

Executive Summary

Background

Polavaram Irrigation Project (PIP) is a multipurpose project on the river Godavari near Ramayyapeta Village of Polavaram Mandal about 42 km upstream of Sir Arthur Cotton Barrage, where the river emerges out of the last range of the Eastern Ghats and enters the plains in erstwhile West Godavari District of Andhra Pradesh State. It envisages construction of a dam to create an ultimate irrigation potential of 2.91 lakh hectare. The project also envisages generation of 960 Mega Watt of hydro power, drinking water supply to a population of 28.50 lakh in 540 villages and diversion of 80 Thousand Million Cubic feet (TMC) of water to Krishna River basin. In a way, the project heralds a wide range of developmental activities across the State of Andhra Pradesh.

Initially, the construction of the project began in 2004-05 with the funds of the Government of Andhra Pradesh (GoAP). Subsequently, in 2014, it was declared as a National Project as per Section 90 Part IX of the Andhra Pradesh State Re-organisation Act, 2014. The Act mandates Government of India (GoI) to execute the project and obtain all requisite clearances including environmental, forest, and rehabilitation and resettlement norms. In pursuance of the Act, Ministry of Water Resources or Ministry of Jal Shakti, GoI constituted a governing body to Polavaram Project Authority (PPA). On behalf of GoI, PIP is being executed by the Water Resources Department (WRD) of GoAP. The execution of civil works of all components of the Project, Land Acquisition (LA) and Rehabilitation & Resettlement (R&R) activities are being carried out by WRD, GoAP. The expenditure incurred by GoAP through its budgetary resources is being reimbursed by GoI. However, the cost of Polavaram Hydro Electric Project (PHEP) would be wholly borne by GoAP.

The Comptroller & Auditor General of India has reviewed the implementation of PIP as a part of the Jalayagnam Report (Report No. 2 of 2012) covering the period April 2006 to March 2010 and also in the year 2017 (Report No.4 of 2018) covering the period April 2012 to March 2017 of Government of Andhra Pradesh. The Jalayagnam Report was partially discussed by the Public Accounts Committee (PAC), however, no recommendations were made. Report No. 4 of 2018 was yet to be discussed by the PAC.

The present Performance Audit was undertaken between June 2022 to June 2023 covering the period 2017-18 to 2022-23. This report also includes the updated position of the issues covered in the earlier Audit Reports, wherever such issues have contemporary relevance. It also covers the events that occurred during the prior period but not covered in the earlier Audit Report.

The Performance Audit of PIP was taken up with an objective to assess the effectiveness in planning and execution of Headworks (for required water storage), Powerhouse (power generation capacity), Right and Left Main Canals with required last mile connectivities to cater the needs of industries, irrigation and drinking water requirements. The audit objectives also included assessment of transparency, fairness and efficiency in acquisition of land by balancing public interest with project requirement and R&R activities for socio-economic benefits to the Project Displaced Families (PDFs). The audit also involved a beneficiary and amenities survey

to assess whether land compensation and R&R benefits were extended to PDFs as envisaged in the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013.

Present Status of the Project

As of March 2023, Headworks / main dam works costing to ₹7,422.69 crore were awarded and an expenditure of ₹5,757.48 crore was incurred. Even after a lapse of 17 years, the Headworks remained incomplete. The overall physical and financial progress of works of Left Main Canal (LMC) and Right Main Canal (RMC) was 76.05 & 72.62 per cent and 96.14 & 92.75 per cent respectively. The physical and financial progress of Polavaram Hydro Electric Power project was only 12 and 17 per cent respectively.

Against the land requirement of 1,79,770 acres, requisitions were filed for 1,67,765 acres and an extent of 1,13,119 acres, i.e., 67.43 per cent, has been acquired.

The Project involves submergence of 373 habitations in 222 revenue villages, affecting 1,06,006 Project Displaced Families (PDFs). A total of 213 R&R colonies were contemplated at an estimated cost of ₹13,262 crore. As of March 2023, a total of 26 R&R colonies were completed, 49 colonies were in progress and 11,677 PDFs were shifted to the R&R colonies.

The major findings of the Performance Audit are presented below:

A. Financial Management and Environmental aspects

There was a drastic decrease in budgetary support to the Project by GoAP during 2019-23, when compared to 2018-19. The percentage utilisation of budget provided ranged between 21 to 66 during 2017-23. The expenditure incurred was largely focused on works component, giving least priority to LA and R&R activities. ***It is recommended that the State Government should ensure adequate budgetary support and enforce upon the Department for optimum utilisation of allocated funds for timely completion of the project.***

Revised Cost Estimate (RCE) submitted for 2017-18 Price Level by GoAP remained unapproved by GoI, due to delay in completion of Socio-Economic Survey and approval of Detailed Project Report (DPR) by PPA/Central Water Commission (CWC) for distributary network. ***It is recommended that the State Government should expedite the Socio-Economic Survey process and obtain approval of DPR by the CWC for the distributary network, to facilitate the approval of the RCE by GoI for timely completion of the project.***

Construction of protective embankments to the submergence villages in the neighbouring States of Chhattisgarh and Odisha, due to be completed by 2014-15, was not yet commenced by GoAP, as public hearing was not done by the concerned States. ***It is recommended that the State Government, in consultation with PPA, should address the submergence issues with the respective States and ensure timely construction of protective embankments to prevent submergence in those States.***

The GoAP unilaterally implemented two lift irrigation schemes without the approval of Central Water Commission, National Green Tribunal (NGT) and PPA which attracted environmental compensation to be paid to NGT. An additional expenditure was necessitated for scientific disposal of spoil earth, as per the directions of NGT, which was not done previously in line with agreement conditions. ***It is recommended that the State Government should be vigilant***

to avoid violation of environmental laws and obtain all mandatory environmental and ecological clearances prior to commencement of work, necessitating such clearances.

B. Planning and execution of Headworks and Canals

The initial requirement (as per DPR) for commencing the construction of the Cofferdams and subsequently the Diaphragm Wall (D-Wall) in the deep course portion, is the diversion of the river course through the Spillway and Spill Channel. Due to deviation from the planned construction schedule and also due to the absence of a contract agency to mitigate the flood situation, the floodwater was obstructed from flowing through its normal course. The diversion of floodwater was not possible due to non-completion of construction of Spillway and Spill Channel. This resulted in floodwater passing through the available gaps of Cofferdam, causing damage to the partially constructed Cofferdams and D-Wall. As of March 2023, the rectification of the D-Wall has not been undertaken. ***It is recommended that the State Government should ensure that the formulated construction schedule is adhered to, for smooth execution of the main dam work and finalise the long pending rectification work of damaged D-Wall.***

There were instances of awarding of works on nomination basis duly revising the estimate in violation of rules, finalisation of contract agency by altering tender conditions and rules selectively and awarding of works to single tenderer in contravention to government rules for reverse tendering process. ***It is recommended that the State Government should develop a fair and transparent tendering process that ensures compliance with prescribed rules and government orders to have / promote competitive bidding.***

Interest free Special Revolving Fund and Special Imprest were sanctioned to the contract agencies at the time of execution of works, in contravention to the laid down rules. This led to loss of interest to the Department and undue favour to the contract agencies. In execution of Polavaram Hydro-Electric Project (PHEP), the Department extended interest free advances causing loss of interest to be earned. Bank Guarantees (BGs) submitted by contract agency did not cover the entire contract period and were not encashed prior to termination of contract. ***It is recommended that the State Government should ensure that advances are paid to the contract agencies in line with the existing rules and regulations. Any financial support extended to contract agencies should include a reasonable interest component and backed by supporting BGs for the amount advanced.***

Procurement of Electromechanical (E&M) material/equipment without immediate need, not only resulted in idling of material but also led to payment of avoidable interest on the loan component taken from Rural Electrification Corporation Limited for construction of PHEP. ***It is recommended that the Electromechanical material be procured in consonance with the execution of work and as per the actual requirement, as the PHEP construction is funded through an interest-bearing loan component.***

The change in Right Main Canal (RMC) alignment after execution of work resulted in wasteful expenditure towards the earthwork excavation already carried out. Boosting up of unit rate for earthwork excavation in the Internal Benchmark (IBM) of Package-6 of RMC resulted in additional financial burden. ***It is recommended that the State Government should ensure***

robust design planning to minimise deviations during project execution and meticulously prepare estimates to avoid unnecessary payments.

The delay in Land Acquisition and the inaccurate estimates prepared by the Department led to a significant increase in the quantities to be executed in the LMC. Ineffective monitoring of the works by the Department after entrustment caused delays in execution by the original contract agencies, resulting in the stoppage of work in four out of the eight packages. The proposals submitted (between October 2020 and November 2021) to GoAP for completing the remaining work in these four packages, are still pending approval with GoAP.

Engineering Procurement Construction (EPC) system of contract mandates the contractor to execute the total work as a whole irrespective of the number of structures provided in the IBM. Increase in number of structures can be considered only if there are changes in basic project parameters. Though there being no change in basic parameters, a sanction towards payment for additional structures in package-7 of LMC was made which resulted in undue advantage to contract agency by ₹15.74 crore. ***It is recommended that the State Government should streamline the procedures relating to EPC contracts including the deliverables, scope and specification of work to avoid undue advantage to the contractors and loss to exchequer due to variation in quantities / number of structures.***

There were huge quantities of spoil earth lying at works site all along both the canals without proper accountal in the specified register/form. Also, there were instances of theft of spoil earth without any action by the Department. The Department has not taken any action for proper accountal, safe custody and disposal of spoil earth. ***It is recommended that the State Government should instruct the Department to account for the excavated spoil earth properly and implement safety measures to prevent any kind of theft.***

C. Land Acquisition and Rehabilitation and Resettlement

Out of the total land requirement, the Department could acquire 67.43 *per cent* of land since the inception of the project. There was a variation between the figures depicted in the Detailed Project Report (DPR) and the respective years Revised Cost Estimate (RCE) with respect to the land requirement, number of villages / habitations under submergence, number of PDFs to be rehabilitated, *etc.* Discrepancies were identified in the extent and classification of land as requisitioned by the Department, compared to the survey reports or land awards of Revenue records. Additionally, land awards were issued without verifying proper ownership records. ***It is recommended that the State Government should determine the extent of land under submergence in alignment with Revenue records, PDFs affected, land required for R&R activities and submit a detailed report to GoI for early approval of Revised Cost Estimate.***

There was drastic decrease in extent of government and forest land to be acquired, with corresponding sharp increase in assigned/encroached government land during the period from 2010-11 to 2017-18 RCE causing additional financial burden towards land cost. The Department failed to take timely action to prevent encroachments and eviction of encroachers. This led to an avoidable financial burden of ₹619.83 crore to the Government in the form of compensation to be paid, besides time over run on the project works. Further, the revenue records were not updated promptly as and when lands were assigned, resulting in incorrect reporting of classification wise extent of land. ***It is recommended that the State Government***

should take effective steps to protect its land from encroachment and also refrain from assigning land to the landless after notification of an 'area under submergence' to avoid payment of compensation for acquiring back the same land.

The PIP involves rehabilitation of 1,06,006 PDFs. As of March 2014 (prior to declaration as a National Project), only 0.67 *per cent* of the total number of PDFs were rehabilitated. Even after a lapse of 17 years, only 11 *per cent* of PDFs have been relocated to R&R colonies. Out of 213 proposed R&R colonies, the works in 138 R&R colonies were yet to be commenced. Of the total land requirement of 8,581.05 acres for construction of 213 R&R colonies, only 2,756.72 acres of land had been acquired. The delay in completion of rehabilitation of targeted PDFs led to an increase in estimated cost by ₹19,346.49 crore due to increased R&R compensation cost after introduction of RFCTLARR Act, 2013.

Against the targeted expenditure of ₹7,270.41 crore for payment of R&R cash benefits to 1,06,006 PDFs, only ₹841.34 crore was paid to 14,500 PDFs. Out of 13,938 housing units sanctioned in 49 colonies, 11,507 units were completed and only 6,216 PDFs were shifted to completed units. Many of the completed units lacked the basic amenities *viz.*, toilets, drinking water, electrical connections, *etc.* Under land-to-land allotment, there were instances of short/excess allotment of land including the allotment exceeding the permissible limit. ***It is recommended that the State Government should expedite Land Acquisition for R&R activities and fast track the R&R activities, to relocate the Project Displaced Families prior to impounding of water into reservoir.***

D. Beneficiary and Amenity Survey

Beneficiary survey of 418 PDFs in 12 R&R colonies and 313 PDFs in six habitations revealed that about 40 and 24 *per cent* PDFs did not receive land award and R&R cash compensation respectively. About 31 *per cent* PDFs expressed dissatisfaction with interior quality of housing units as there were cracks on walls, seepage of ceiling, flooring problems, *etc.* The housing units given to PDFs were not registered in the names of the PDFs. Land-to-land allotment was not made to 36 *per cent* of PDFs though eligible. The eligible (95 *per cent*) Scheduled Caste and Tribe youth were not provided with Skill Development Training.

Amenities survey of 12 sampled R&R colonies revealed that the colonies did not have proper internal or external roads, 42 *per cent* R&R colonies did not have school and where established, were non-functional; in 83 *per cent* R&R colonies playground for children was not provided. Basic health facilities *viz.*, Primary Health Centres/Sub-Health Centres were not established in 83 *per cent* R&R colonies and where established were non-functional, Anganwadi Centres were not established in 58 *per cent* of R&R colonies, Veterinary Service Centre was not provided in almost all R&R colonies, 92 *per cent* R&R colonies had open drainage system and tap connections were not provided to toilets in all R&R colonies. Fair Price Shops to provide free ration to PDFs was not available in 67 *per cent* of R&R colonies. GoAP attributed shortfall to limit on per PDF cost fixed by GOI. ***It is recommended that the State Government should accelerate the process of creating necessary infrastructural amenities for the well-being of PDFs.***