

## CHAPTER 3

### ELECTRICITY INDUSTRY IN MALAYSIA

The generation availability in West Malaysia for Financial Year (FY) 1991/92 to FY 1999/2000 is illustrated in Table 2.

The increase in demand has been steadily rising from 10.5% in 1992/93 to 15.2% per year in 1995/96. However this percentage increase in demand is low especially from 1996/97 to 1998/99. In 1991 the excess capacity was only a marginal 302 MW. This situation was further aggravated by the margin drawing to an insufficient capacity of 69 MW. This tight supply situation had resulted in the dark chapter of TNB, the nation wide blackout incident in 29 Th. September 1992 . This incident lead to bitter criticism to TNB and consequently licenses were issued to the Independent Power Products (IPP) to generate electricity.

From 1994-1996 the excess capacity has increased tremendously especially when the IPP, major power plant, YTL Paka Power Station in Terengganu and Segari Power station in Lumut starts generating electricity. The peak excess capacity of 2418MW was experienced in 1995/96 with the IPP constituting 30.9% of the total installed capacity.( TNB Annual Report 1996)

With this scenario of excess capacity and an estimated growth of only 6.4% in 1996/97, 8.99% in 1997/98, and 9.71% in 1998/99, it is estimated that the excess capacity will again come to a comfortable level of 445MW in 1999/2000 and again Demand Side Management must be exercised.

**TABLE 2 :**  
**GENERATION AVAILABILITY**  
**FY 1991 / 92 - FY 1999 / 2000**

FINANCIAL YEAR	GENERATION CAPACITY (MW)	GENERATION OUTAGES (MW)	AVAILABLE CAPACITY (MW)	PEAK DEMAND (MW)	% INCREASE OF PEAK DEMAND	EXCESS CAPACITY (MW)
FY 91 / 92	5664	864	4800	4498		302
FY 92 / 93	5800	898	4902	4971	10.51	-69
FY 93 / 94	7204	836	6368	5610	12.88	758
FY 94 / 95	9562	1351	8211	6381	13.74	1830
FY 95 / 96	11064	1295	9769	7351	15.2	2418
FY 96 / 97	12510	2486	10024	7824	6.43	2200
FY 97 / 98	13010	2486	10325	8527	8.99	1798
FY 98 / 99	13510	2685	10825	9355	9.71	1470
FY 99 / 2000	13510	2685	10825	10380	10.96	445

(TNB Distribution Division, Statistic Department, 1995)

In order for Tenaga to be economical and remain competitive, the excess capacity must be utilized. It is therefore TNB's priority to encourage customers to consume more electricity. Presently the national breakdown of domestic customers and their average monthly consumption are as illustrated in Table 3.

**TABLE 3**

**STATISTIC OF DOMESTIC CONSUMERS AVERAGE CONSUMPTION 1995.**

Monthly bill < RM40 (Units consumed < 200 units)	Monthly bill > RM40 (Units consumed > 201)
67%	33%

(Tenaga Nasional Berhad Distribution Division, Statistic Department: 1995)

A sample of rural electricity consumption for domestic consumers in Temerloh, Pahang is also obtained for comparison in Table 4.

**TABLE 4**

**TEMERLOH DISTRICT DOMESTIC CONSUMERS AVERAGE  
CONSUMPTION 1995**

Monthly bill < RM40 (Units consumed < 200 units)	RM40 < bill < RM232 (200 < units consumed < 1000 units)	Monthly bill > RM232 (Units consumed > 1000units)
28826 consumers (88%)	3277 consumers (10%)	56 consumers (2%)

(Temerloh District Manager, Encik Esmet, 1995)

The electricity tariff is a controlled tariff that is approved by the Malaysian Cabinet. TNB has been experiencing various hindrances from all sectors of customers and agencies every time a tariff hike is proposed. However, the present tariff already accounts for a increase of 4 sen per unit from 20 sen to 24 sen for consumption above

200 units (bill of RM40 per month). This implies that TNB would enjoy 20% increase in tariff automatically if the customers increase their electricity usage without going through cabinet approval. The present tariff structure for Tariff A domestic customers are tabulated in table 6.

**TABLE 6**

**TARIFF A - DOMESTIC TARIFF**

For the first 200 units per month	20 sen
For the next 800 units per month	24 sen
For each additional unit per month	26 sen

The Minimum Monthly Charge is RM2.50 (TNB: Tariff)

Therefore, with the present scenario of excess capacity and the present tariff structure, it is a strategic decision to encourage customers especially the 67% majority which is still using below 200 units per month to step up to the next band of tariff.