



India

37 Eastern Gandak Canal Hydroelectric Project

A
B
C
D

The project's objectives were to ease power shortages in Bihar State by constructing a bypass channel for power generation along the Eastern Gandak Irrigation Canal in the northwestern part of Bihar, and conducting low-head power generation*, and thereby contribute to the economic development of the region.

* Hydroelectric power generation at a low-height dam

Loan Amount/Disbursed Amount: 1,630million yen/1,628million yen

Loan Agreement: December 1984

Terms and Conditions: Interest rate, 3.25%; Repayment period, 30 years (grace period, 10 years); Partially untied

Final Disbursement Date: July 1996

External Evaluator: Ryujiro Sasao (IC Net Limited)

Field Survey: July 2003



Evaluation Result

In this project, power generation and transformation equipment, and canals for power generation, etc. were constructed almost as planned. However, the project period took much longer than planned because the Government of Bihar State had difficulty securing funds for the local currency portion, as well as that the route of the canal had to be changed to obtain forest clearance. The project cost was almost the same as planned. The total power generation in the Fiscal Year 2002 was 26.46GWh, only 30% of the planned target. This is mainly because the water level does not drop sufficiently at the lower reach when more than one generator is working. This problem is expected to be solved by constructing the escape channel. Although the effect generated by the project is limited, the power generation plant supplies electricity to approximately 74,000 people as estimated from the annual power consumption per person in India. As a result of the project, the local residents can use electric appliances such as TVs, and some farm works such as water pumping and wheat processing have become mechanized. The executing agency Bihar State Hydro Electric Power Corporation Ltd. has no problem regarding the technical capacity, operation and

maintenance system, and financial condition. In order to operate the equipment to its full capacity, the construction of the escape channel should be implemented.

Third-Party Evaluator's Opinion

Although the delay in implementation, and the power production is not fully realized as current power generation is seriously below peak demand in Bihar State, the canal hydroelectricity project is relevant under government policy.

Third-Party Evaluator: Mr. Basanta Kumar Pradhan

Obtained a doctorate in economics from Indian Statistical Institute. Presently holds the post of Chief Economist, National Council of Applied Economic Research, specializing in developing economies.

The power plant and the power generator control room constructed under the project



Power plant



Power generator control room

The staff of the power plant and the outsourcing company carry out daily operation and maintenance of the power plant. The local residents, who can now use electric appliances thanks to the project, enjoy the benefit of the project such as the mechanization of farm works and TV watching.