

CAG Report Summary

Electrification Projects in Indian Railways

- The Comptroller and Auditor General of India submitted a report on the electrification projects in Indian Railways (between 2013-14 and 2015-16) on July 21, 2017. Trains on Indian Railways are hauled either by diesel locomotives or electric locomotives. In 2015-16, the total expenditure on energy/fuel was Rs 23,699 crore. Of this, 56% was spent on diesel and 44% on electricity. As on March 31, 2016, 42% of the total railway route length (66,687 route kilometres) has been electrified. The audit looked at the project implementation and management, and post project utilisation of electrified lines. Key findings and recommendations of the audit report include:
- **Planning:** Currently, new railway lines are assessed without electrification and electrification is added as a subsequent activity. The CAG recommended that all new line projects should be assessed both with and without electrified routes.
- **Pace of electrification:** The pace of electrification has increased from 1,165 route kilometres (RKMs) in 2011-12 to 1,730 RKMs in 2015-16 (48% increase). However, delays were observed in every stage from project planning to project execution of the electrification process.
- **Project delays:** It was noted that delays in the completion of projects led to an increase in the capital cost of the projects both in terms of time and cost overruns. Several projects saw a cost overrun of 2% to 77%. Delays in completion also led to non-achievement of the projected savings. In 21 projects, projected savings of Rs 3,006 crore could not be achieved due to such delays. CAG recommended that delays in execution of works may be controlled through better project monitoring. Further, project teams should be adequately empowered for decision making within reasonable time limits.
- **Tendering process:** It was observed that the time taken by Railway Board to assign the Central Organisation for Railway Electrification (CORE) and Rail Vikas Nigam Limited (RVNL) as the implementing agencies for electrification works, was up to 337 days and 202 days respectively. The time taken after the project appeared in the annual works programme, to the approval of the detailed estimates was up to 35 months in CORE, and 18 months in RVNL. It was also noted that the tenders were processed without giving due regard to the objective of completion of project in time. CAG recommended
- implementing e-tendering and conducting various activities of tender evaluation in parallel. Further, timelines for various activities in tender processing may be prescribed to complete the tender evaluation process within a reasonable time.
- **Due diligence:** While accepting tenders, CORE examined the work experience and turnover of the firms, but did not assess their financial soundness. It also did not assess the likely impact of the workload of the firm on its ability to complete the assigned work. Both CORE and RVNL did not assess the past performance of the bidders while evaluating the bids. The CAG recommended that assessment of contractors must include evaluation of: (i) technical resources (personnel, machinery), (ii) work experience, (iii) past performance, (iv) turnover, and (v) financial resources (including working capital).
- **Project extensions:** It was observed that project extensions were granted to the contractors in a routine manner. Of the 481 contracts reviewed in the audit, extensions were granted in 419 (87%). Overall, 2,086 extensions were granted to various contractors by CORE and RVNL. Further, 69% of these extensions were granted by these agencies without mentioning the reasons under which these were allowed. Some of the reasons for extensions, as identified by CAG, include: (i) non-availability of material, (ii) delay in receipt of material, (iii) non-deployment of sufficient manpower, and (iv) change in scope of work.
- Liquidated damages are damages which would be claimed, decided during the formation of contract for compensation on breach of specific contract provisions. CAG recommended that this mechanism, available to the Railways, must be effectively enforced to ensure timely execution of the project. Further, incentives may be provided in the tendering process for early completion of projects.
- **Post project utilisation:** Instances of sub-optimal utilisation of the electrified sections of railway lines were also observed. In 12 electrified sections, only up to 59% trains were being run with electric traction. This resulted in a shortfall in achievement of the projected savings of Rs 404 crore in 14 projects. CAG recommended that the use of electrified routes for electric trains should be monitored. Further, diesel trains should not be allowed on such routes except for unavoidable reasons.

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