

# **A Comparative Analysis of Two Independent Power Plants under Different Ownership**

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## **ABSTRACT**

Many governments have turned to private investors, especially Independent Power Producers (IPPs), to provide some or all of the nation's power requirements. The main reasons for this are: a) to eliminate the financial burden of the government, b) to promote competition in the generation sector to improve operating efficiency and reduce generating cost, and c) to transfer power generation technology, especially in the developing nations, at a rapid pace.

In line with world trends, the Malaysian government, in 1993, deregulated its power generation sector. This was done in order to overcome the shortage of installed capacity due to an increase in the demand for electricity caused by rapid economic growth, and to promote competition in the generation sector to improve its operating efficiency.

The objective of this study is to determine whether the deregulation of the power generation sector did indeed increase the operating efficiency of the power plants. Towards this end, two power plants (Serdang Power Station, owned by Tenaga Nasional Berhad, and PD Power, a subsidiary company of the Sime Darby group of companies) are being compared in terms of:

- generating cost, and
- Net Present Value (NPV) per installed capacity

The basis for selecting these companies was that both should have the same technical and operating criteria.

According to the findings, the cost of generating electricity is 4.30 percent (0.51 sen/kWh) lower in PD Power, the company representing the private sector. The NPV per installed capacity is also higher here. This shows that deregulation has increased the operating efficiency of the power plants.

# ABBREVIATION

b	Firm Beta.
BTU	British Thermal Unit, a measure of heat.
CAPM	Capital Assets Pricing Model.
CP	Capacity Payment.
CF	Cashflow.
EP	Energy Payment.
IPP	Independent Power Producer.
$K_e$	Cost of Equity.
$K_m$	Rate of Return on the Market.
$K_{RF}$	Risk Free Market.
NPV	Net Present Value.
TNB	Tenaga Nasional Berhad.
WACC	Weighted Average Cost of Capital.
Wd	Weight of Debt.
We	Weight of Equity.

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