



India

# 43 Kothagudem 'A' Thermal Power Station Rehabilitation Project

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The project's objective was to ease power shortages expected to continue in Andhra Pradesh State by rehabilitating the boilers, turbines, and power generators of Kothagudem 'A' Power Station, and thereby contribute to economic development of the state.



**Loan Amount/Disbursed Amount:** 5,092 million yen/5,084 million yen

**Loan Agreement:** February 1995

**Terms and Conditions:** Interest rate, 2.6%; Repayment period, 30 years (grace period, 10 years); General untied

**Final Disbursement Date:** April 2002

**External Evaluator:** Ryujiro Sasao (IC Net Limited)

**Field Survey:** July 2003

## Evaluation Result

In this project, rehabilitation of boilers, turbines, and power generators was carried out almost as planned. Both the project period and the project cost were almost the same as planned. The target power plant generates 1,844 GWh of electricity a year, which can supply electricity to approximately 5 million people based on the annual power consumption per person in India. Thermal efficiency has improved from 25.7% before rehabilitation to 30.1% in the Fiscal Year 2002 against the target of 32.5%. It is the same level as the Japanese electricity companies. The Plant Load Factor (PLF) reached 87% in the Fiscal Year 2002, substantially exceeding the planned 65%. It is generally said that improvement of electricity infrastructure leads to development of industries. The average annual growth rate of real GRDP (Gross Regional Domestic Product) of Andhra Pradesh (AP) State between the Fiscal Year 1998 and the Fiscal Year 2001 was approximately 6.7%, exceeding the national average of 5.7%. The executing agency Andhra Pradesh Power Generation Corporation Ltd. (APGENCO) is making efforts to protect the environment by securing a coal ash disposal site while conducting a study on the reuse of coal ash as fertilizer jointly with the Ministry of Agriculture and

local universities. It has no problem with the technical capacity, operation and maintenance system, and financial condition is favorable.

## Third-Party Evaluator's Opinion

In AP State which has consistently achieved the best Plant Load Factors among all public sector thermal plants in India, the project has promoted the power sector's liberalization, and it has become an instance of well-implemented plant rehabilitation.

**Third-Party Evaluator:** Mr. Sankaran Kartha Narayanan Nair

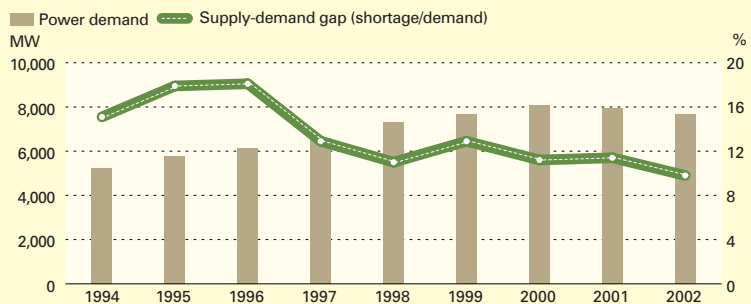
Obtained a master's degree in literature from University of Madras. Presently holds the post of Senior Consultant, National Council of Applied Economic Research. Specializes in infrastructure policy, power, transport (railways), telecommunications, etc.

### Kothagudem 'A' Thermal Power Station



The power plant recovered its functions through rehabilitation. The thermal efficiency improved to 30% in the FY 2002.

### Power Demand and Supply-Demand Gap in AP State



Source: Andhra Pradesh Power Generation Corporation Ltd. (APGENCO)

The supply-demand gap has been reduced by half from 18.1% before the start of the project (FY 1996) to 9.8% in FY 2002.