average bill will be recovered.

Short billing of energy charges

2.2.4.4 Audit scrutiny of records of energy billing pertaining to HTS and HTSS consumers in two test checked ESCs revealed the following:

- In case of a HTSS consumer M/s Sukh Sagar, (consumer no. CKU 2) under ESC Jamshedpur, it was observed that while carrying forward the arrears during the period September 2015 to December 2015, ESC Jamshedpur had short charged ₹ 61.45 lakh.

- During October 2015, a HTSS consumer M/s Himadri Steel (P) Ltd., (consumer no. CKU3) under ESC Jamshedpur, had consumed 1295640 units of energy. However, the Company had charged only 1155600 units. Thus, ESC Jamshedpur short charged 140040 units of energy resulting in revenue loss of ₹ 4.55 lakh.

- ESC Chaibasa charged 100 *per cent* of its demand charge against a HTSS consumer M/s SSR Sponge, (consumer no. HT55), who had not paid the full energy bill as demanded by ESC but filed a case before *Vidyut Upvokta Shikayat Niwaran Forum* (*VUSNF*). As per order of VUSNF, the bill was revised for the period April 2007 to October 2010. In the revised bill, ESC charged ₹ 62.51 lakh as arrears up to November 2010. However, it was observed that the total arrears from April 2007 to November 2010 was ₹ 1.01 crore. Thus, ESC had short billed revenue of ₹ 38.14 lakh.

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[56] Considering average consumption of past three months *w.e.f* September 2015.
[57] Nine in ESC, Jamshedpur six in ESC, Dhanbad. Two at ESC Chaibasa and 14 at ESC Ranchi.
[58] ESC Jamshedpur, Chaibasa, Chas, Ramgarh and Ranchi.

The management accepted (November 2016) the short billing in case of M/s Himadri Steel Pvt Ltd. Further, stated that there was no short charging against M/s Sukh Sagar and M/s S.S.R Sponge.

The reply regarding M/s Sukh Sagar and M/s S.S.R Sponge was not acceptable as the Company has not produced any documentary evidence contrary to findings of audit.

Wrong billing

2.2.4.5 As per JSERC tariff order 2010-11 effective from May 2010, domestic connection in Housing Colonies/ Housing Complexes/ Houses of multi storied buildings purely for residential use, with power supply at 11 KV voltage level and load above 75 KW shall be categorised under Domestic HT connection. Fixed charge of ₹ 40, ₹ 65, ₹ 75 and ₹ 80 per KVA per month was leviable effective from May 2010, July 2011, August 2012 and January 2016, as per tariff orders of respective years. Further, there were no provisions of providing power factor rebate to Domestic HT consumers in the tariff.

Short billing of the fixed charges and irregular power factor rebate allowed to seven Domestic HT consumers resulted in loss of ₹ 40.15 lakh.

Audit observed that in case of seven[59] Domestic HT consumers, the concerned ESEs had short billed the fixed charges and irregularly allowed power factor rebate resulting in revenue loss of ₹ 40.15 lakh during the period 2011-12 to 2015-16.

The management accepted (November 2016) the audit observation and stated that short billed amount against consumers of ESC Chaibasa and Chas has been charged and ESC Dhanbad has been directed to the recover the short billed amount from the consumers immediately.

Undue favour to consumers

2.2.4.6 To liquidate the arrears of energy bills, the Company allows instalment facility to the consumers on request basis. For this an agreement is executed between the Company and the consumers. As per terms of agreement, the consumer has to pay fixed instalment amount per month in addition to current bill *plus* compensation charges at the rate of 0.4 *per cent* per week on the outstanding dues. If consumer breaches the terms of agreement, the entire amount would be recovered by the Company from the consumer in one lump sum and the Company shall further be entitled to disconnect the supply for failure to pay the same.

Audit observed that four HTSS consumers in two test checked ESCs[60], had failed to make payment as per terms of agreement. However, the Company did not take any effective action against the consumers and extended undue benefit to consumers as discussed below:

- On request of M/s Maa Tara Ispat (P) Ltd (consumer no. DVM 6) under ESC Jamshedpur, the Company executed an agreement (July 2013) with the consumer allowing him to pay arrears of ₹ 3.53 crore with interest in 20 monthly instalments along with current bill and took post-dated cheques

[59] GM, Jarda (consumer No. MK1557), CMRI (consumer No. DH1731), Mac Nally Bharat Engg. Works (consumer No. KD521) and Chief Engineer Services (consumer No. DHL 1546, 1547) of ESC Dhanbad, Bihar Sponge Iron (P) Ltd. (consumer No. HT 83) and Rungta Mines Ltd (consumer No. HT 88) of ESC Chaibasa and Veena Rani (consumer No. CH20) and Binay Kumar Tiwary (consumer No. BIA56) of ESC Chas.

[60] ESC Jamshedpur and Chaibasa.

towards payment of instalments. The consumer failed to fulfill the stipulated condition of payment of the entire current bill, but neither the instalment facility was withdrawn, nor the power supply was disconnected. As a result outstanding dues piled up to ₹ 10.67 crore in October 2014.

However, on request of the consumer, Company again executed an agreement (November 2014) allowing it to pay arrears with interest in 20 monthly instalments along with current bill and took post-dated cheques towards instalment payment. Again cheque amounting to ₹ 20.56 lakh payable in December 2014 was dishonoured and the consumer also failed to pay the current bill, yet the Company did not disconnect the supply and the arrear increased to ₹ 14.06 crore in April 2015.

Further, a case of theft of power by the consumer was detected and its supply was disconnected (May 2015) and a penal bill of ₹ 11.20 crore was separately raised (June 2015) against the consumer for theft of energy. However, on appeal, the Hon'ble High Court, Jharkhand ordered to create an escrow account of ₹ 50 lakh and deposit of 50 *per cent* of penalty (₹ 5.60 crore) in five monthly instalments in order to restore the electric connection. Accordingly, electric supply to the consumer was restored (November 2015). However, the consumer failed to comply with the condition of restoration of power and deposited two monthly instalments after the due date and failed to pay the third instalment. The consumer had also not paid any portion of the current bill including arrears, which now amounted to ₹ 24.28 crore as of March 2016.

The management accepted (November 2016) the audit observation and stated that action is being taken for realisation of dues.

The fact remains that despite repeated failures in payment of outstanding energy dues, ESE Jamshedpur did not take any action against the consumer as per terms of the agreement to disconnect the power supply to safeguard Company's interest.

- Electricity line of M/s Himadri Steel (P) Ltd. (consumer no. CKU3) under ESC Jamshedpur was disconnected (14 February 2015) for the failure to pay outstanding dues. The consumer requested (February 2015) for grant of 10 monthly instalments to pay the outstanding dues of ₹ 3.12 crore and this was granted. An agreement was executed with the Company for the same in February 2015. Audit observed that the consumer deposited ₹ 40 lakh in February 2015 but subsequently defaulted in payment of instalments which were due on 21 March 2015 and current bill. Despite breach of agreement by the consumer, ESE Jamshedpur did not take any action against the consumers. As a result arrears of ₹ 4.82 crore was pending for recovery against the consumer as on March 2016.

The management accepted (November 2016) the audit observation and stated that action is being taken for realisation of dues.

- M/s Divine Alloys & Power Co. Ltd. (consumer no. HT 38) under ESC Chaibasa, had not paid energy bills of April 2014 and May 2014 and electricity supply was disconnected on 2 June 2014. On request of the consumer the Company executed (September 2014) agreement with the consumer for payment of ₹ 3.30 crore in 20 monthly instalments along with

compensation charges of 1.5 *per cent* in addition to current bill. Accordingly, electricity supply was reconnected. However, the consumer defaulted again and the electricity supply was disconnected on 02 May 2015. Consumer requested yet another instalment facility and the Company allowed the payment of ₹ 6.25 crore in 25 monthly instalments. Accordingly an agreement was executed with the consumer and electric supply was reconnected (July 2015). As per agreement, the consumer had to submit post dated cheques towards payment of instalments, but it was observed that consumer again defaulted in payment of these instalments implying that post dated cheques were not taken. However, ESE Chaibasa did not take any action against the consumer and arrears increased to ₹ 11.42 crore as of March 2016.

The management stated (November 2016) that matter of differential demand charge is subjudice before court.

No response have been furnished about the failure of ESE Chaibasa in taking action against the consumer for defying the terms of agreement entered into by him in September 2014 and July 2015. The consumer had not paid the monthly instalments of February 2016 and March 2016 and had either not paid or paid partially the energy dues for the period from June 2015 to March 2016.

- M/s Kohinoor Steel Pvt. Ltd. (consumer no. HT 40) under ESC Chaibasa, was paying energy bill partially and its accumulated arrears upto May 2014 were ₹ 44.49 lakh. The Company executed an agreement (August 2014) with the consumer allowing it to pay arrears with interest in five monthly instalments along with current energy charges through demand drafts. The consumer defaulted in payment of instalments and electric supply was disconnected on 31 October 2014. However, as per instruction of Chairman cum Managing Director, Jharkhand Urja Vikas Nigam Limited, ESE Chaibasa reconnected (November 2014) the electric supply. Further, on request of the consumer, the Company executed (November 2014) an agreement for payment of arrears of ₹ 54.50 lakh in eight monthly instalments through post dated cheques. The consumer did not adhere to the agreement and electric supply was disconnected on 27 January 2015. But for the third time payment of arrears ₹ 1.09 crore in instalments was granted and the Company executed (February 2015) an agreement for 10 monthly instalments through nine post-dated cheques. The electric supply was reconnected on 25 February 2015. However, the consumer paid only three monthly instalment, short-paid two monthly instalments implying that post dated cheques were not taken. As a result the consumer failed to pay delayed payment surcharge (DPS) of ₹ 4.56 lakh and instalment amount of ₹ 55.99 lakh.

The Company did not take any action against consumers who failed to pay their arrears of electricity dues as per terms of agreement.

Despite repeated failure of the consumer to pay energy charges the ESE Chaibasa had allowed payment of arrears of energy charge in instalments to the consumer and thereby had extended undue benefit to him.

The management stated (November 2016) that after reconnection on 25 February 2015, the consumer paid three consecutive instalments and short paid two instalments. The management further stated that as per order of Hon'ble High Court, recovery of further arrears had been stopped and the ESE Chaibasa continued to account for the arrears with DPS in the monthly bill of the consumer.

The reply of the management is not acceptable as the Hon'ble High Court passed the order in July 2015 whereas, consumer had failed to adhere to the condition of the agreement dated 11 August 2014, 28 November 2014 and 25 February 2015. Despite that no effective action was taken against the consumer.

Failure to revalidate the Bank Gaurantee

2.2.4.7 M/s Tata Yodugawa Ltd. (consumer no. HJAP 25) under ESC Jamshedpur was granted electric connection (June 1996) under HTS tariff. The consumer had outstanding dues of ₹ 3.72 crore on account of fuel surcharge for the period during April 1999 to December 2003 including Delayed Payment Surcharge (DPS) up to June 2006. This was kept in abeyance as the consumer had filed a writ against the levy of fuel surcharge in the Hon'ble High Court, Jharkhand. On request of the consumer the service connection was disconnected (March 2013) by depositing bank guarantee (BG) of ₹ 3.72 crore valid up to March 2014.

Subsequently, Hon'ble High Court, Jharkhand dismissed (May 2015) the writ. However, in the mean time the BG of ₹ 3.72 crore given by the consumer expired in March 2014 and ESE Jamshedpur failed to get the same revalidated in time. The consumer paid (July 2015) ₹ 43.61 lakh only though the Company issued a fresh bill of ₹ 12.32 crore, including DPS up to July 2015 which has been challenged by the consumer in the Hon'ble Supreme Court.

Thus, due to failure of ESE Jamshedpur to validate the BG before its expiry, the Company lost the opportunity to recover fuel surcharge of ₹ 3.28 crore.

The management accepted (November 2016) the audit observation and directed the ESE Jamshedpur to act expeditiously.

Loss due to inaction of the Company

2.2.4.8 In two test checked ESCs, following instances of loss due to inaction by the concerned ESEs were observed.

- M/s M.P.Minning & Energy Ltd. was released a new service connection under ESC Deoghar in January 2016 in the premises that earlier belonged to M/s MACLIOD Steel (P) Ltd., whose line was disconnected (August 1990) due to outstanding dues of ₹ 15.31 lakh for which a certificate case[61] was filed (July 1992) by the Company. The defaulting consumer faced winding up orders in September 2003. Audit observed that though advertisement for sale of property was publicly[62] available, ESE Deoghar failed to register its claim before the liquidator to recover its dues. Hence, the Company suffered a loss of ₹ 15.31 lakh.

- M/s Gajpati Food Pvt. Ltd. (consumer no. BRD 609) was released (March 2015) a new service connection under ESC Dhanbad, in the premises that earlier belonged to M/s Saraswati Roller Flour Mills Pvt. Ltd. (SRFM) (consumer no. BRD 534) whose line was disconnected (February 1995) due to outstanding dues of ₹ 18.52 lakh. A certificate case was filed (February 1995) against SRFM by the Company. SRFM had taken loan from Bihar State Financial Corporation (BSFC) for which agreement was signed

[61] Case registered under Bihar and Orissa Public Demand Recovery Act, 1914 for recovery of dues.
[62] Times of India and Prabhat Khabar dated 26 July 2007.

(February 1989). The premises of SRFM were mortgaged with BSFC. Notice of attachment was issued (August 2006) and body warrant[63] against the owner of SRFM had also been issued (November 2008). However, the said amount could not be recovered from the consumer till date. Audit observed that though advertisement for sale of property was published[64], ESE Dhanbad failed to register its claim before BSFC to recover its dues. Hence the Company suffered loss of ₹ 18.52 lakh.

Thus, failure of the management in taking timely action to recover the dues led to loss of ₹ 33.83 lakh in above two cases.

The Management stated (November 2016) that they have directed ESE Deoghar and Dhanbad to submit detailed report on the matter.

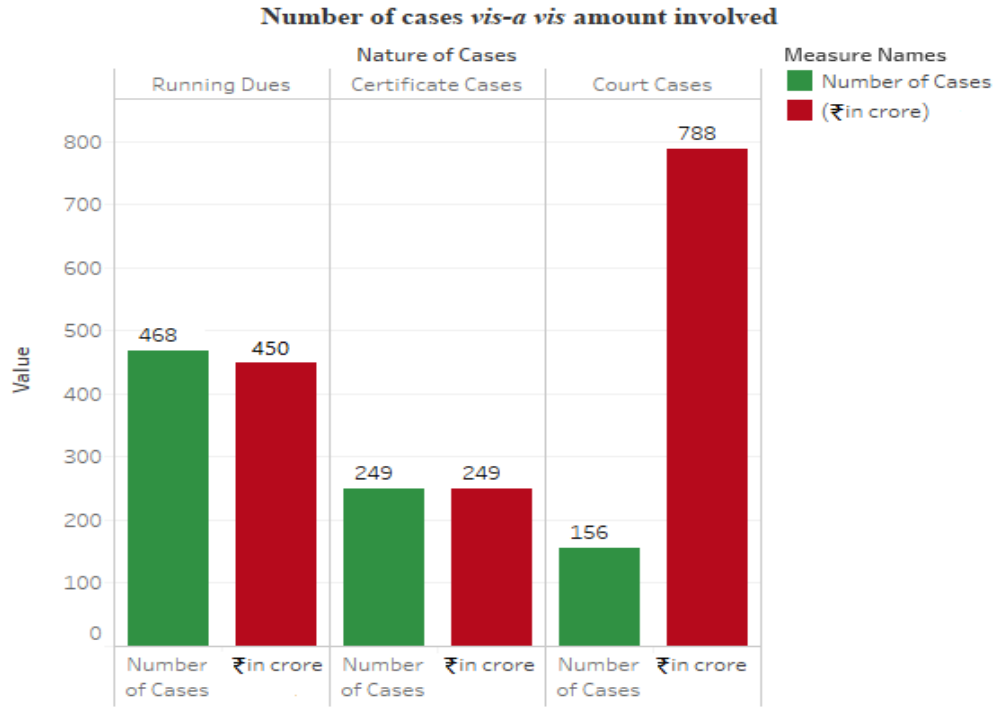
The fact remains that the concerned ESEs failed to take timely action, causing loss to the Company.

Outstanding dues

2.2.4.9 As revenue from sale of energy is the main source of income of the Company, prompt collection of revenue assumes great significance.

We observed that as of 31 March 2016 there were outstanding dues of ₹ 1487.11 crore against 873 HTS consumers in seven[65] test checked ESCs. Out of above ₹ 449.84 crore was outstanding against the 468 running consumers, ₹ 249.22 crore was pending against 249 consumers in certificate case and ₹ 788.05 crore against 156 consumers in Hon'ble Supreme Court/High Court. The amounts were pending for a period ranging from two years to 34 years in different courts. Following **chart 2.2.2** depicts the status of outstanding dues graphically.

Chart 2.2.2: Status of outstanding dues as of 31 March 2016



[63] A body warrant means that the accused is to be held in jail until brought before the judge.
[64] Prabhat khabar dated 28 September 2012.
[65] Jamshedpur, Ranchi, Dhanbad, Chaibasa, Deoghar, Ramgarh and Chas.

The management stated (November 2016) that effective action is being taken to recover the outstanding dues.

Failure of the Company to recover dues

2.2.4.10 Audit further, observed that premises of M/s Spriha Steel Pvt. Ltd. (consumer No. RP 378) under ESC Ranchi, were inspected (October 1999) by a team lead by Deputy Superintendent of Police, Vigilance along with other officers of Bihar State Electricity Board and line was disconnected alleging theft of electricity. The final bill was served (December 2000) for an amount of ₹ 52.88 crore.

The consumer challenged the decision of the Company in the High Court, Jharkhand. The High Court passed an order (July 2003) directing Chairmen, JSEB to take a final decision on the matter and issue fresh bill according to decision within 60 days from date of receipt of representation from the consumer along with all relevant documents and after giving proper opportunity of hearing to the parties. Date of representation by the consumer and reply of the Company was not available. However, final decision has yet not been taken (November 2016).

The management stated (December 2016) that file have been misplaced, therefore, information cannot be furnished. The Government stated in exit conference (November 2016) that the Company has been directed to rebuild the documents and establish the records of the case.

The fact remains that in the absence of decision by the Chairman, JSEB which he was obliged to do within 60 days as directed by the Hon'ble High court an amount of ₹ 52.88 crore remained unrecovered from the consumer.

Conclusion

Audit concluded that:

- **Four HTSS consumers were utilising load for purposes other than induction furnace; however, the Company had not segregated the load into HTSS and HTS tariff as required under JSERC Supply Code and suffered loss of ₹ 9.90 crore;**

- **In five cases the Company failed to provide new connections/enhancement of load within the time limit of 153 days prescribed in JSERC Supply Code resulting in revenue loss of ₹ 5.43 crore;**

- **Actual demand of 61 HTS consumers exceeded the Contract Demand for continuous three months during the period 2011-12 to 2015-16; however, the Company failed to increase the contract demand as per JSERC tariff orders resulting in revenue loss of ₹ 3.42 crore;**

- **The Company failed to collect additional security deposits of ₹ 54.03 crore against 62 HTS/HTSS consumers based on their actual billing as per JSERC Supply Code; and**

- **There were huge outstanding dues of ₹ 1487.11 crore against 873 HTS/HTSS consumers including 450 crore against 468 running consumers in seven test check circles.**

Recommendations

Audit recommends that the Company should:

- **segregate the load in HTSS and HTS tariff in cases mentioned in this Report as per the provisions of JSERC Supply Code and review the load of all HTSS consumers;**
- **provide new connections/enhancement of load within stipulated time as per JSERC Supply Code;**
- **review the contract demand on regular basis and increase the contract demand wherever required in accordance with the JSERC tariff orders;**
- **review the security deposit as per JSERC Supply Code and collect the additional security deposit wherever applicable; and**
- **take effective steps to recover the outstanding dues.**