

Benefit analysis of Baozhusi hydropower station and its economic operation rules

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Abstract The performance of a hydropower station is often affected by some operation rules, and the fluctuation of the electricity's supply–demand market also influences the performance of the reservoir. As a result, the actual electricity quantity generated is always less than the designed value. This paper focuses on the benefits deficiency of Baozhusi hydropower station since its operation; it aims to explore the causes resulting in the lack of full benefits and present new operation rules for the reservoir to produce greater benefits. It is revealed that the decrease of inflow and the unsuitable designed regulation curve are two main factors causing the problem of the station, and the discord of the power supply with demand makes it worse. The paper proposes a new regulation curve, recalculates the theoretical annual amount of electricity, and suggests the optimal economic operation rules.

Key words economic operation rule; hydropower station; regulation curve
