

**OFFICE OF THE
COMPTROLLER & AUDITOR GENERAL OF INDIA**

NEW DELHI
03rd February, 2017

**CAG AUDIT REPORT ON FUEL MANAGEMENT OF COAL BASED
POWER STATIONS OF NTPC LIMITED PRESENTED IN PARLIAMENT**

The Comptroller & Auditor General of India's Audit Report No. 35 of 2016 on Fuel Management of Coal Based Power Stations of NTPC Limited was tabled in Parliament today.

Introduction

Coal based electricity generation constitutes 60.69 *per cent* of the total generation capacity in the country (as on 31 October 2016). NTPC Limited is the largest power utility in the country, its coal based capacity being 40084 MW (October 2016). Coal cost constitutes 60 to 70 *per cent* of the total generation tariff of a coal based power station and has a major impact on cost of supply of power to consumers. Inefficiencies in fuel management would increase the energy charges for the stations and cost of power to the ultimate consumer.

Major Audit Findings

Procurement of Domestic Coal

- The power stations incurred extra expenditure on procurement of coal at higher cost compared to the rates notified by CIL during the period, 2010-11 to 2015-16. The stations paid performance incentives for coal quantities already contracted at notified rates. The incentive was also paid on Deemed Delivered Quantity (imported coal not actually delivered to the station). To meet coal shortages, the stations had to procure coal through MoU arrangements and through e-auction for which they had to pay a premium. Additional expenditure on procurement of coal by the power stations was seen to be Rs 6869.95 crore during this period.

Import of coal

- NTPC did not lay down a specific policy for importing coal. In the absence of a comprehensive policy, different approaches to key decisions were noticed. In order to enhance participation level, though splitting was introduced, the splitting ratio was modified subsequently, which had the effect of awarding higher quantity to L1 bidder.

Assessment of Quality and Quantity of coal

- The quality of coal is represented by its Gross Calorific Value (GCV). Cost of coal is directly proportional to GCV and the price of coal based power is inversely proportional to GCV. Thus, higher the GCV, higher the cost of coal and lower the cost of power. GCV is measured by different methods by the coal companies and the power stations. The method used by coal companies yields a higher value of GCV resulting in a higher coal cost. The power stations use a different method of measuring GCV which yields a lower value for the same quality of coal. This leads to a higher cost of power which means a higher burden on the customers.
- Audit compared the GCV ‘as billed’ at mine end, GCV ‘as received’ at the unloading point of the power station, and GCV ‘as fired’ in the boilers for a year (from October/November 2012 to September 2013) and observed that GCV of coal progressively decreased from ‘as billed’ stage to ‘as fired’ stage, though as per Central Electricity Authority, the three GCV values should be approximately same. The difference in energy charges considering the ‘as received’ and ‘as fired’ stage for the one year period was ₹0.03 to ₹0.96 per unit of electricity for the different stations.
- As per Fuel Supply Agreements (FSA), power stations had to pay as per weighment done at the delivery/loading point of the coal mine. The FSAs also provided for weighment at unloading point (power station) in order to ensure recalibration of weigh bridges at loading point. However, power stations did not regularly weigh domestic coal, though in-motion weigh bridges were installed in the stations. This meant that the stations lost an opportunity to cross verify the quantity of coal received and ascertain the resultant transit loss.

Coal Supply Management

- During 2012-13, the stock level was at super critical position (stock less than four days requirement) in seven stations for more than six months and similar situation prevailed in four stations during 2013-14. There was some improvement in 2014-15, but three stations reported super critical stock levels. Further, domestic coal stock dropped to *zero level* at stations during 2012-13 to 2014-15. During 2010-

11 to 2015-16, 11 out of 13 stations covered in audit reported a generation loss of 19546.26 million units of electricity with potential revenue loss of ₹4299.80 crore, due to units being taken out of operation or being operated at partial load in view of coal shortage.

- As per 'Local Management Instructions' issued by stations, imported coal was to be stacked separately in earmarked area in the yard. Physical verification reports (April 2010 to March 2016) of coal stock were reviewed in audit and it was observed that domestic and imported coal were stored in the same yard. Availability of imported coal in excess of earmarked capacity for it ranged between 6 and 158 *per cent* indicating that domestic and imported coal were being mixed at the yard itself before they were actually blended. The cost and quality of imported coal was much higher compared to domestic coal and such un-intended blending ought to have been avoided.

Consumption of coal

- Although yearly average Specific Coal Consumption of stations remained below 1 kg per unit of power, Audit noticed significant monthly variations. The maximum SCC in some stations, Mouda and Badarpur was found to be very high.
- Coal used to produce one unit of energy remained the same, irrespective of whether imported coal was blended to a lesser or greater extent. This raises doubts whether imported coal was indeed superior to domestic coal even though NTPC incurred higher cost for procuring it.
