

**ELECTRICITY SUPPLY
INDUSTRY IN MALAYSIA**

PERFORMANCE AND STATISTICAL INFORMATION

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FOREWORD

In the year 2007, the maximum demand for the grid system in Peninsular Malaysia increased by 4.8% from 12,990 MW attained in 2006 to 13,620 MW which was recorded on 8 August 2007. The total installed capacity increased by 1,400 MW with the commissioning of two coal-fired generating units of capacity 700 MW each in Tanjung Bin Power Station, Johor in February 2007 and August 2007. With these additional capacities, the total installed generation capacity at the end of 2007 stood at 19,723 MW, which was a 7.6% increased from 18,323 MW in 2006. Of the total installed generation capacity in 2007, 32.2% or 6,346 MW are owned by TNB and 13,377 MW from the IPP's generation plants {including Janamanjung power station and Kapar Energy Ventures Sdn. Bhd. (KEV)}. In Peninsular Malaysia, under such supply-demand scenario, the system reserve margin in 2007 stood at a comfortable level of 45%.

Electricity Demand Forecast in Peninsular Malaysia

	2008	2009	2010	2011	2012
Maximum Demand (MW)	14,281	14,940	15,602	16,259	16,927
% Growth	4.8	4.6	4.4	4.2	4.2
Energy Demand (GWh)	95,106	99,516	103,911	108,295	112,740
% Growth	4.8	4.6	4.4	4.2	4.1

Source : Tenaga Nasional Berhad

Besides the IPP's generation projects above, several new or rehabilitation projects by TNB at the existing power stations are carried out such as :

- I. The second phase rehabilitation project at Tuanku Jaafar Power Station with a capacity of 750 MW. The project was at 90% progress stage and scheduled to be completed by December 2008;
- II. The life extension and rehabilitation project at Cameron Highlands and Batang Padang Hydroelectric Stations i.e. the stations of Jor (100 MW), Woh (150 MW), Odak (4.2 MW) and Habu (5.5 MW) with the total capacity was 259.7 MW. The progress of the project was 90% and scheduled to be completed by December 2008.

Meanwhile, in Sabah the forecasted growth of electricity demand for the next five years is at an average of 8.16%. The maximum demand is expected to increase from 710 MW in year 2008 to 971 MW in year 2012. In line with the forecasted growth, the electricity energy demand is expected increase from 3,205 GWh in year 2008 to 4,411 GWh in year 2012.

In Sabah, the east west interconnection grid was completed and commissioned on 28th July 2007. This project has enable the surplus electricity supply from West Coast of Sabah to be transmitted to the East Coast of Sabah to alleviate to a certain extent

The electricity demand growth in Peninsular Malaysia for the next five years is forecasted to increase at an annual average of 4.4% from 14,281 MW in year 2008 to 16,927 MW in year 2012. In line with the forecasted growth, the demand for electricity also is expected increase to 112,740 GWh in year 2012 from 95,106 GWh in year 2008.

In Peninsular Malaysia, a coal-fired power generation project by Jimah Energy Venture Sdn. Bhd. at Mukim Jimah, Port Dickson, Negeri Sembilan is still in progress. The project comprises of 2 units of 700 MW each, where the first unit is scheduled to be completed and commissioned by 1st January 2009 and the second unit by 1st July 2009. The power from this generating station is expected to enhance the supply capacity in the central area of Peninsular Malaysia.

the inadequacy of generation capacity in the East Coast. Nevertheless, the power flow from the West Coast to the East Coast is still limited to a certain capacity due to constraint in the system. The new proposed coal-fired power plant in the East Coast is expected to overcome the constraint and provide for a more secure overall system.

Electricity Demand Forecast in Sabah

	2008	2009	2010	2011	2012
Maximum Demand (MW)	710	767	830	898	971
% Growth	8.23	8.03	8.21	8.19	8.13
Energy Demand (GWh)	3,205	3,467	3,755	4,071	4,411
% Growth	8.13	8.17	8.31	8.42	8.35

Source : Sabah Electricity Sdn. Bhd.

Basing on the forecasted electricity demand into the next five years, the issues of fuel resources, supply security and escalating fuel costs will be major challenges to the industry. In Peninsular Malaysia, almost 70% of the electricity generation are from natural gas supplied by the Petronas. The implementation of Bakun hydroelectric project is expected to increase the hydro contribution to the generation mix. The use of coal for power generation has also increased significantly with most coal supply imported from the country such as Indonesia, Australia and South Africa. Nevertheless, supply of coal and increasing cost will be major issues into the future.

In year 2007, a wide area supply interruption had occurred on 20th November 2007, interrupting the electricity supply to about 80% of the area in Pulau Pinang and South of Kedah, causing a load loss of about 430 MW. The interruptions was restored by TNB in stages and lasted for about 10 minutes to half an hour. The incident was triggered by the tripping of a bus coupler in Juru Main Intake Substation, which subsequently caused a cascading trippings of four other Main Intake Substations, namely Farlim, Sungai Pinang, Bayan Lepas and Air Terjun.

In line with the aspiration of Government to increase efficiency in industry, several early initiatives are implemented by the Energy Commission to assess the efficiency level of operation

of the IPPs and the utility. Several factors of performance for generation, transmission, distribution and productivity are monitored and reported quarterly. For generation, two aspects of performance assessed are thermal efficiency and unplanned outage rate, whereas for transmission system, the performance measure is on the aspect of system reliability. For distribution system, the reliability of system such as the number and duration of interruptions are the aspect of performance which are monitored, assessed and benchmarked from the time to time.

The reliability of electricity supply is still a main concern. The performance level of electricity supply in Malaysia in year 2007 declined with the number and duration of interruptions increasing from the previous year. Efforts and steps need to be taken by the TNB and Sarawak Energy Berhad to reduce the number and duration of interruptions. Analysis on the causes of interruptions indicated that more emphasize should be accorded to planning of maintenance programmes and management of asset by the utilities in Malaysia. In addition, power quality incidents such as voltage dip still requires continuous monitoring as well as coordinated effort from the utilities and the industrial consumers.

The restructuring of the electricity tariff on 1st June 2006 stipulated for the need to prepare a Client Charter for TNB which shall prescribe the levels of minimum services and supply guaranteed. The Energy Commission formulated the Standard for Supply Services of TNB, taking into account services which are constantly causing grievances to consumers. The proposed standards set the minimum services (MSL) levels and the guaranteed service levels (GSLs), where only GSLs are attached with penalty for non-compliance. However, as of end of 2007, the approval for the implementation of the standard is still pending.

The data and information contain in this report are extracted from the monthly and yearly reports submitted by the licensee, namely Tenaga Nasional Berhad (TNB), Sabah Electricity Sdn. Bhd. (SESB), and mini-utility Nur Distribution Sdn. Bhd. Whereas the information on the performance and statistics of utility in the state of Sarawak are submitted on request, by Sarawak Energy Berhad. In addition, information and data are compiled based on reports received from the grid system operator, independent generators, public complaints etc.

Prepared by :
Electricity Supply Regulatory Department
Energy Commission

COUNTRY PROFILE

Area	329,733 sq.km
Climate	– Tropical Type – Average temperature between 20° C to 32° C – Average rainfall of about 3540 mm per annum
Population	27.2 ^P million with a multi racial community comprising Malays, Chinese, Indians, Kadazans, Bajaus, Muruts, Kelabits, Dayaks, Ibans and others
Labour Force	11.8 million ^P
Real GDP	RM504.4 billion ^P (+6.3% ^P)
Per Capita Income	RM 23,103 ^P
Real GNI	RM 486.7 billion ^P (+7.3% ^P)
Nominal GNI	RM 627.8 billion ^P (+13.1% ^P)
Current Account Balance	99.3 billion ^P (+15.8% ^P of GNI)*
Foreign Reserves	RM 335.7 billion ^P (8.4 months of retained imports)*
Gross National Savings	37.8 ^P (as % of GNI)*
Total Electricity Generation	108,539 GWh
Total Electricity Consumption	97,113 GWh
Per Capita Electricity Consumption	3,570 kWh
Average Price of Electricity:	
Peninsular Malaysia	26.09 sen per kWh
Sabah	25.17 sen per kWh
Sarawak	28.47 sen per kWh

Note :

P : Preliminary

* : At end of December 2007

MAP OF MALAYSIA



PERFORMANCE HIGHLIGHTS

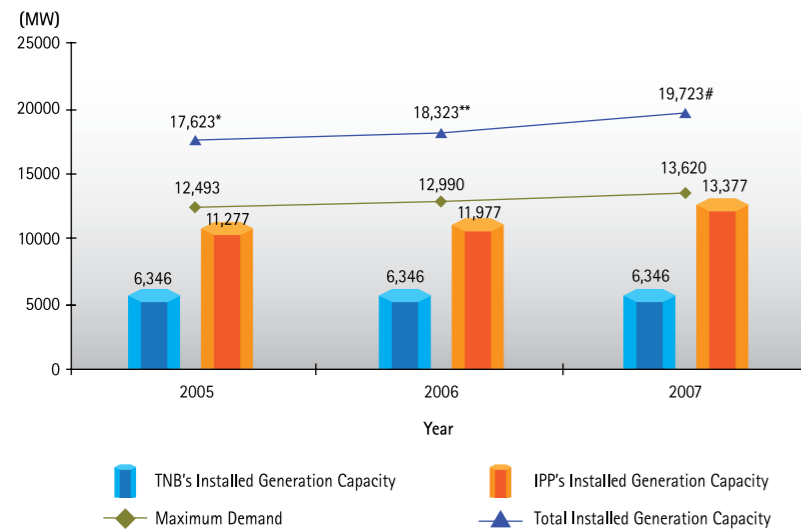
- Electricity Supply and Demand
- Sales of Electricity
- Performance of Generation System
- Performance of Transmission System
- Performance of Distribution System
- Causes of Electricity Supply Interruptions
- Voltage Quality
- Quality of Service
- Average Selling Prices of Electricity

ELECTRICITY SUPPLY AND DEMAND

INSTALLED GENERATION CAPACITY AND MAXIMUM DEMAND

Grid System in Peninsular Malaysia - TNB

Figure 1 : Installed Generation Capacity and Maximum Demands in Peninsular Malaysia in the Year 2007



Notes :

Installed capacity of IPPs including of Janamanjung Power Station and Kapar Energy Ventures Sdn. Bhd. (KEV)

* - 1) Addition of one block of combined cycle unit of 715 MW at Tuanku Jaafar Power Station, Port Dickson in June 2005.

2) Retirement of 3 thermal generation units totaling 360 MW in Prai Power Station in July 2005.

** -Commissioning of Unit 1 coal generation plant of 700 MW at Tanjung Bin Power Station, Johor in September 2006.

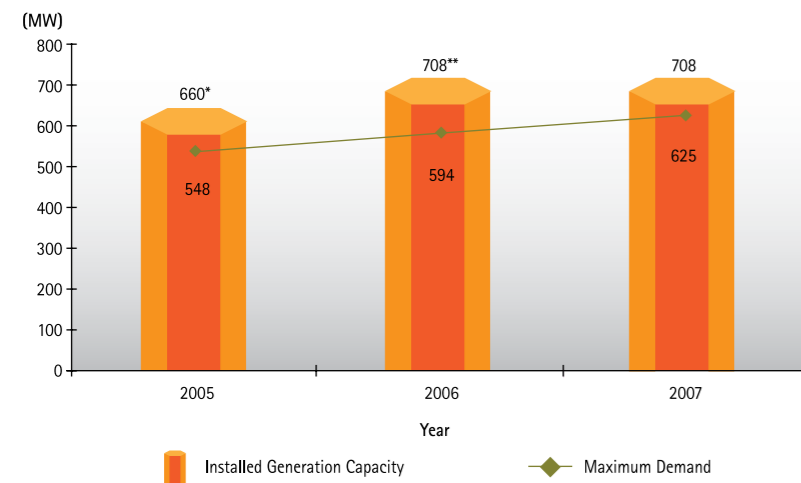
- Commissioning of Unit 2 and Unit 3 coal generation plant of 700 MW each at Tanjung Bin Power Station, Johor in February and August 2007.

Source : Tenaga Nasional Berhad

The installed generation capacity in Peninsular Malaysia increased by 7.6% from 18,323 MW in the year 2006 to 19,723 MW. The additional generation capacities of 1,400 MW, were due to the commissioning of Unit 2 and Unit 3 coal-fired plant of (2X700 MW) at Tanjung Bin Power Station in Johor in February 2007 and August 2007 respectively. The maximum demand also increased by 4.8% from 12,990 MW in the year 2006 to 13,620 MW recorded on 8 August 2007.

Grid System in Sabah - SESB

Figure 2 : Installed Generation Capacity and Maximum Demands in Sabah in the Year 2007



Notes :

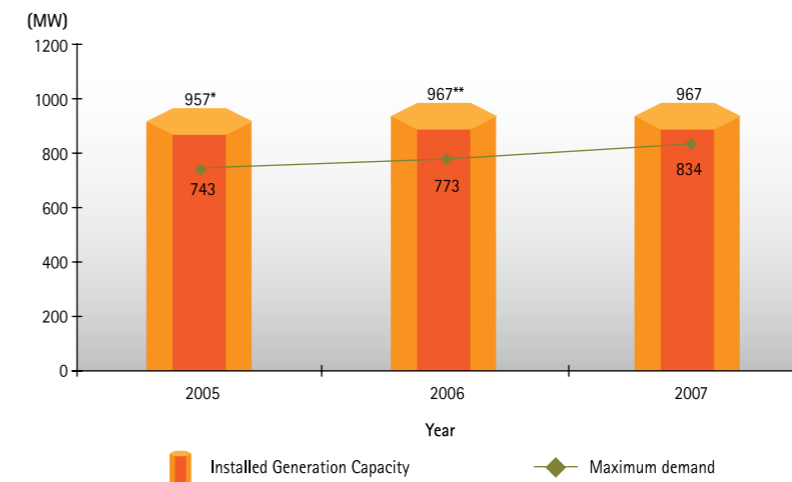
* -Retirement of several SESB diesel generation stations (isolated and grid connected) in Sabah in early year 2005.

** -Commissioning of First Phase of open cycle (66 MW) at Sepangar Bay, Sabah by Sepangar Bay Power Corporation Sdn. Bhd. in November 2006.

In 2007, there was no significant changes in the installed generation capacity from the previous year, as there was no additional new capacity. However, the maximum demand of the grid system in Sabah increased by 5.2% to 625 MW from 594 MW in 2006.

Grid System in Sarawak - SARAWAK ENERGY BERHAD

Figure 3: Installed Generation Capacity and Maximum Demands in Sarawak in the Year 2007



Notes :

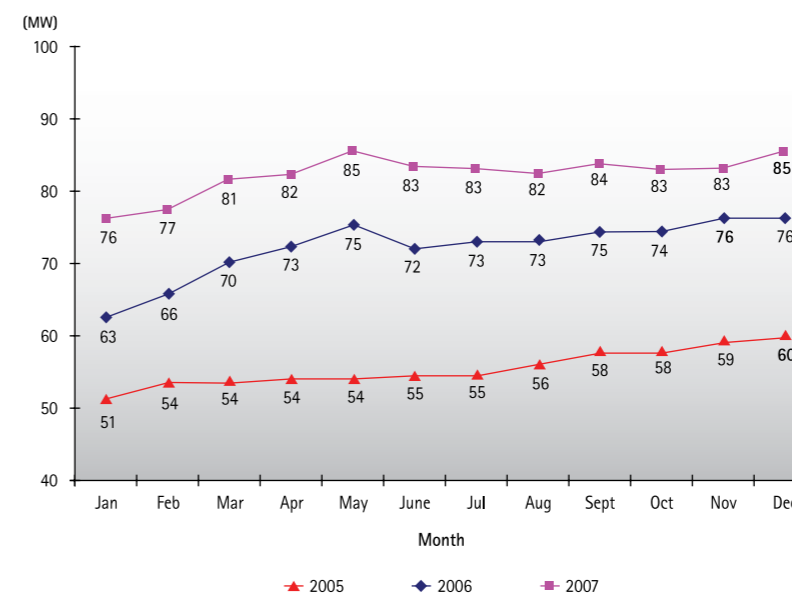
* - Additional of 102 MW coal-fired thermal plant at Sejingkat Power Corporation (SPC) Power Station, Kuching

** - Additional capacity of coal-fired thermal plant at PPLS Power Generation Power Station.

For year 2007, there was no new additional capacity reported in Sarawak. However, the maximum demand increased to 834 MW, that is a 7.9% from 773 MW in 2006.

Distribution System of Nur Distribution Sdn. Bhd.

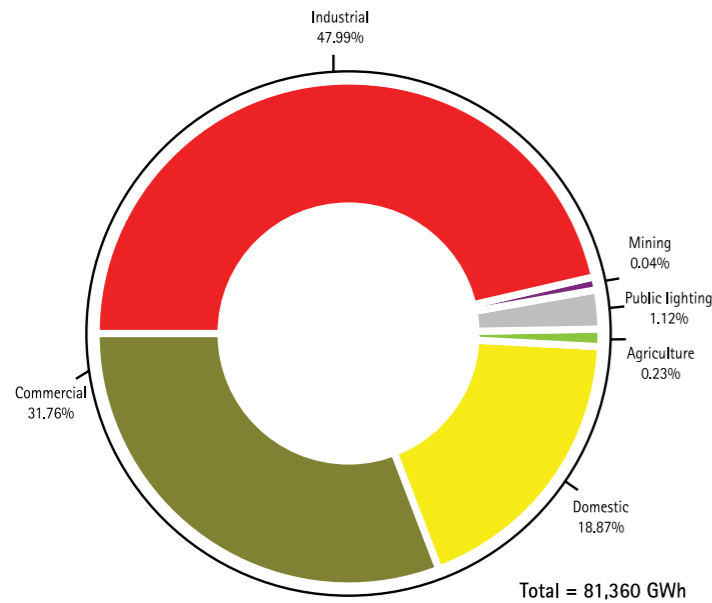
Figure 4 : Monthly Maximum Demands in Kulim Hi-Tech Park (KHTP) Reported by NUR Distribution Sdn. Bhd.



In 2007, the load growth in KHTP increased to 85 MW compared to 76 MW in the previous year. The connection of a few large industrial consumers such as Infineon Technologies (Malaysia) Sdn Bhd, Intel Products (M) Sdn Bhd, Semiconductor Sdn Bhd dan Fuji Electric (M) Sdn Bhd contributed to the increase.

SALES OF ELECTRICITY OF TNB, SESB, SARAWAK ENERGY BERHAD AND NUR

Figure 5 : Sales of Electricity (GWh) by TNB in 2007



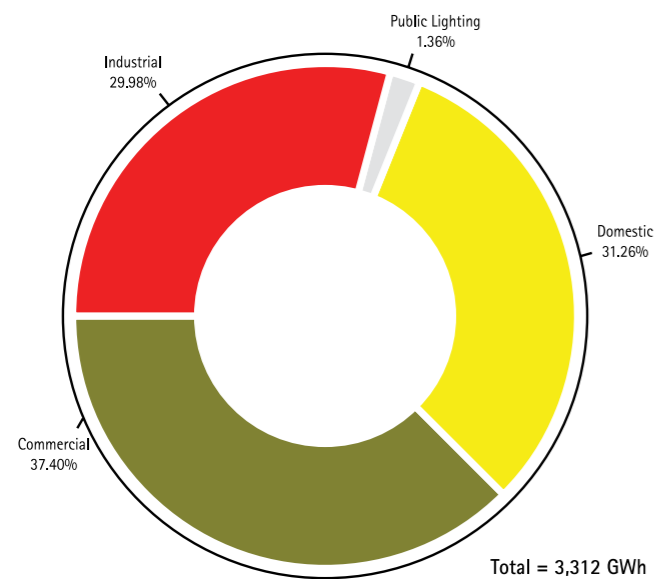
Notes :

Total energy sales of TNB from year 2003 to 2007 :

64,292 GWh (Year 2003)
68,974 GWh (Year 2004)
73,102 GWh (Year 2005)
77,008 GWh (Year 2006)

In 2007, the sales of electricity of TNB increased by 5.7% to 81,360 GWh from 77,008 GWh sold in 2006. The industrial sector was the major consumer of electricity with consumption of 47.9% or 39,046 GWh from the total electricity energy sold in 2007. This was followed by sales in the commercial and domestic sector at 31.76% and 18.87% respectively.

Figure 6 : Sales of Electricity (GWh) by SESB in 2007



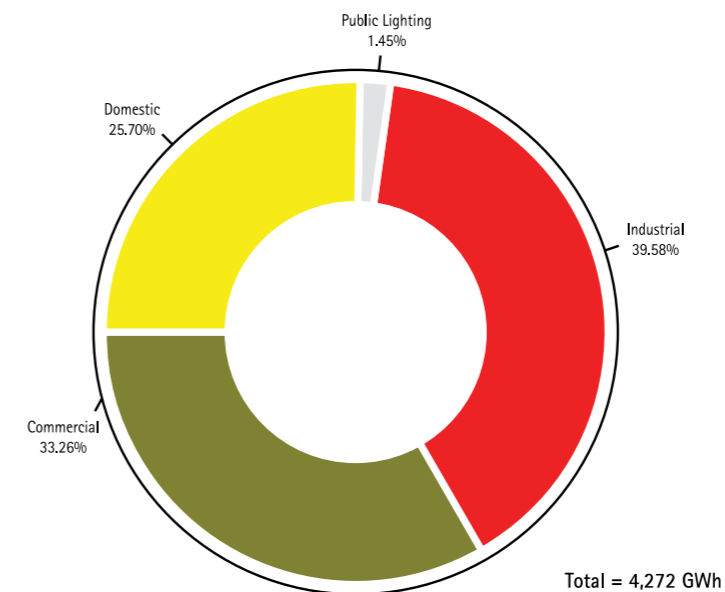
Notes :

Total energy sales of SESB from year 2003 to 2006 :

2,333 GWh (Year 2003)
2,556 GWh (Year 2004)
2,770 GWh (Year 2005)
2,968 GWh (Year 2006)

In 2007, the recorded sales of electricity of SESB in Sabah increased by 11.6% to 3,312 GWh from 2,968 GWh sold in 2006. The commercial sector was still the major user which consumed 37.4% of the total electricity, followed by the domestic sector at 31.26%.

Figure 7 : Sales of Electricity (GWh) by Sarawak Energy Berhad in 2007



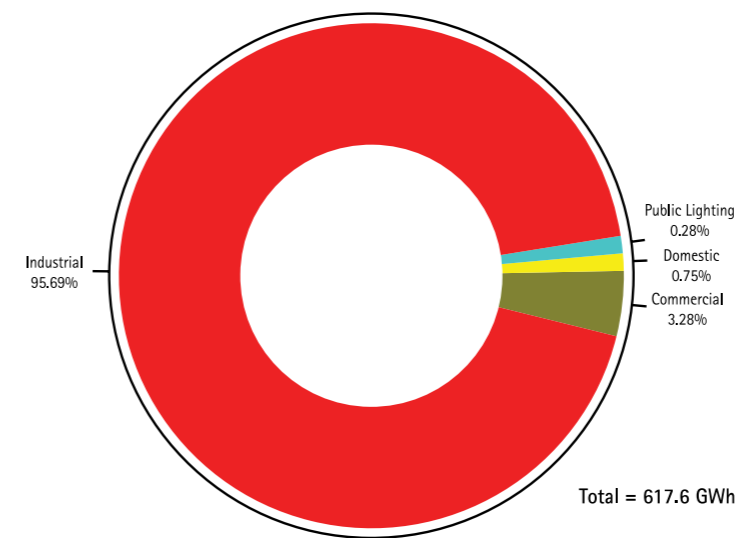
Notes :

Total energy sales of Sarawak Energy Berhad from year 2003 to 2006 :

3,471 GWh (Year 2003)
3,679 GWh (Year 2004)
3,942 GWh (Year 2005)
4,045 GWh (Year 2006)

In 2007, Sarawak Energy Berhad recorded a total sales of electricity of 4,272 GWh, which was a 5.6% increment from 4,045 GWh sold in 2006. The industrial sector recorded the highest percentage of energy sold with 39.6% from the total energy sold in 2007.

Figure 8 : Sales of Electricity (GWh) of NUR Distribution Sdn. Bhd. in 2007



Notes :

Total energy sales of NUR from year 2003 to 2006 :

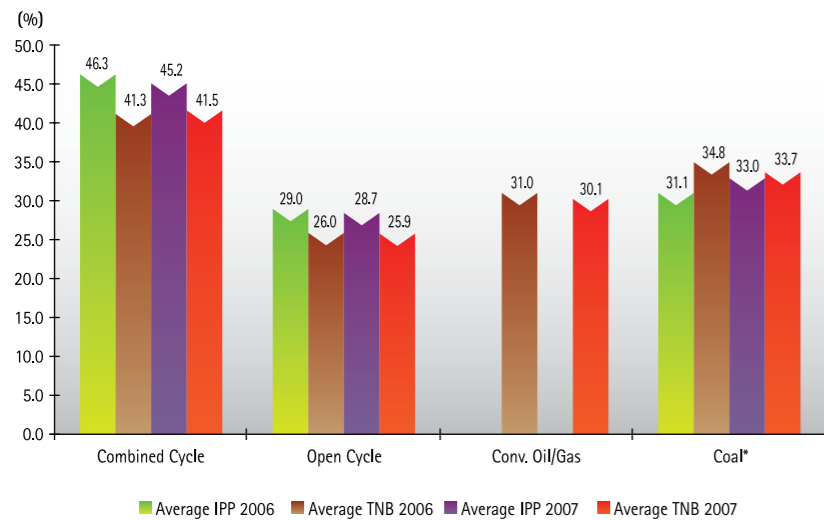
395 GWh (Year 2003)
408 GWh (Year 2004)
427 GWh (Year 2005)
555 GWh (Year 2006)

The sales of electricity of NUR Distribution Sdn. Bhd. was 618 GWh, that is a 11.4% increment from 555 GWh sold in 2006. The industrial sector was the major consumer of electricity with consumption of 591 GWh or 95.7% from the total electricity sold in 2007.

PERFORMANCE OF GENERATION SYSTEM

Performance of Generation System - TNB

Figure 9 : Average Thermal Efficiency of IPP's and TNB's Plants for Year 2006 and 2007

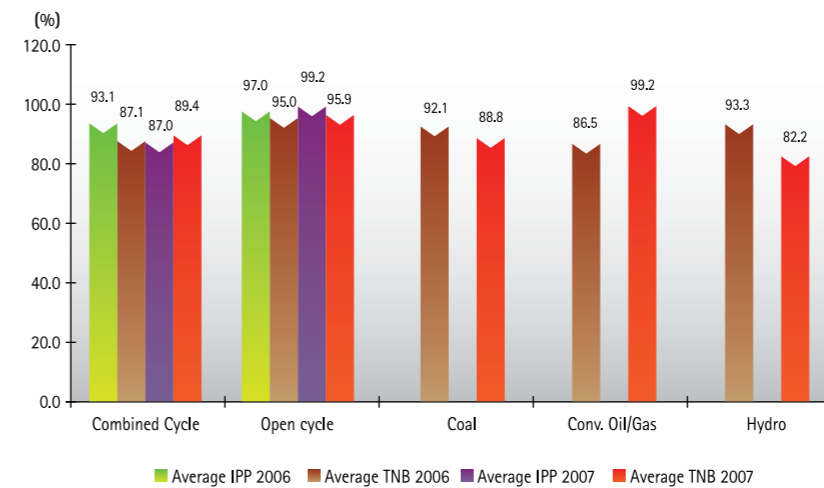


Notes :

Effective from July 2004, Kapar Energy Ventures (KEV) had assumed ownership and the operation and maintenance of Sultan Salahuddin Abdul Aziz Shah Power Station at Kapar, Klang from TNB.

* In this report, TNB Janamanjung and KEV are classified as IPPs.

Figure 10 : Equivalent Availability Factor of IPP's and TNB's Plants for Year 2006 and 2007



Note :

TNB Janamanjung and KEV are classified as IPPs.

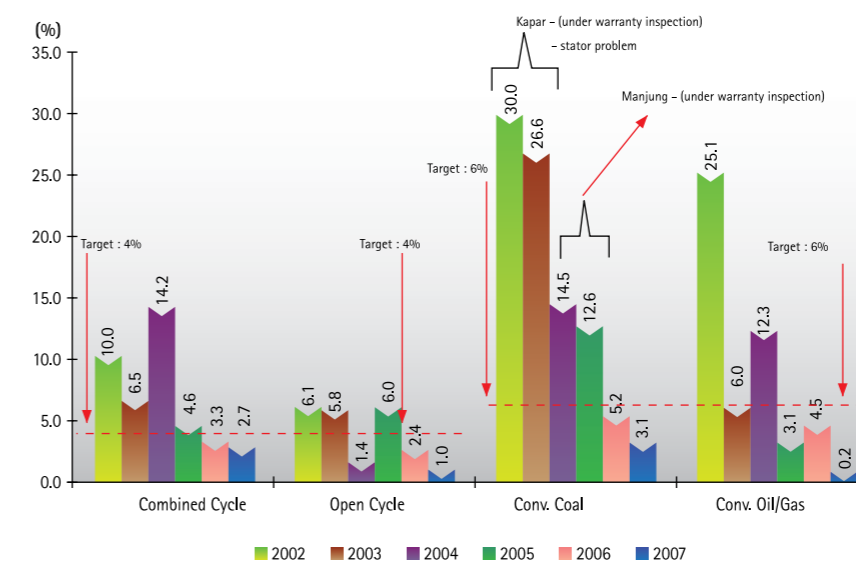
The thermal efficiency of generating plants are affected by the various factors such as thermal combustion or generation technology, operating and site conditions, type and quality of fuel, degradation and etc. As such, it is not possible to set a fixed targets for thermal efficiency and the reported figures is based on the average value. For IPP's generation plants, the targets of performance are assessed based on the contracted efficiency level as stipulated in their respective power purchase agreements.

In the year 2007, the average thermal efficiency for IPP's generating plants was 28.7% for open cycle and 45.2% for combined cycle plants. The average thermal efficiency for TNB gas-based plants stood around 25.8% for the oldest open cycle plant and 48.6% for the new combined cycle plant. For TNB thermal plants, the average thermal efficiency stood around 30.1% for oil-based generating plants and 33.7% for coal-based generating plants.

Most IPP's and TNB's generating plants achieved higher efficiency than the contracted and target efficiency.

The average Equivalent Availability Factor (EAF) for the IPP's generating plants in 2007 was 87.0% for combined cycle plants and 99.2% for open cycle. For TNB thermal plants, the average EAF was 88.8% for coal-fired generating plants and 99.2% for oil-based generating plants.

Figure 11 : Equivalent Unplanned Outage Factor of TNB's Plants



Meanwhile, the average Unplanned Outage Rate (UOR) for TNB's generating plants had improved compared with UOR in 2006. In 2007, for TNB's generating plants, the UOR were 2.7% (combined cycle plants), 1.0% (open cycle plants), 3.1% (coal plants) and 0.2% (oil plants).

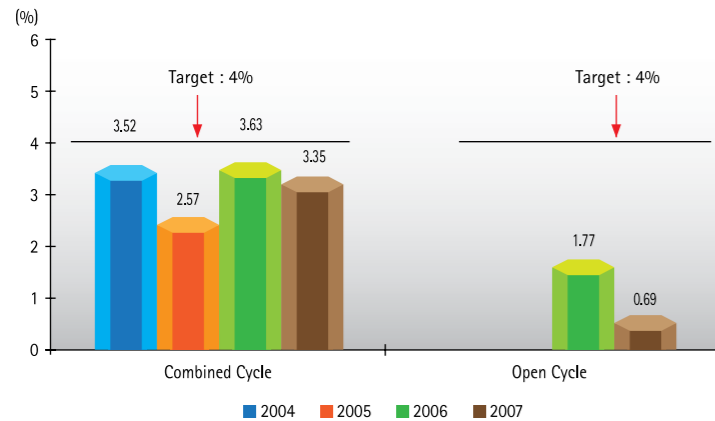
Overall performance of TNB's generating plants in 2007 were better than the targeted UOR of 4% for open cycle and combined cycle plants, and 6% for coal and oil-based plants.

Note :

TNB Janamanjung and KEV are classified as IPPs.

PERFORMANCE OF TRANSMISSION SYSTEM

Figure 12 : Unplanned Outage Rate (UOR) of IPP's Plants for Year 2004 to 2007

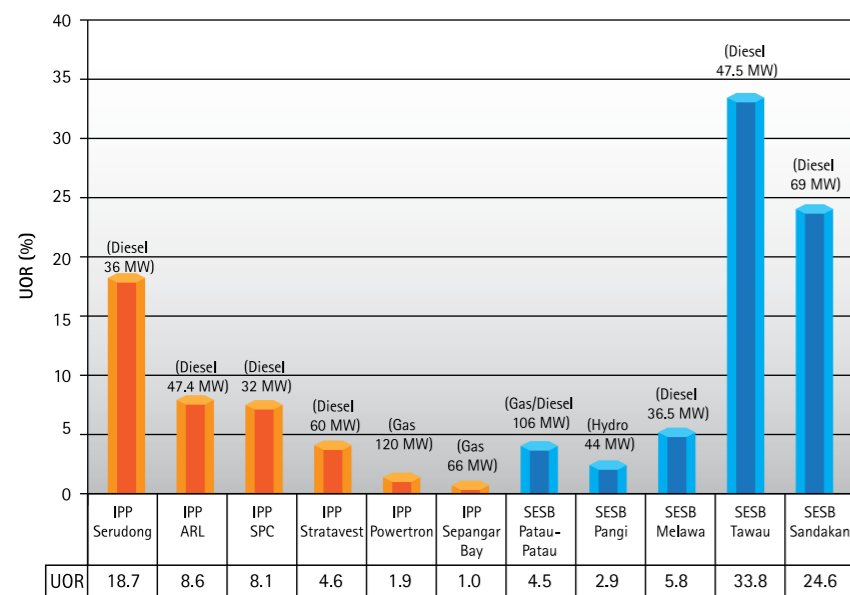


Overall, the average UOR for IPP's generating plants in 2007 were better than the targeted UOR of 4% for combined cycle and open cycle plants.

In 2007, the average UOR for IPP's generating plants was 3.35% for combined cycle plants and 0.69% for open cycle plants

PERFORMANCE OF GENERATION SYSTEM - SESB

Figure 13 : Unplanned Outage Rate (UOR) for Sabah in 2007



In 2007, the average Unplanned Outage Rate of IPP's generating plants was 7.2% whereas for SESB's generating plants was 14.3%.

Overall, most IPP's and SESB's diesel generating plants in Sabah recorded high outage rates. The high outage rates were due to several factors such as ageing, maintenance regime, operating conditions and etc, and contributed to lower reliability of the whole supply system in Sabah.

Transmission System of TNB

The total number of trippings in the transmission network in Peninsular Malaysia with a load loss of above 50 MW in 2007 increased by 42.9% from 7 incidents in 2006 to 10 incidents. From the total incidents, the number of major trippings also increased to 9 incidents compared to 6 incidents in the previous year. However, there was no increase in load shedding incident reported in the year 2007.

The total unsupplied energy also increased to 1,246.8 MWh from 215.4 MWh in 2006, due to the wide area tripping incident on 20 November 2007 in Seberang Prai that affected the supply to area of Pulau Pinang and South of Kedah.

Table 1 : Transmission System Trippings with a Load Loss of 50 MW and above for Year 2005 to 2007 in Peninsular Malaysia

Indicators	2005	2006	2007
No. of Tripping without Load Shedding	11	6	9
Unsupplied Energy due to Tripping (MWh)	20,122.7*	215.4	1,246.8**
No. of Tripping with Load Shedding	2	1	1
Unsupplied Energy during Load Shedding (MWh)	19,347.6*	179.1	103.5

Note : * Including tripping incident on 13th January 2005

** Including tripping incident on 20 November 2007 in Pulau Pinang

Table 2 : Monthly Transmission System Trippings with a Load Loss of 50 MW and Above for Year 2007 in Peninsular Malaysia

Indicators	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
No. of Tripping without Load Shedding	1	0	1	1	1	0	0	1	1	1	1	1
Unsupplied Energy due to Tripping (MWh)	263.4	0	192.4	71.7	87.8	0	0	71.73	233.8	5	183.1	138
Average Unsupplied Energy per Trip (MWh)	263.4	0	192.4	71.7	87.8	0	0	71.73	233.8	5	183.1	138
Average Duration per Trip (Hour)	1:28	0:26	3:00	0:43	1:21	0	0	0:56	1:45	0:05	0:26	1:55
No. of Tripping with Load Shedding	0	1	0	0	0	0	0	0	0	0	0	0
Unsupplied Energy during Load Shedding (MWh)	0	103.5	0	0	0	0	0	0	0	0	0	0

Figure 14 : Number of Transmission System Tripping with a Load Loss of 50 MW and Above for Year 2003 to 2007 in Peninsular Malaysia

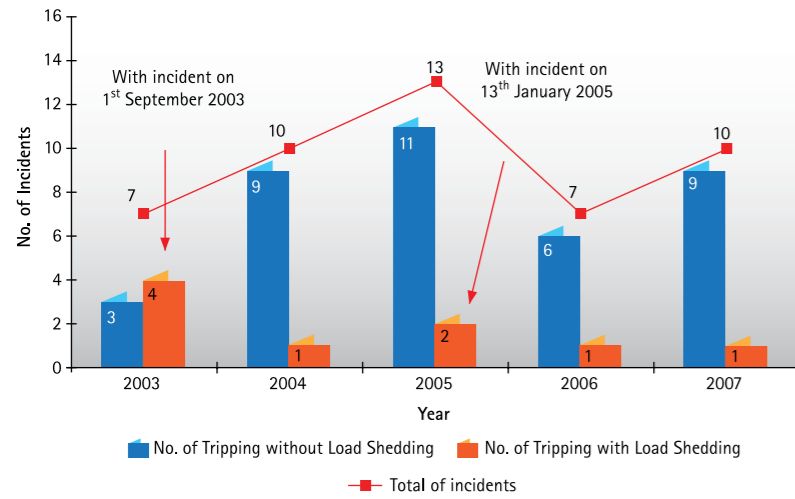
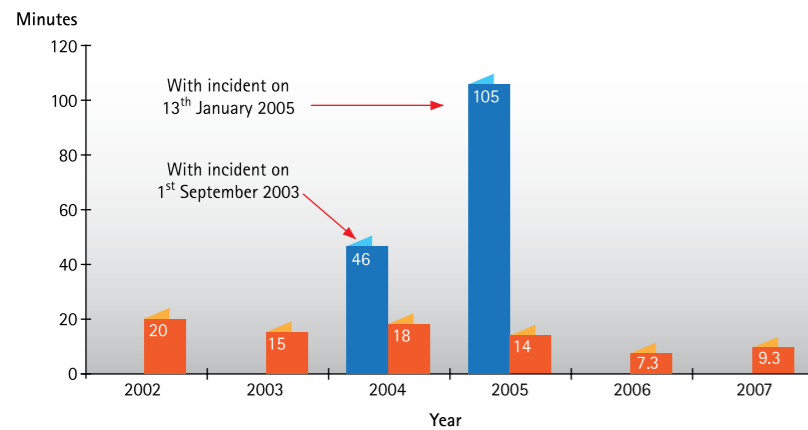


Figure 15 : System Minutes TNB

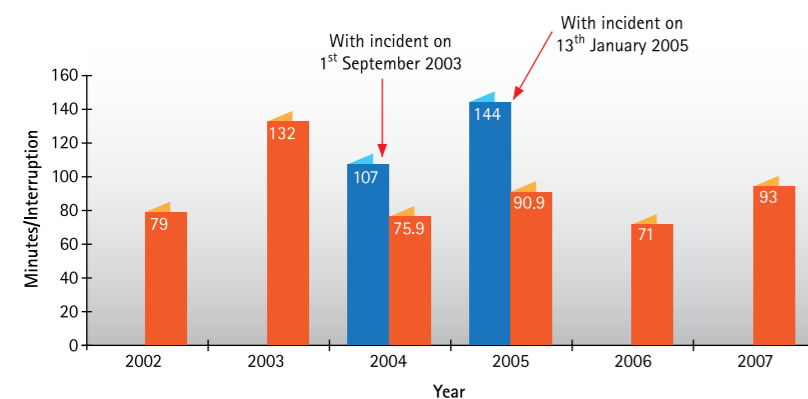
Delivery Point Unreliability Index (DePUI) – System Minutes



Source : Tenaga Nasional Berhad

In the year 2007, the delivery point unreliability index (DePUI) or system minutes of TNB's increased slightly to 9.3 minutes from 7.3 minutes in 2006 and exceeded the yearly threshold of 9 minutes for 2007.

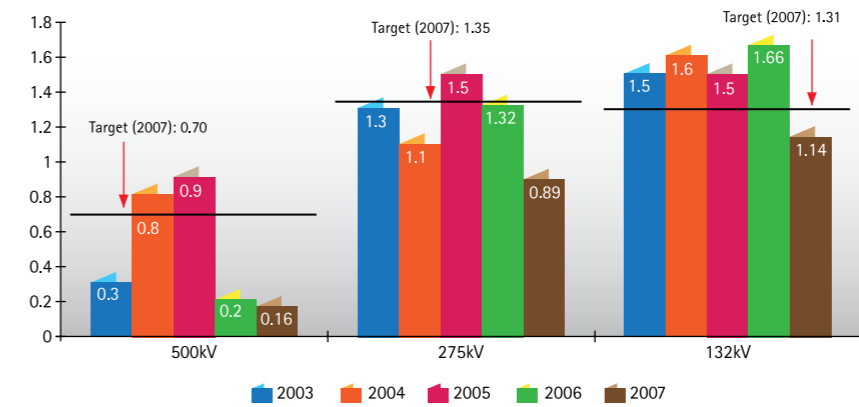
Figure 16 : System Average Restoration Index (SARI)



Source : Tenaga Nasional Berhad

In the year 2007, the average duration in minutes taken to restore any occurrence of supply interruptions in the transmission network or SARI increased by 31% to 93 minutes from 71 minutes in 2006. This indicated a longer time taken to restore supply following interruptions in the transmission network.

Figure 17 : No. of Combined Line and Cable Trippings Per 100 cct-km



In the year 2007, the number of line and cable trippings in the 132 kV network is the highest at 142 incidents compared to 94 incidents in 275 kV network and 2 incidents in the 500 kV network.

Profile for Year 2007

Line Voltage	Total Length (cct-km)	Total Tripping	Tripping per 100 cct-km
132 kV	10,214	142	1.14
275 kV	7,103	94	0.89
500 kV	609	2	0.16
Total	17,926	238	-

Source : Tenaga Nasional Berhad

Transmission System of SESB

Table 3 : Transmission System Trippings of West Coast Grid in Sabah with a Load Loss of 50 MW and Above in the Year 2007 (Up to 27th July 2007)

Indicators	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
No. of Tripping without Load Shedding	1	0	2	0	0	0	0	0	0	0	0	0
Unsupplied Energy due to Tripping (MWh)	5349		5394									
Average Unsupplied Energy per Trip (MWh)	5349		2697									
Average Duration per Trip (Hour)	2:54		1:14									
No. of Tripping with Load Shedding	0	0	0	0	0	0	0	0	0	0	0	0
Unsupplied Energy during Load Shedding (MWh)												

Source : Sabah Electricity Sdn. Bhd.

The number of transmission trippings in the West Coast Grid in Sabah with a load loss of above 50 MW in the year 2007 (up to 27th July 2007) decreased from 9 incidents in the year 2006 to 3 incidents.

Table 4 : Transmission System Trippings of East Coast Grid in Sabah with a Load Loss of 50 MW and Above in the Year 2007 (Up to 27th July 2007)

Indicators	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
No. of Tripping without Load Shedding	2	1	3	1	0	0	2	0	3	3	0	0
Unsupplied Energy due to Tripping (MWh)	451.84	267.52	454.77	90.51			237.99		334.63	206.42		
Average Unsupplied Energy per Trip (MWh)	225.92	267.52	151.59	90.51			118.99		111.54	68.81		
Average Duration per Trip (Hour)	4:52	4:20	2:23	1:54			2:21		2:16	5:55		
No. of Tripping with Load Shedding	0	0	0	0	0	0	0	0	0	0	0	0
Unsupplied Energy during Load Shedding (MWh)												

Source : Sabah Electricity Sdn. Bhd.

Meanwhile the number of transmission trippings in the East Coast Grid with a load loss of above 50 MW increased to 15 incidents compared with 8 incidents in the year 2006.

Table 5 : Transmission System Trippings of Sabah Grid with a Load Loss of 50 MW and Above in the Year 2007 (From 28th July – 31st Aug 2007)

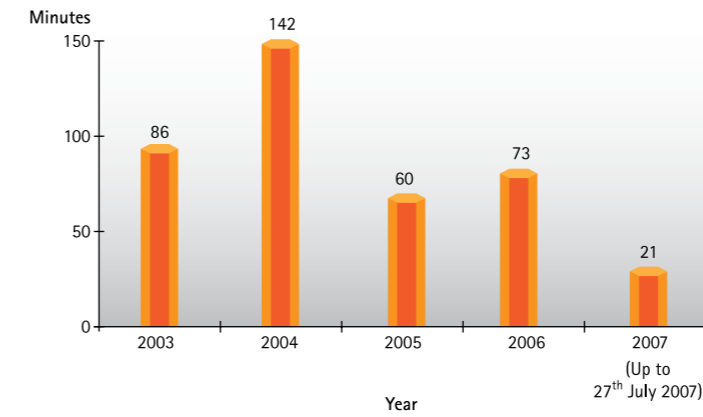
Indicators	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
No. of Tripping without Load Shedding	0	0	0	0	0	0	0	0	0	0	1	1
Unsupplied Energy due to Tripping (MWh)											14.76	3.76
Average Unsupplied Energy per Trip (MWh)											14.76	3.76
Average Duration per Trip (Hour)											2:27	1:11
No. of Tripping with Load Shedding	0	0	0	0	0	0	0	0	0	0	0	0
Unsupplied Energy during Load Shedding (MWh)												

Source : Sabah Electricity Sdn. Bhd.

However, after the commissioning of the East West interconnection grid in late July 2007, the number of transmission system trippings of Sabah grid in the year 2007 (from 28th July to 31st August 2007) decreased to 2 incidents.

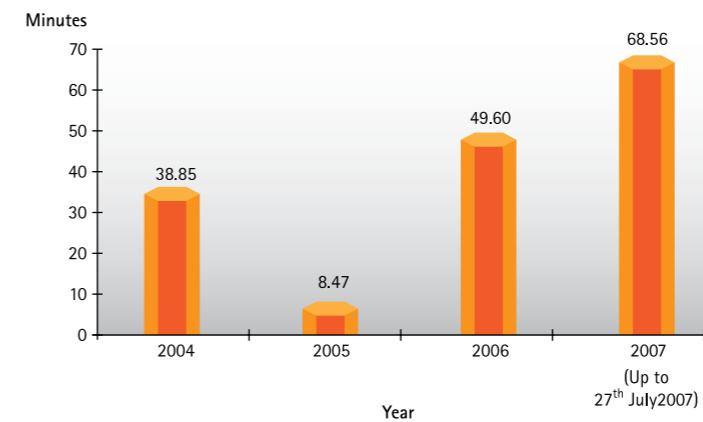
Figure 18 : System Minutes SESB

Delivery Point Unreliability Index (DePUI) – West Coast Grid



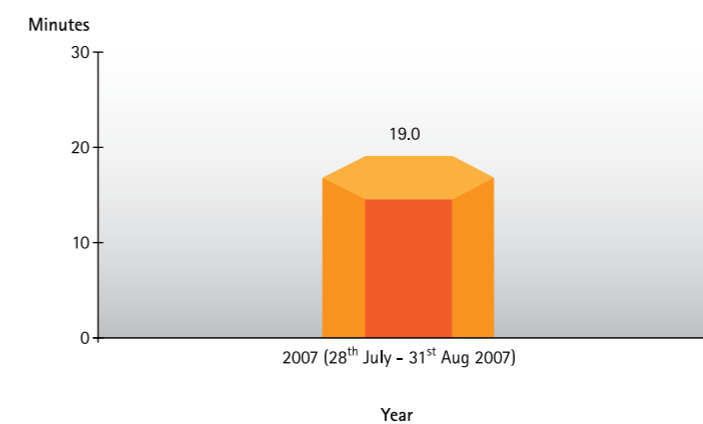
In the year 2007 (up to 27th July 2007), system minutes of West Coast Grid decreased to 21 minutes from 73 minutes in the year 2006. However system minutes of East Coast Grid increased by 38.3% to 68.6 minutes from 49.6 minutes in the year 2006. This indicated a lower reliability in the East Coast of Sabah in the overall system.

Delivery Point Unreliability Index (DePUI) – East Coast Grid



The commissioning of the East West interconnection grid in Sabah in late July 2007 showed a slight improvement in the overall system minutes of the Sabah grid.

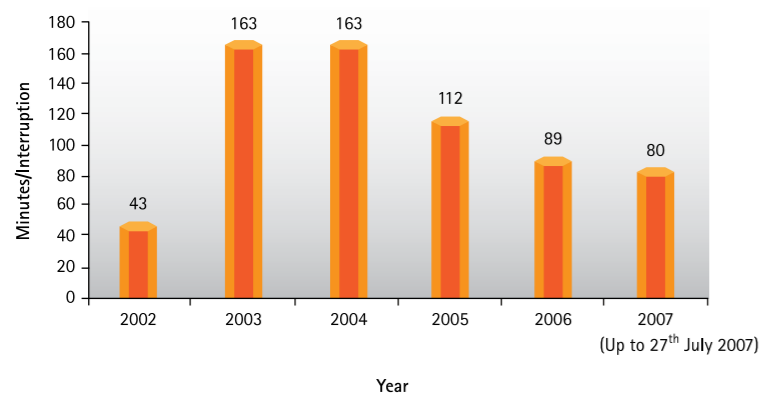
Delivery Point Unreliability Index (DePUI) – Sabah Grid



Note :
 # - West coast interconnection grid commissioning on 28th July 2007
 Delivery Point Unreliability Index-DePUI = $\frac{\text{Total unsupplied energy (MW-min)}}{\text{System peak load (MW)}}$
 Source : Sabah Electricity Sdn. Bhd.

Figure 19 : System Average Restoration Index (SARI)

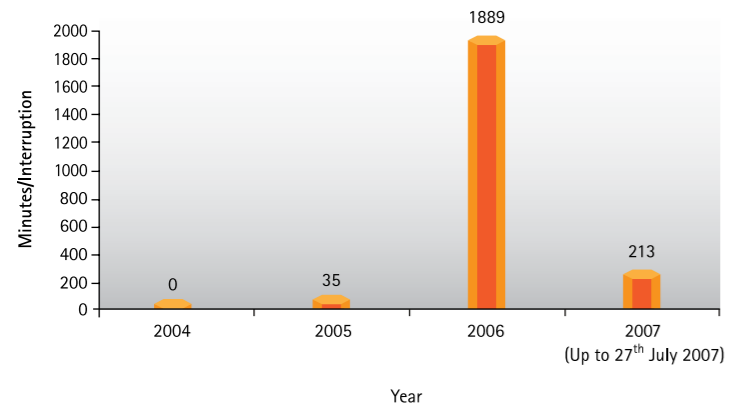
West Coast Grid



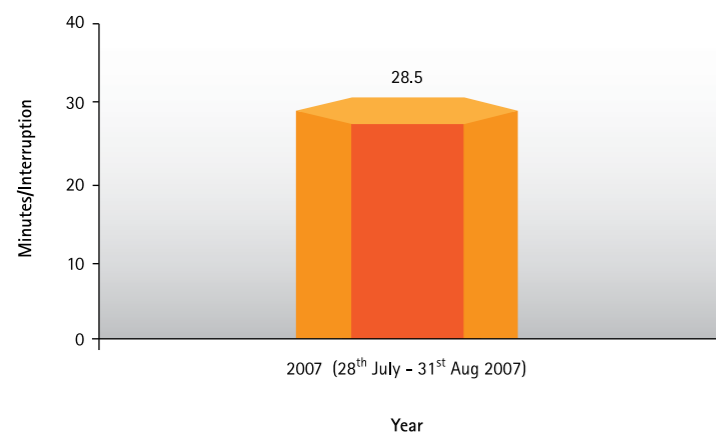
In the year 2007 (up to 27th July 2007), SARI of West Coast Grid in Sabah decreased by 10.1% from 89 minutes in the year 2006 to 80 minutes. The SARI of East Coast Grid also decreased significantly from 1,889 minutes in the year 2006 to 213 minutes.

With the commissioning of East West interconnection grid in Sabah in late July 2007, SARI of the grid system in Sabah for year 2007 (from 28th July to 31st August 2007) decreased to 28.5 minutes.

East Coast Grid



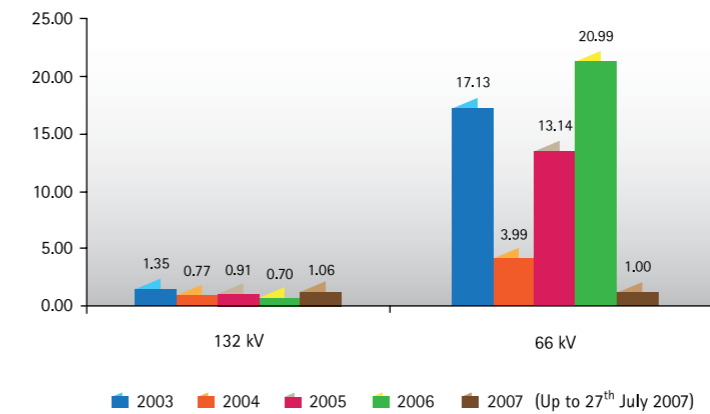
Sabah Grid



Source : Sabah Electricity Sdn. Bhd.

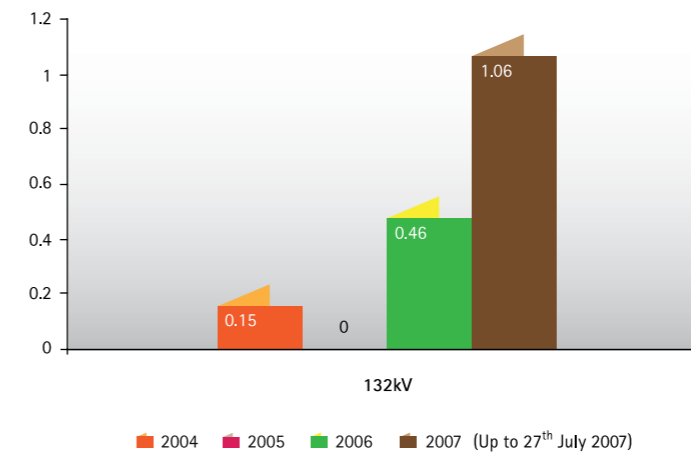
Figure 20 : No. of Combined Line and Cable Tripping per 100 cct-km (With load loss) for West Coast Grid, East Coast Grid and Sabah Grid

West Coast Grid

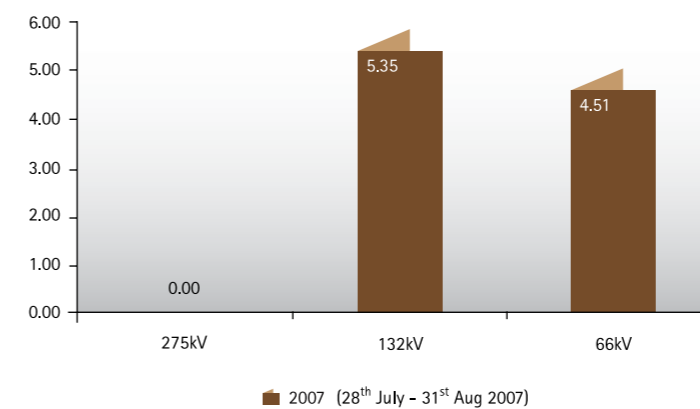


In the year 2007 (up to 27th July 2007) the number of line and cable trippings for every 100 cct-km in the West Coast Grid with a load loss decreased significantly in the 66 kV network. However, the trippings in the 132 kV network increased slightly compared to the previous year. Meanwhile, for the East Coast Grid, the number of trippings for every 100 cct-km on 132 kV network also increased to 1.06 from 0.46 in the year 2006.

East Coast Grid



Sabah Grid



Source : Sabah Electricity Sdn. Bhd.

PERFORMANCE OF DISTRIBUTION SYSTEM

Transmission System of Sarawak Energy Berhad

Table 6 : Monthly Transmission System of Sarawak Energy Berhad in Sarawak for Year 2007

Indicators	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
No. of Tripping without Load Shedding	0	0	1	0	0	0	0	0	0	0	0	0
Unsupplied Energy due to Tripping (MWh)			10									
Average Unsupplied Energy per Trip (MWh)			10									
Average Duration per Trip (Hour)			8									
No. of Tripping with Load Shedding	0	0	0	0	0	0	0	0	0	0	0	0
Unsupplied Energy during Load Shedding (MWh)			0									

In Sarawak, the number of transmission trippings in Sarawak Energy Berhad's system decreased significantly from 15 incidents in 2006 to only 1 incident in 2007.

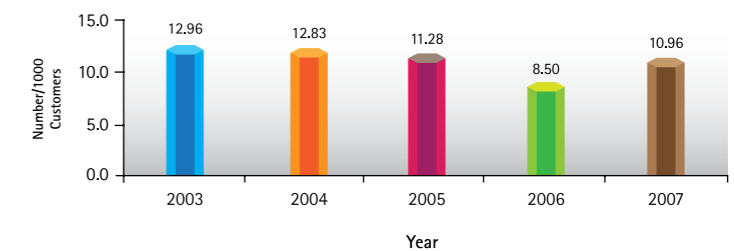
Statistics of Supply Interruptions of TNB

Starting from the month of September 2007, TNB has embarked on new monitoring and reporting system on the performance of supply system using new software namely TOMS (Total Outage Management System). With the changes, the number of electricity supply interruptions per 1,000 customers reported in the supply system of TNB for the year 2007 increased by 30.3% to 11.3 interruptions compared to 8.67 interruptions in year 2006.

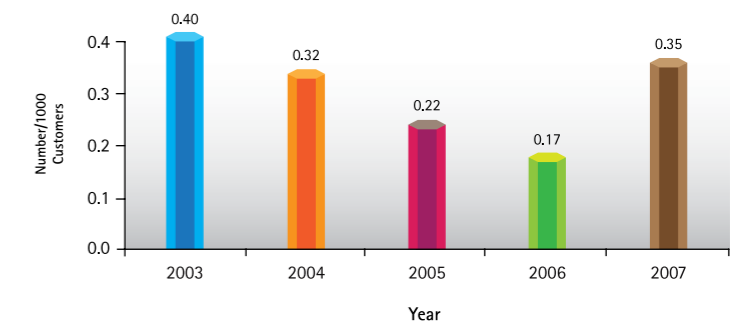
The numbers reported also include the interruptions of supply to a single customer that experienced interruptions for more than 1 minute. Unscheduled interruptions recorded 96.9% of the total number in 2007 compared with scheduled interruptions at 3.1%.

Figure 21 : Number of Electricity Interruptions per 1,000 Customers of TNB for Year 2003 to 2007

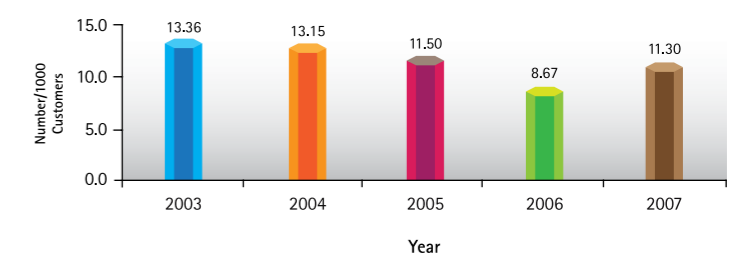
Unscheduled Interruptions of TNB



Scheduled Interruptions of TNB



Total Interruptions of TNB



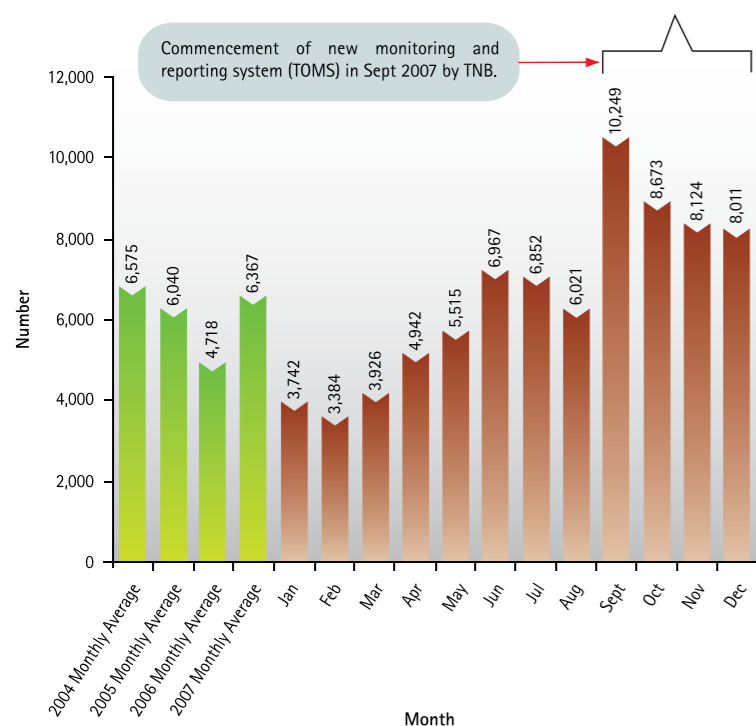
Notes :

a) Numbers of Customers :
 5.8 Million (Year 2003)
 6.0 Million (Year 2004)
 6.23 Million (Year 2005)
 6.53 Million (Year 2006)
 6.76 Million (Year 2007)

b) From 1 September 2004, the reported figures of supply interruption include supply interruption to a single customer for more than 1 minute which was omitted in the past statistics.

c) From September 2007, application of new monitoring and reporting system on performance of supply system using the new software, i.e. Total Outage Management System (TOMS) by TNB.

Figure 22 : Monthly Supply Interruptions of TNB in 2007



The monthly average number of supply interruptions in Peninsular Malaysia in 2007 increased significantly to 6,367 from 4,718 in 2006. The highest number of interruptions was recorded in the month of September with a total of 10,249 interruptions.

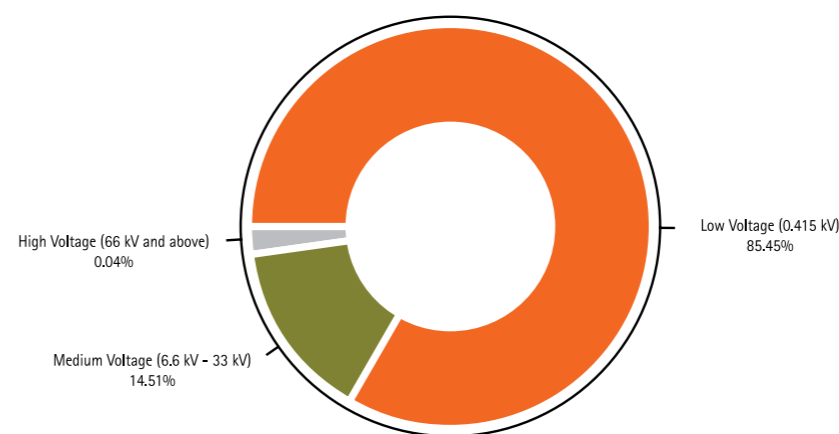
Selangor and WP Kuala Lumpur, which have bigger size networks compared to other states recorded the highest number of supply interruptions at 16,313 and 11,097 respectively. However, in term of interruptions per 1,000 customers, the state of Kelantan still recorded the highest number at 21.3 interruptions per 1,000 customers.

Table 7 : Total Number of Supply Interruptions and Number of Interruptions per 1000 Customers in Various States in Peninsular Malaysia for Year 2005 to 2007

State	Total No. of Interruption			No. of Interruption per 1000 Customers		
	2005	2006	2007	2005	2006	2007
Perlis	283	329	773	4.50	3.85	11.79
Kedah	9,382	3,181	3,695	18.45	4.90	6.89
P.Pinang	1,893	1,317	9,872	3.49	1.69	19.16
Perak	8,688	5,695	5,157	12.64	6.15	7.14
Selangor	10,188	9,735	16,313	8.02	4.87	11.76
WP Kuala Lumpur	7,725	6,766	11,097	8.84	5.62	11.86
WP Putrajaya	18	32	30	1.29	0.93	1.53
N.Sembilan	5,949	4,252	4,406	14.65	9.48	12.68
Melaka	2,268	1,983	1,646	9.74	6.17	6.47
Johor	11,205	9,385	8,493	12.18	8.05	8.63
Pahang	1,970	2,256	5,317	5.57	3.91	14.22
Terengganu	1,527	3,586	2,018	6.17	11.09	7.63
Kelantan	11,385	8,097	7,589	33.47	19.44	21.32
Total TNB	72,481	56,614	76,406	11.50	8.67	11.30

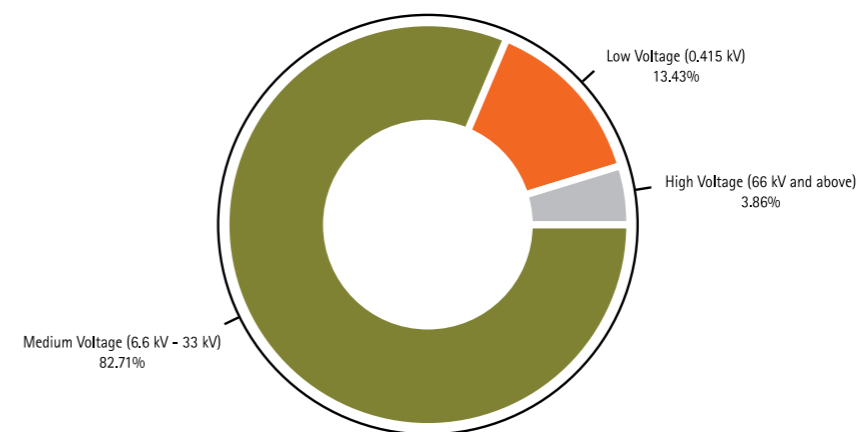
Figures 23 : Number of interruptions and SAIDI based on supply networks voltages

Interruptions



Further analysis showed that interruptions in the high voltage networks accounted for only 0.04% to the total interruptions. Most interruptions were in the low voltage networks which accounted almost 86% of the total interruptions.

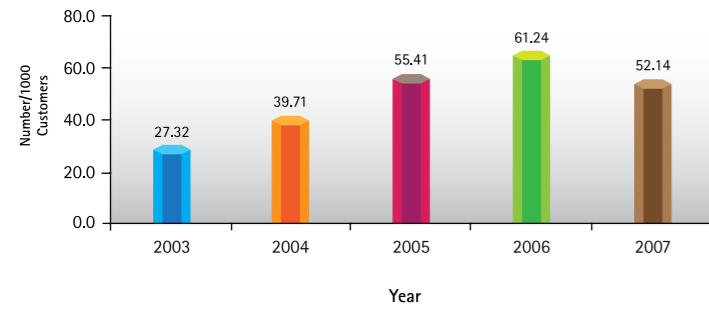
SAIDI



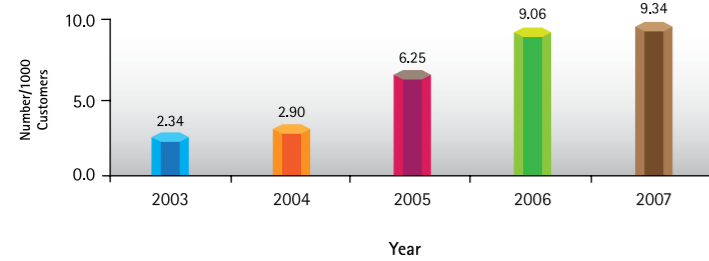
Statistics of Supply Interruptions of SESB

Figure 24 : Number of Electricity Supply Interruptions per 1,000 Customers of SESB in Sabah for Year 2003 to 2007

Unscheduled Interruptions of SESB



Scheduled Interruptions of SESB



Total Interruptions of SESB

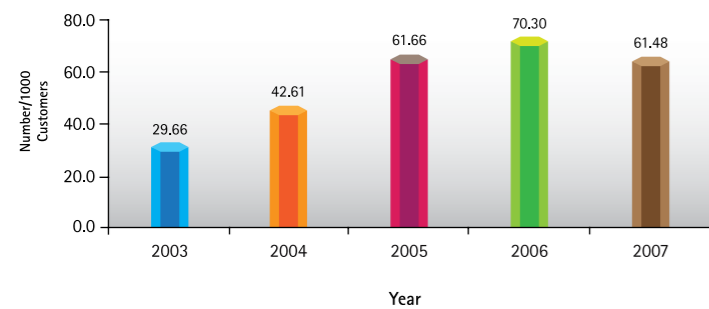
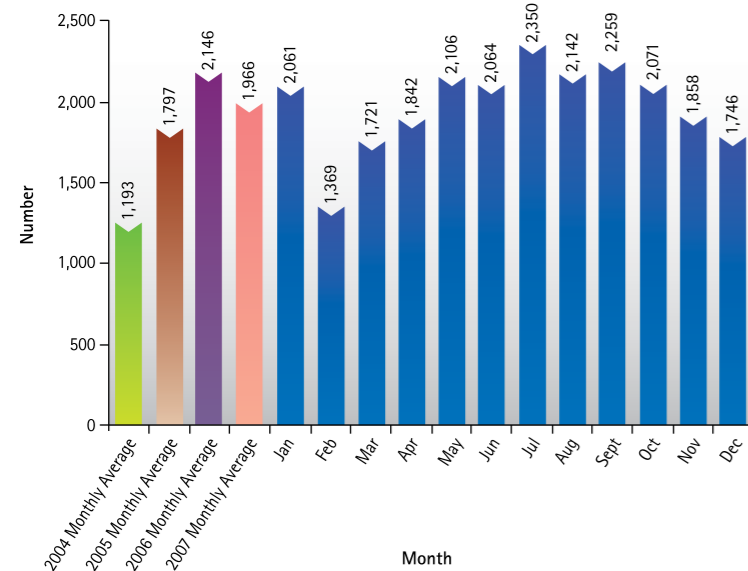


Figure 25 : Monthly Supply Interruptions of SESB in Sabah in 2007



The number of electricity supply interruptions per 1,000 customers of SESB's system in Sabah in 2007 decreased by 12.5% to 61.48 interruptions from 70.30 interruptions in 2006. The unscheduled interruptions recorded the highest percentage at 84.8% as compared to scheduled interruptions at 15.2% of the total supply interruptions in 2007.

Notes :

- a) Number of Customers :
322,830 (Year 2003)
335,800 (Year 2004)
349,757 (Year 2005)
366,380 (Year 2006)
383,716 (Year 2007)

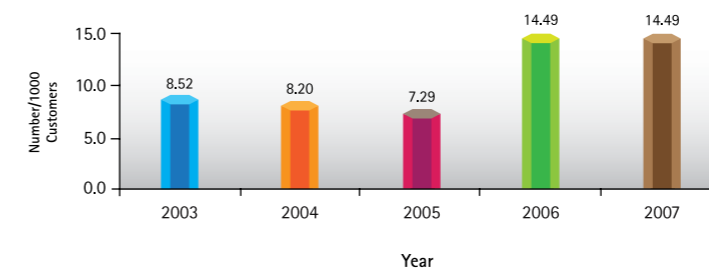
- b) Starting from 1 September 2004, SESB implemented changes in monitoring and recording of supply interruption whereby all the complaints of electricity supply interruption will be recorded in the new application, namely LGBNet.

In Sabah, the monthly average number of supply interruptions decreased to 1,966 from 2,146 in 2006. The highest number of interruptions was recorded in July with 2,350 interruptions.

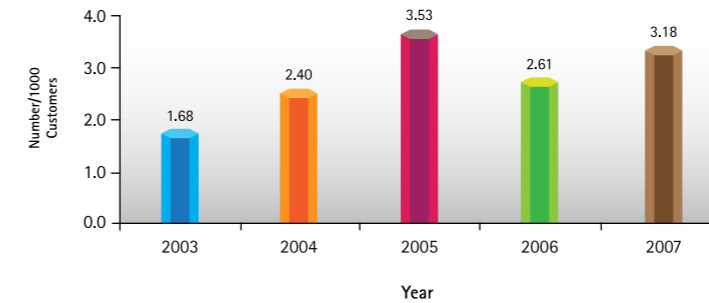
Statistics of Supply Interruptions of Sarawak Energy Berhad

Figure 26 : Number of Electricity Supply Interruptions per 1,000 Customers of Sarawak Energy Berhad for Year 2003 to 2007

Unscheduled Interruptions of Sarawak Energy Berhad



Scheduled Interruptions of Sarawak Energy Berhad



Total Interruptions of Sarawak Energy Berhad

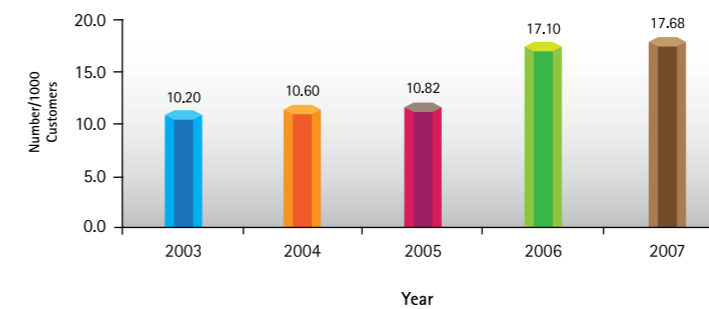
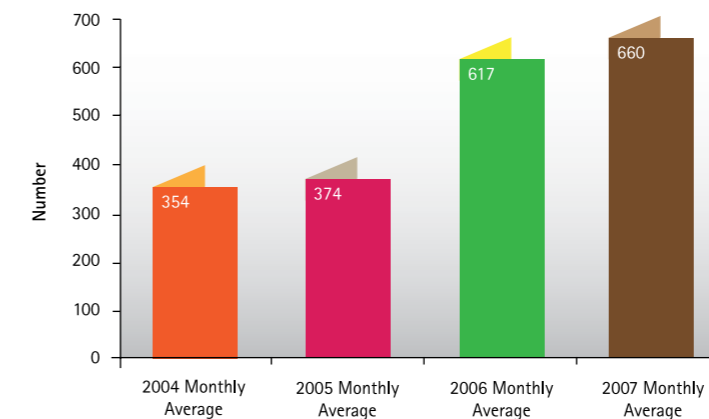


Figure 27 : Monthly Average of Supply Interruptions of Sarawak Energy Berhad in 2007



In 2007, the number of electricity supply interruptions per 1,000 customers in Sarawak increased slightly by 3.4% to 17.68 interruptions from 17.10 interruptions in 2006. The unscheduled interruptions still recorded the highest percentage at 82.0% compared to scheduled interruptions at 18.0% of the total supply interruptions in 2007.

Notes :

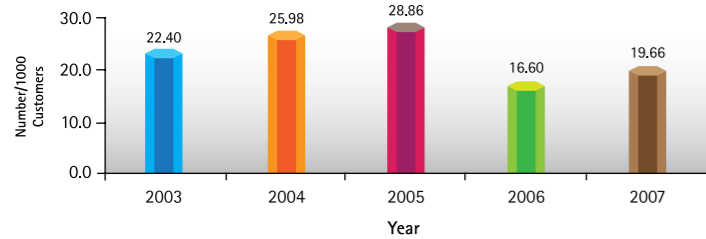
- Number of Customers :
385,003 (Year 2003)
400,348 (Year 2004)
414,767 (Year 2005)
433,401 (Year 2006)
447,750 (Year 2007)

In Sarawak, the monthly average number of supply interruptions increased by 7.0% from 617 in 2006 to 660.

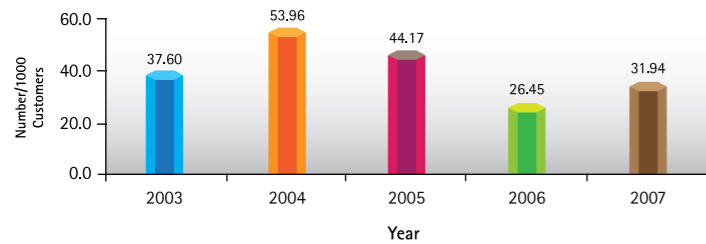
Statistics of Supply Interruptions of NUR

Figure 28 : Number of Electricity Supply Interruptions per 1,000 Customers in Kulim Hi-Tech Park Reported by NUR Distribution Sdn. Bhd. For Year 2003 to 2007

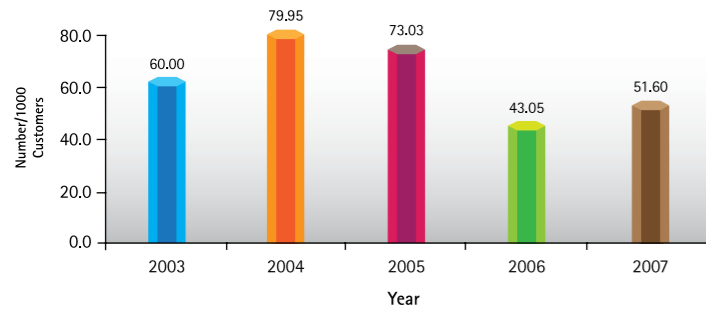
Unscheduled Interruptions of NUR Distribution Sdn. Bhd.



Scheduled Interruptions of NUR Distribution Sdn. Bhd.



Total Interruptions of NUR Distribution Sdn. Bhd.

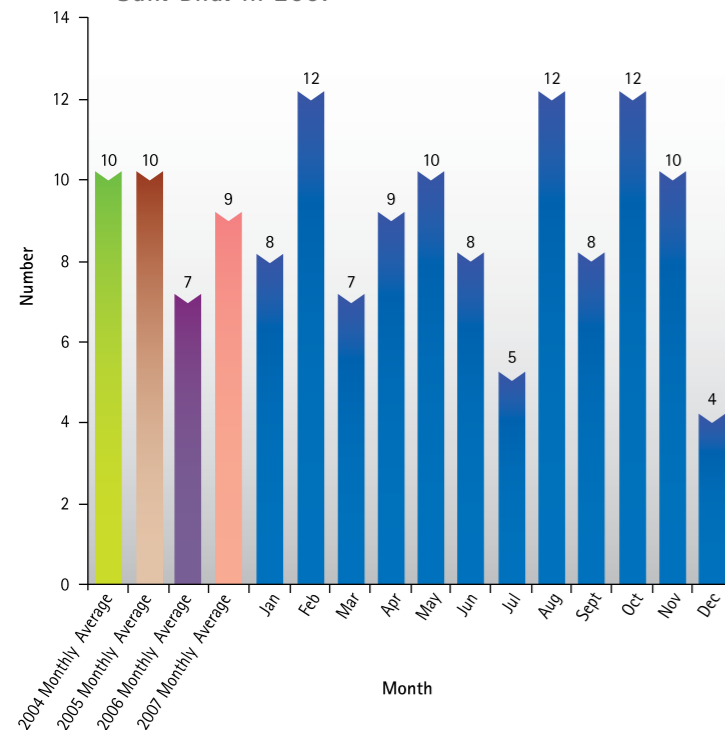


In the year 2007, the number of electricity supply interruptions per 1,000 customers in Kulim Hi-Tech Park (KHTP) reported by NUR Distribution Sdn. Bhd. was 51.60 interruptions, i.e. an increase of 19.9% from 43.05 interruptions in 2006. Of the total interruptions in 2007, scheduled interruptions recorded the highest percentage at 61.9% compared to unscheduled interruptions at 38.1%.

Notes :

Number of Customers :
 1,250 (Year 2003)
 1,501 (Year 2004)
 1,698 (Year 2005)
 1,928 (Year 2006)
 2,035 (Year 2007)

Figure 29 : Monthly Supply Interruptions of NUR Distribution Sdn. Bhd. in 2007

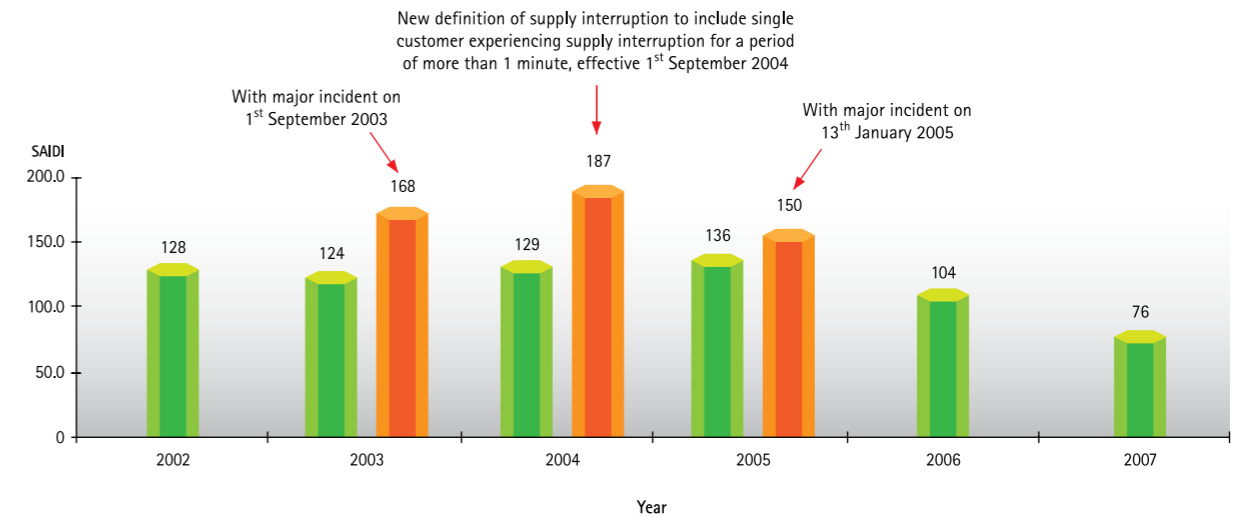


In KHTP, the monthly average number of supply interruptions also increased to 9 from 7 in the year 2006. The month of February, August and October recorded the highest number of interruptions at 12 in each of the month.

DISTRIBUTION SYSTEM OF TNB

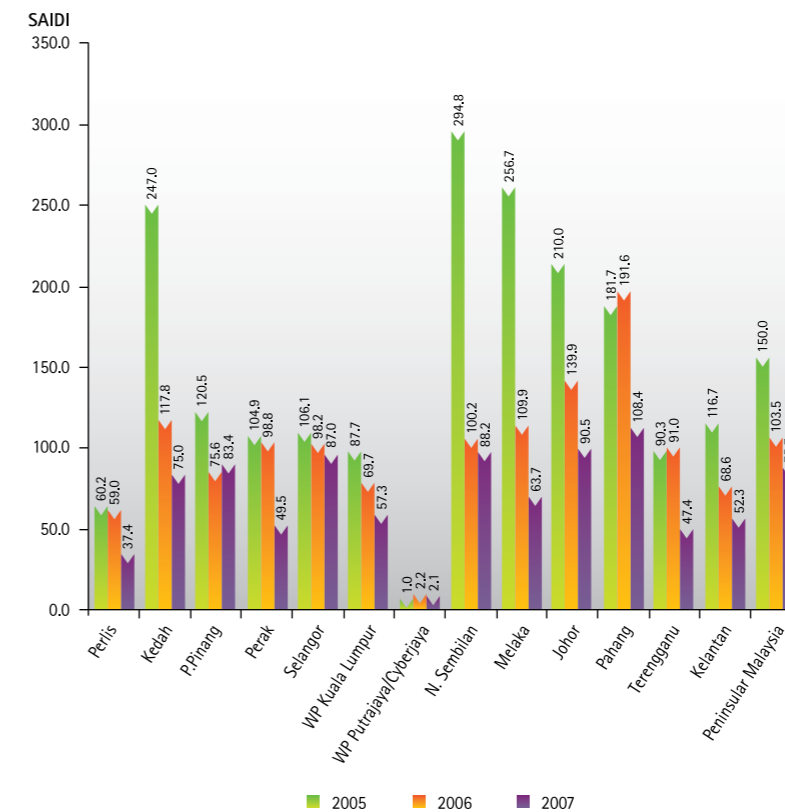
System Average Interruption Duration Index (SAIDI)

Figure 30 : SAIDI (Minutes/Customer/Year) in Peninsular Malaysia from the Year 2002 to 2007



The SAIDI of TNB dropped by 27% from 104 minutes/customer/year in 2006 to 76 minutes/customer/year, which was well below the targeted level of 99 minutes/customer/year.

Figure 31 : SAIDI (Minutes/Customer/Year) for the Various States in Peninsular for Year 2005 to 2007



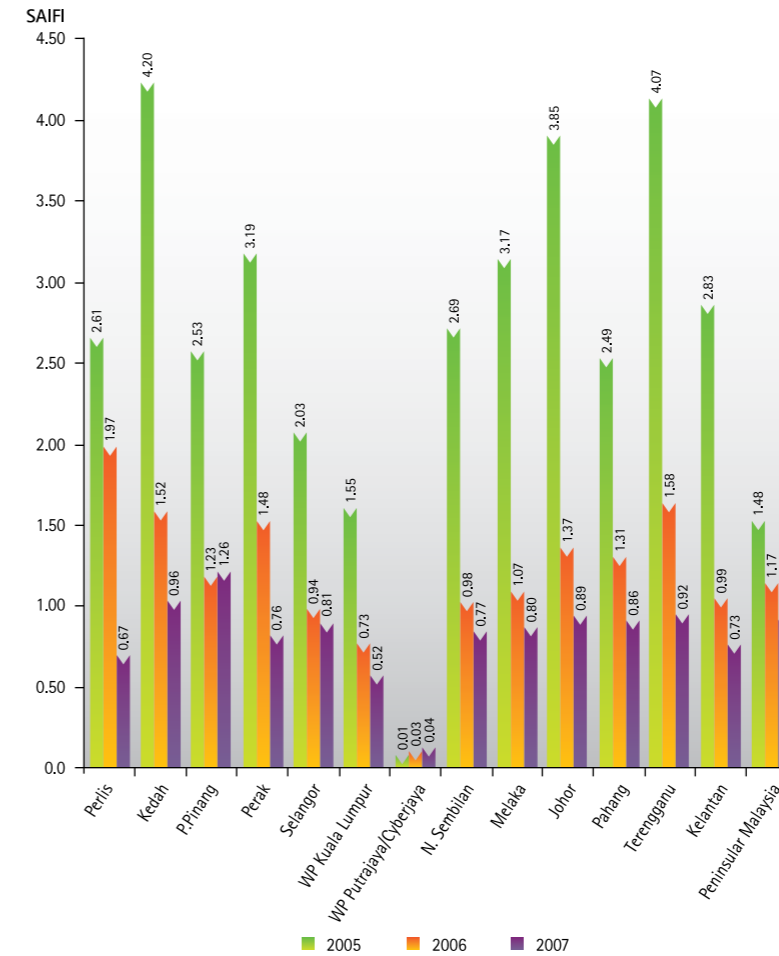
The highest SAIDI was recorded in state of Pahang with 108.4 minutes/customer/year, although it showed an improved performance from the previous year SAIDI of 191.6 minutes/customer/year.

Table 8 : SAIDI of TNB and Several Utilities in Other Countries

Utility / Country	SAIDI (Minutes/Customer/Year)
TNB Distribution (Calendar year)	76
(Financial year)	88
Thailand (2006/07)	1,496
Taiwan, Power (2006/07)	29.27
Singapore (2006/07)	2.2
Indonesia (2006/07)	794.4
Japan (2006/07)	6
United Kingdom (2006/07)	70
Norway (2006/07)	218
New Zealand (2006/07)	128
Philippines (2006/07)	1,200
Canada (2006/07)	220
Ireland (2006/07)	170
United States (2006/07)	214
Colombia (2006/07)	9,480
Brazil (2006/07)	1,101.6
Argentina (2006/07)	480
Finland (2006/07)	183
Tokyo (2005/06)	3
Hong Kong (2005/06)	6
New York City (2005/06)	12
London (2005/06)	38
Melbourne (2005/06)	21
Frankfurt (2005/06)	23
Amsterdam (2005/06)	25

The SAIDI of TNB had improved over the years and is showing better performance than some international utilities from countries such as Canada, United States, Norway, New Zealand and Ireland. Nevertheless, the SAIDI of each utilities also are dependent on the size and type of networks, maintenance regime, geographical conditions etc.

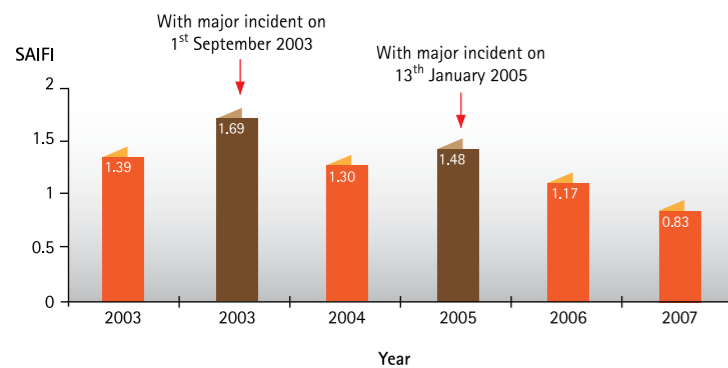
Figure 33 : SAIFI (No's of Interruption/Customer/Year) for the Various States in Peninsular Malaysia for Year 2005 to 2007



The highest SAIFI in 2007 was recorded in Pulau Pinang at 1.26.

System Average Interruption Frequency Index (SAIFI)

Figure 32 : SAIFI (No's of Interruption/Customer/Year) in Peninsular Malaysia from the Year 2003 to 2007

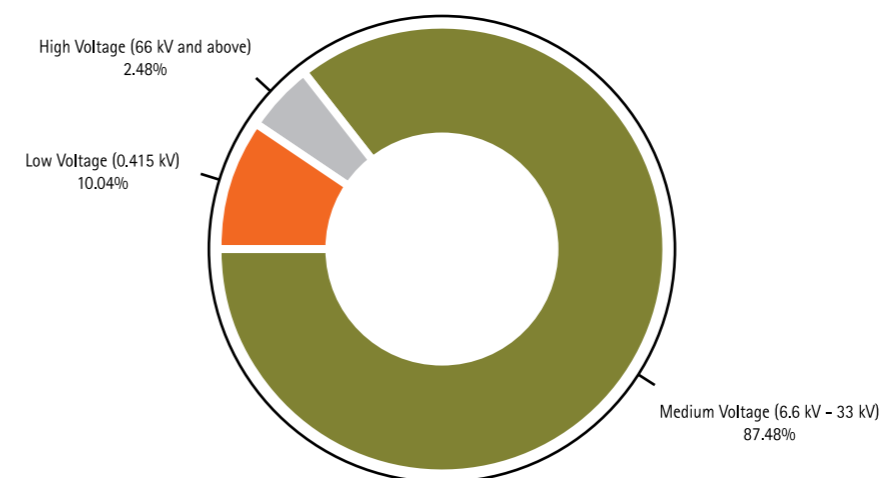


At the end of December 2007, the SAIFI in Peninsular Malaysia improved to 0.83 from 1.17 in 2006.

SAIFI represents the average number or frequency of interruptions experienced by a customer in a year.

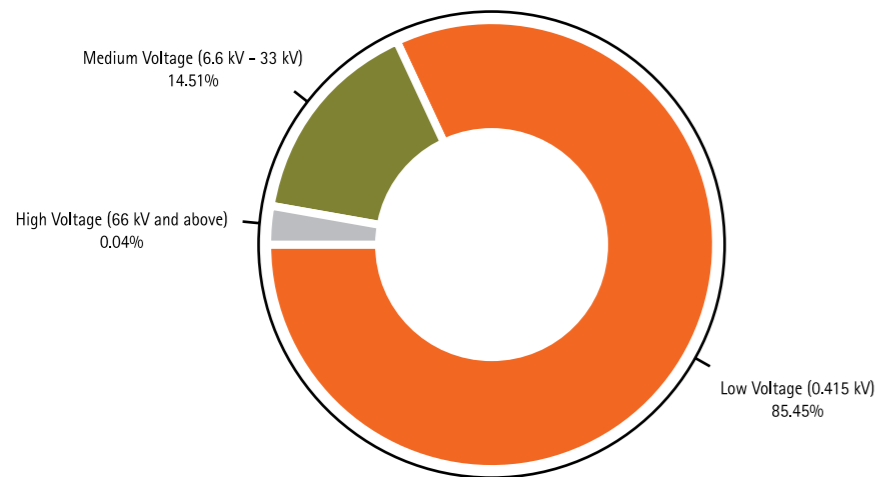
Figure 34 : SAIFI and Interruptions based on supply networks voltages for Year 2007

SAIFI



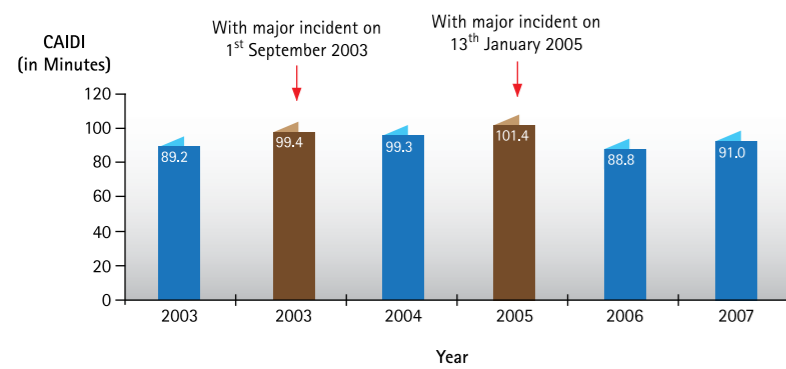
Again, the highest SAIFI was recorded in the low voltage supply networks (87%) compared to the high voltage networks (2.48%).

Interruptions



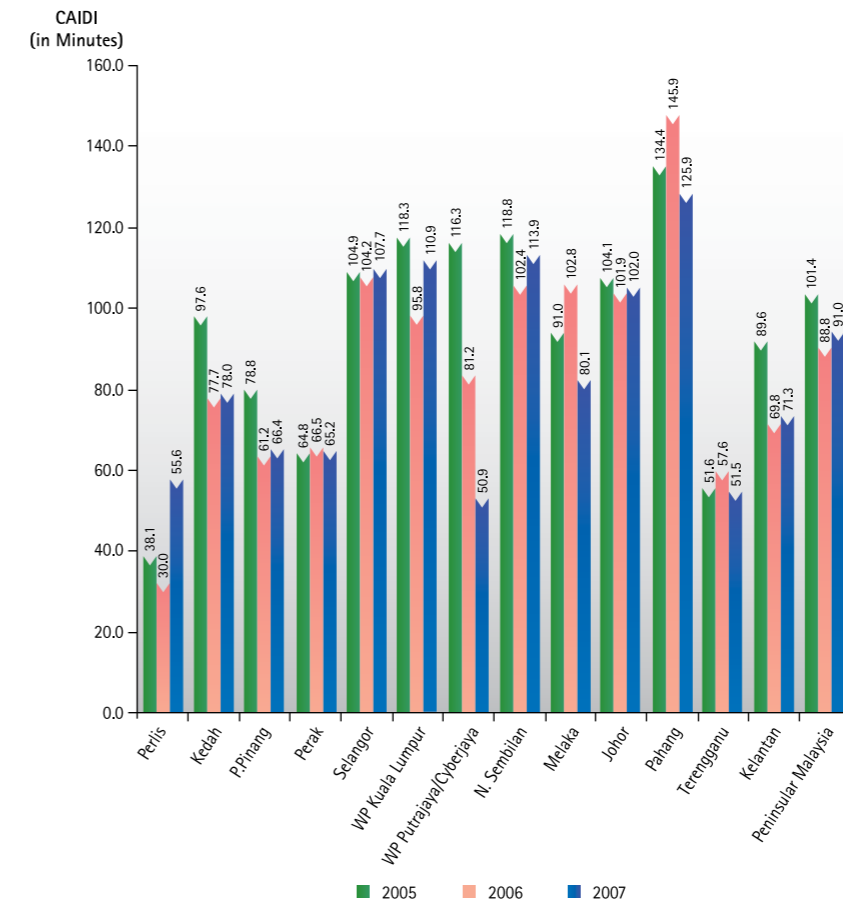
Customer Average Interruption Duration Index (CAIDI)

Figure 35 : CAIDI (Minutes/Interrupted Customer/Year) in Peninsular Malaysia from the Year 2003 to 2007



At the end of December 2007, the CAIDI in Peninsular Malaysia was 91.0 minutes, i.e. a slight increase compared to 88.8 minutes in 2006.

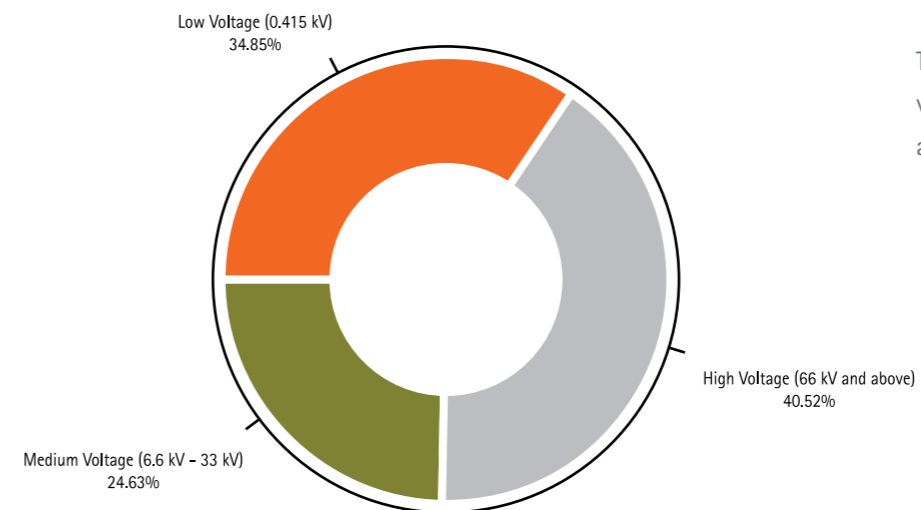
Figure 36 : CAIDI (Minutes/Interrupted Customer/Year) for the Various States in Peninsular Malaysia for Year 2005 to 2007



In 2007, most states in Peninsular Malaysia showed an increase in CAIDI with the exception of Perak, WP Putrajaya/Cyberjaya, Melaka, Pahang and Terengganu. The highest CAIDI was recorded in Pahang at 125.9 minutes. The lower CAIDI indicates a shorter duration of interruption and represents the average time taken by the utility to restore the electricity supply.

Figure 37 : CAIDI based on supply networks voltages for Year 2007

CAIDI

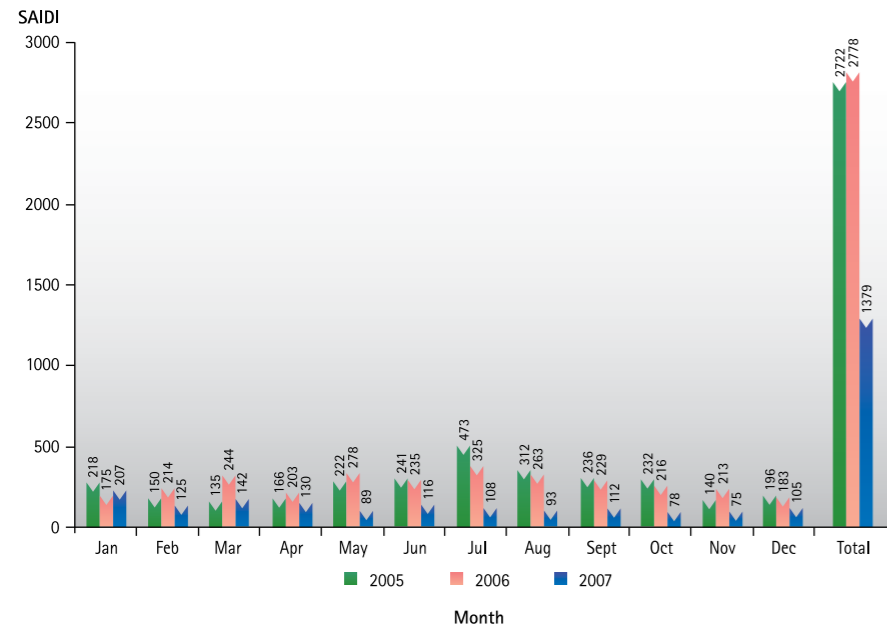


The time taken to restore a fault in the high voltage networks consumed the most, which accounted for 40.5% of the total CAIDI.

DISTRIBUTION SYSTEM OF SESB

System Average Interruption Duration Index (SAIDI)

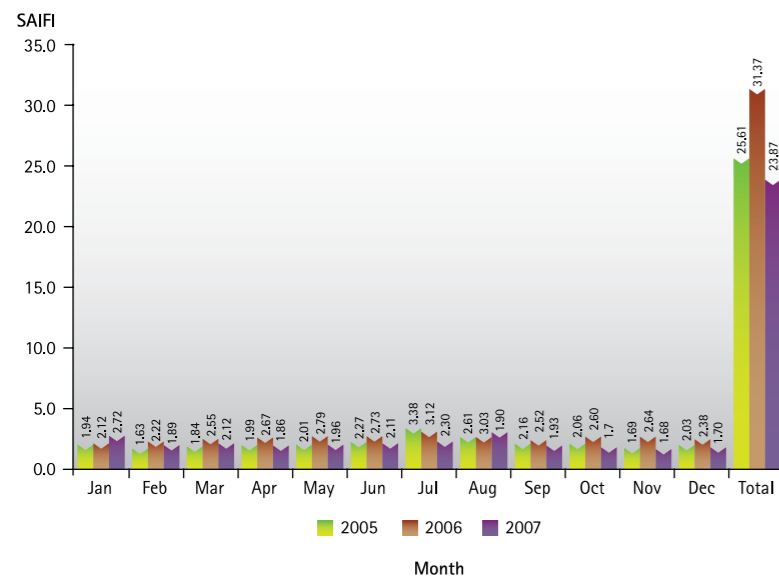
Figure 38 : Monthly SAIDI (Minutes/Customer/Year) for the State of Sabah for Year 2005 to 2007



In 2007, the SAIDI of SESB dropped by 50.4% from 2,778 minutes/customer/year in 2006 to 1,379 minutes/customer/year. SAIDI in the month of January was the highest recorded in 2007.

System Average Interruption Frequency Index (SAIFI)

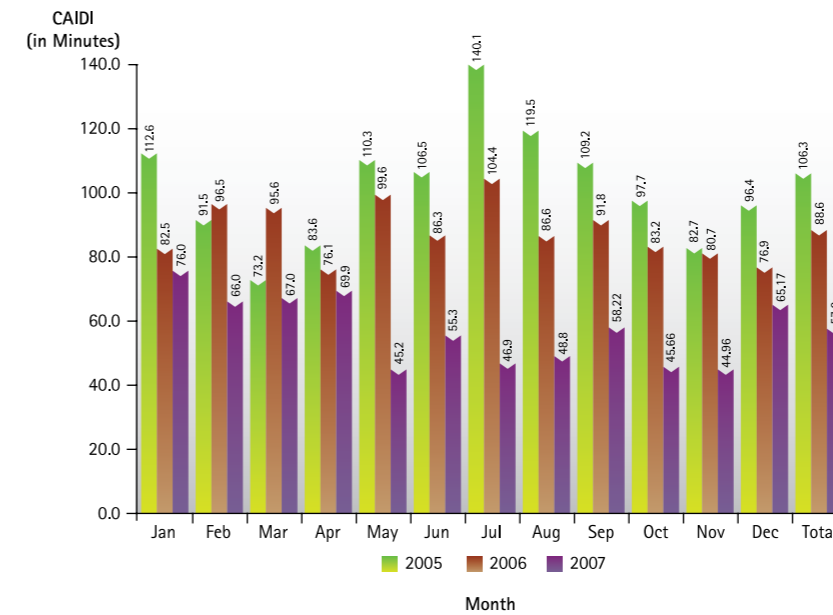
Figure 39 : Monthly SAIFI (No's of Interruption/Customer/Year) in Sabah for Year 2005 to 2007



The SAIFI of SESB for year 2007 was 23.87, i.e. a slight improvement from the previous year of 31.37. The highest SAIFI was recorded in the month of January 2007.

Customer Average Interruption Duration Index (CAIDI)

Figure 40 : Monthly CAIDI (Minutes/Interrupted Customer/Year) in Sabah for Year 2005 to 2007

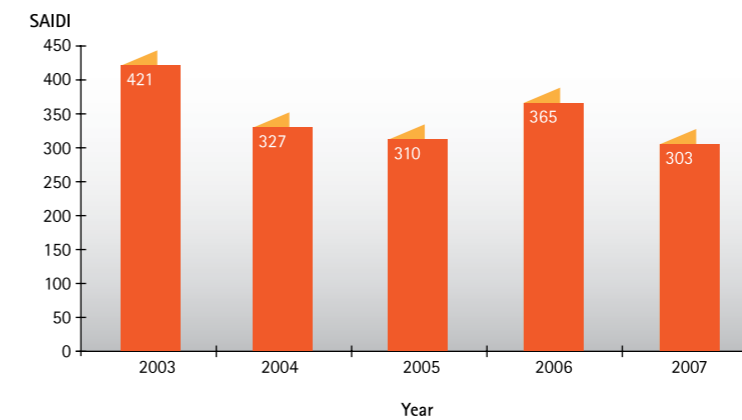


The CAIDI of SESB in Sabah improved by 34.8% from 88.6 minutes in 2006 to 57.8 minutes in 2007. The month of January recorded the highest CAIDI in 2007.

DISTRIBUTION SYSTEM OF SARAWAK ENERGY BERHAD

System Average Interruption Duration Index (SAIDI)

Figure 41 : SAIDI (Minutes/Customer/Year) of Sarawak Energy Berhad in Sarawak for Year 2003 to 2007



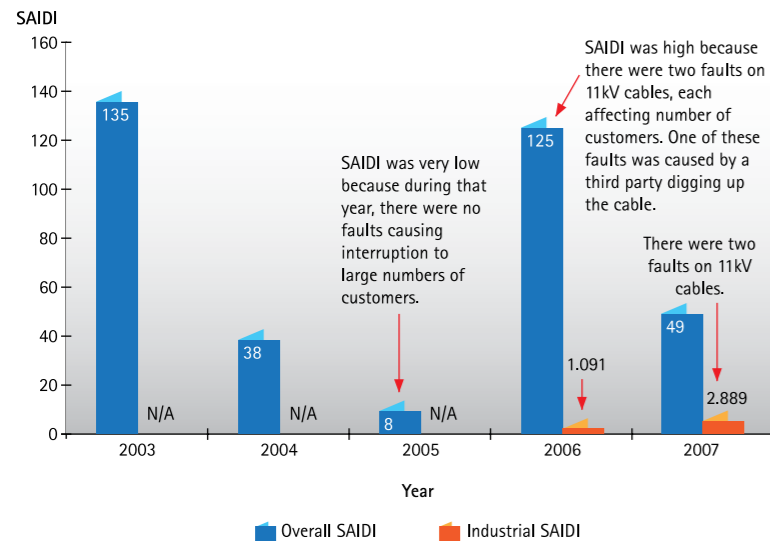
The SAIDI of SEB in Sarawak reduced by 17% from 365 minutes/customer/year in 2006 to 303 minutes/customer/year in 2007, reflecting a slightly better performance than the previous year.

CAUSES OF ELECTRICITY SUPPLY INTERRUPTIONS

DISTRIBUTION SYSTEM OF NUR

System Average Interruption Duration Index (SAIDI)

Figure 42 : Total SAIDI (Minutes/Customer/Year) and Industrial SAIDI (for High Voltage Customers Only) in Kulim Hi-Tech Park Reported by NUR Distribution Sdn. Bhd. for Year 2003 to 2007

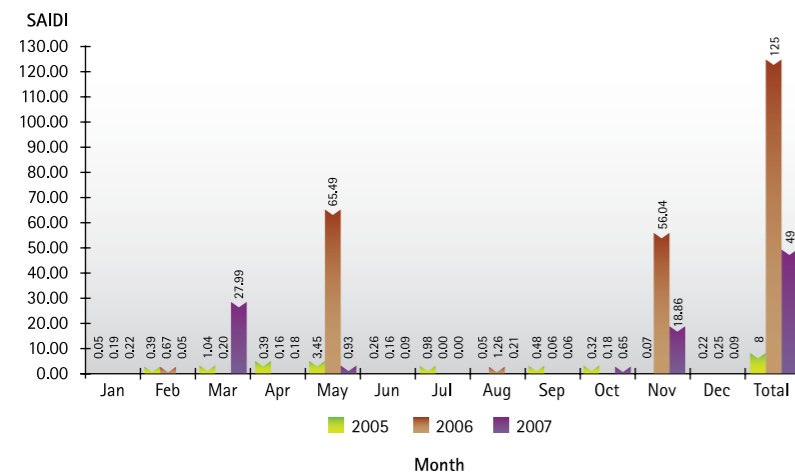


Note : N/A – Not Available

As of December 2007, the overall SAIDI reported in KHTP improved by 61% to 49 minutes/customer/year from 125 minutes/customer/year in the previous year.

Nevertheless, the industrial SAIDI (for high voltage customer only) increased from 1.091 minutes/customer/year in 2006 to 2.889 minutes/customer/year, due to faults on 11 kV cables in May and November 2007 in KHTP industrial area which affected the supply to large numbers of customers.

Figure 43 : Total SAIDI (Minutes/Customer/Year) in KHTP Reported by NUR Distribution Sdn. Bhd. for Year 2005 to 2007



In 2007, the highest SAIDI at 28 minutes/customer/year was recorded in the month of March.

Causes of Interruptions - TNB

In 2007, the total unscheduled interruptions increased significantly to 74,058 compared to 55,523 in 2006. Interruptions caused by natural disasters recorded the highest percentages at 50.5% in 2007 compared to others causes.

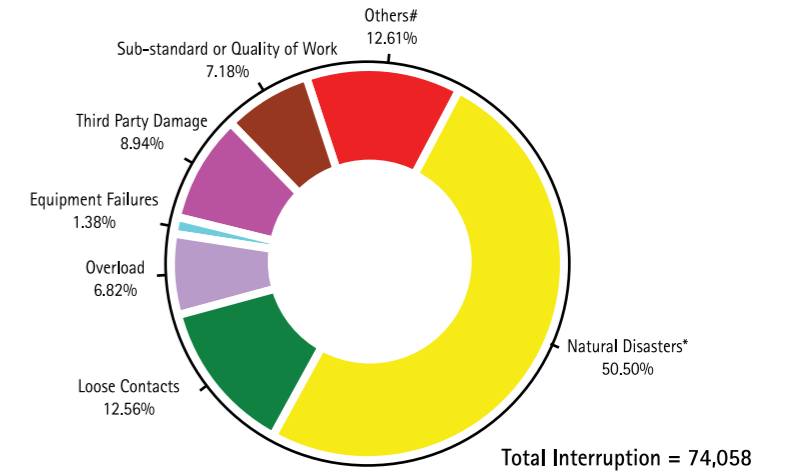
Notes :

Total unscheduled interruptions in Peninsular Malaysia from Year 2004 to 2006 :

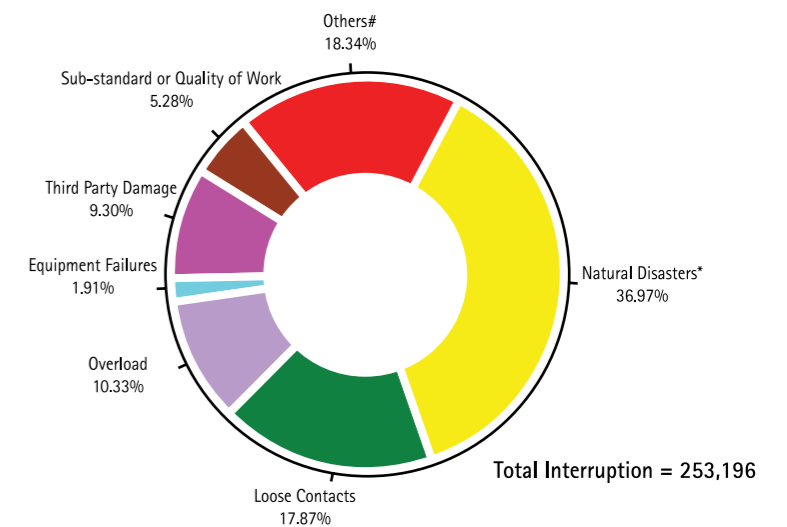
Year 2004@ : 52,514
 (@Prior to 1st September 2004, the figure did not include single customer experiencing supply interruption for a period of more than 1 minute)
 Year 2005 : 71,101
 Year 2006 : 55,523

Figure 44 : Causes of Unscheduled Electricity Supply Interruptions in Peninsular Malaysia

Year 2007



Year 2004 to 2007



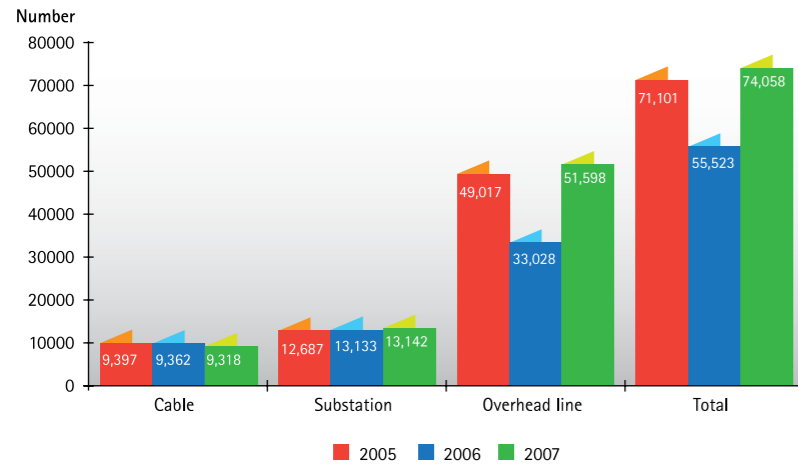
Over the 4 years average, interruptions due to natural disasters was the highest at 36.9% of the total unscheduled interruptions. However, causes due to fault in the network such as loose contacts, overload and equipment failures accounted for almost 30% of the total interruptions and should be given serious attention by the utilities.

Notes :

* (wind, storm, flood, land slides, etc.)

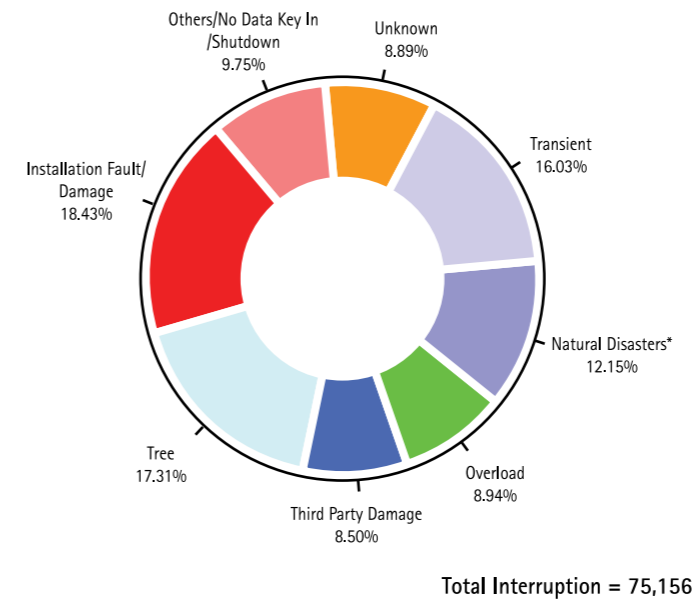
(ageing of insulation, design defect, relay malfunction, transient overload, encroachment/vandalism, maloperation of protection, material quality)

Figure 45 : Number of Unscheduled Electricity Supply Interruptions Due to Component of Network



The causes of electricity supply interruptions due to overhead line fault recorded the highest percentage, i.e. 70% of the total unscheduled electricity supply interruptions in Peninsular Malaysia in 2007.

Year 2004 to 2007



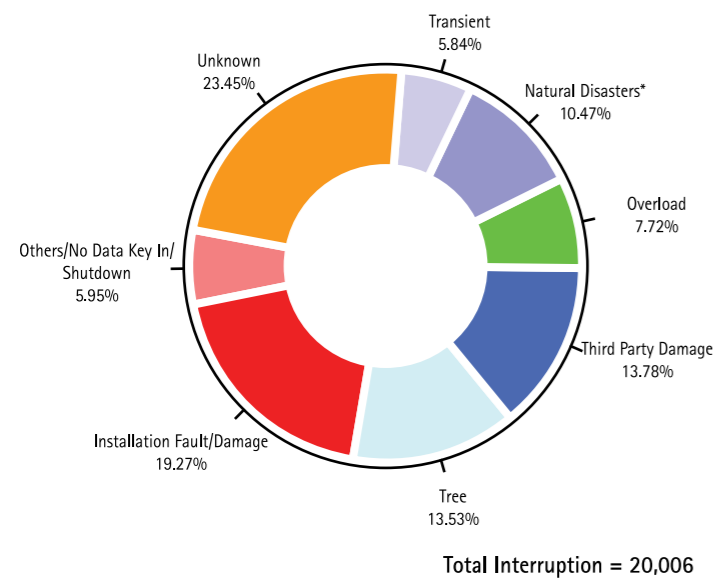
Over the last 4 years, interruptions due to installation fault/damage recorded the highest percentage at 18.4% of the total unscheduled interruptions.

Note : * (wind, storm, flood, land slides, etc.)

Causes of Interruptions - SESB

Figure 46 : Causes of Unscheduled Electricity Supply Interruptions in SESB's System

Year 2007



In 2007, the total unscheduled interruptions in Sabah decreased to 20,006 from 22,436 in 2006. Almost 24% of the total interruptions were reported due to unknown causes, 19.3% due to installations faults and 13.8% due to work by third party causing damage to utility's installations.

Notes :

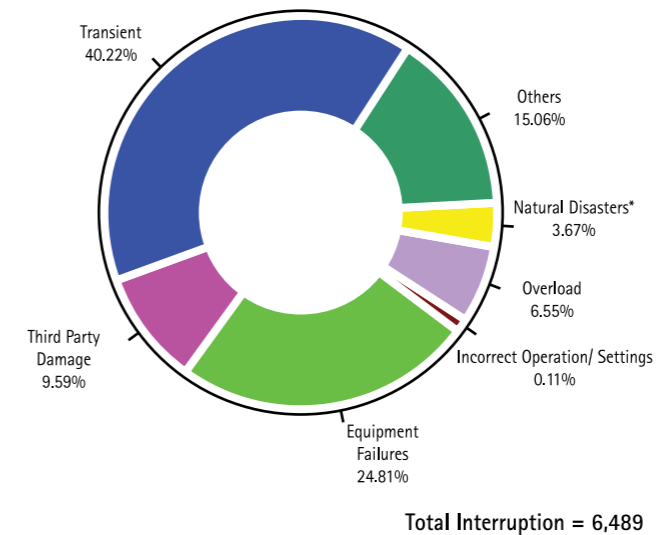
Total unscheduled interruptions in Sabah from Year 2004 to 2006 :

Year 2004 : 13,335
Year 2005 : 19,379
Year 2006 : 22,436

Causes of Interruptions - Sarawak Energy Berhad

Figure 47 : Causes of Unscheduled Electricity Supply Interruptions in Sarawak Energy Berhad

Year 2007



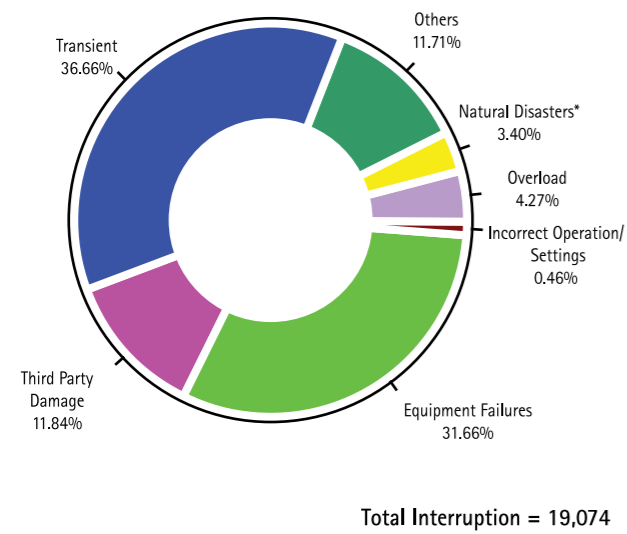
The causes of unscheduled electricity supply interruptions increased by 3.3% to 6,489 compared to 6,279 in 2006. The interruptions due to transient faults still recorded the highest percentage, i.e. 40.2% of the total unscheduled interruptions in 2007. This was followed by interruptions due to equipment failures at 24.8%.

Notes :

Total unscheduled interruptions in Sarawak from Year 2004 to 2006 :

Year 2004 : 3,283
Year 2005 : 3,023
Year 2006 : 6,279

Year 2004 to 2007



Over the last 4 years, it can be seen that interruptions due to transient faults and equipment failures accounted for a combined percentage of 68% of the total interruptions.

Note : * (wind, storm, flood, land slides, etc.)

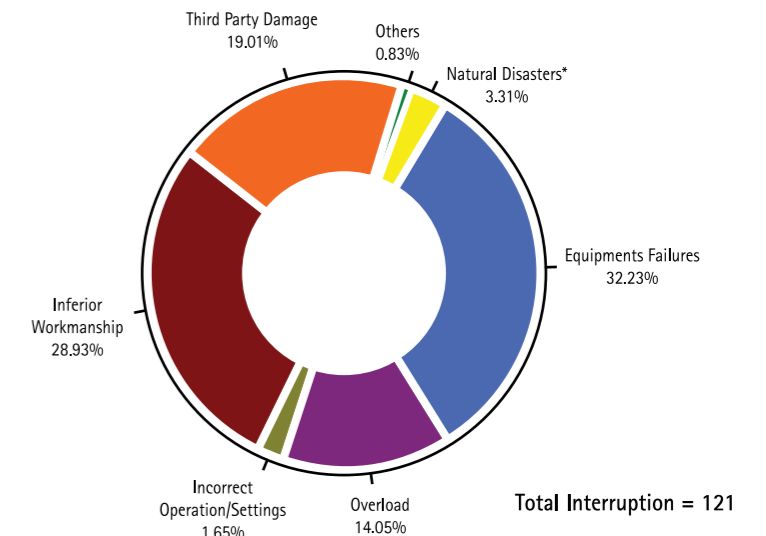
Causes of Interruptions – Other Electricity Distributors

Table 9 : Causes of Unscheduled Electricity Supply Interruptions Reported by Electricity Distribution Apart from TNB and SESB for Year 2005 to 2007

Unscheduled Causes of Interruptions	K.K.I.P Power Sdn. Bhd.			NUR Distribution Sdn. Bhd.		
	2005	2006	2007	2005	2006	2007
Natural Disasters (wind, storm, flood, land slides, etc.)	0	0	0	1	1	2
Equipment Failures	5	2	5	11	14	14
Overload	0	0	0	5	4	8
Incorrect Operation / Settings	0	0	0	0	1	1
Inferior Workmanship	0	0	0	19	7	9
Caused by Third Parties	3	25	23	13	5	5
Others	0	0	0	0	0	1
Total Number	8	27	28	49	32	40

Most unscheduled interruptions reported by NUR Distribution Sdn. Bhd. were due to equipment failures, whereas in K.K.I.P the interruptions due to the works by third parties causing damage to the distribution system were the major causes reported in 2007.

Figure 48 : Causes of Unscheduled Electricity Supply Interruptions of NUR Distribution for Year 2005 to 2007



Over the last 3 years, the interruptions due to equipment failures and inferior workmanship accounted for almost 61% of the total interruptions.

Note : * (wind, storm, flood, land slides, etc.)

VOLTAGE QUALITY

Incidents of Overvoltage

In 2007, the number of overvoltage incidents increased significantly compared with the previous year, i.e. from 100 incidents in 2006 to 219 incidents. Major causes of overvoltage incidents were loose connections due to poor insulating piercing connector, missing earth copper connection due to theft, fouling trees on the lines etc.

Figure 49 : Overvoltage Incidents Reported for Year 2003 to 2007

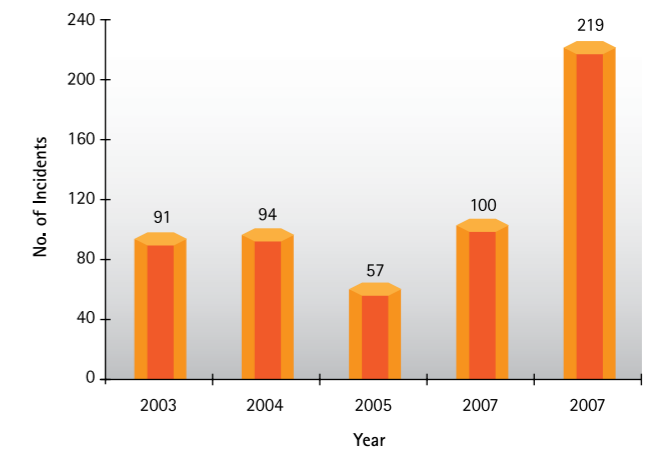
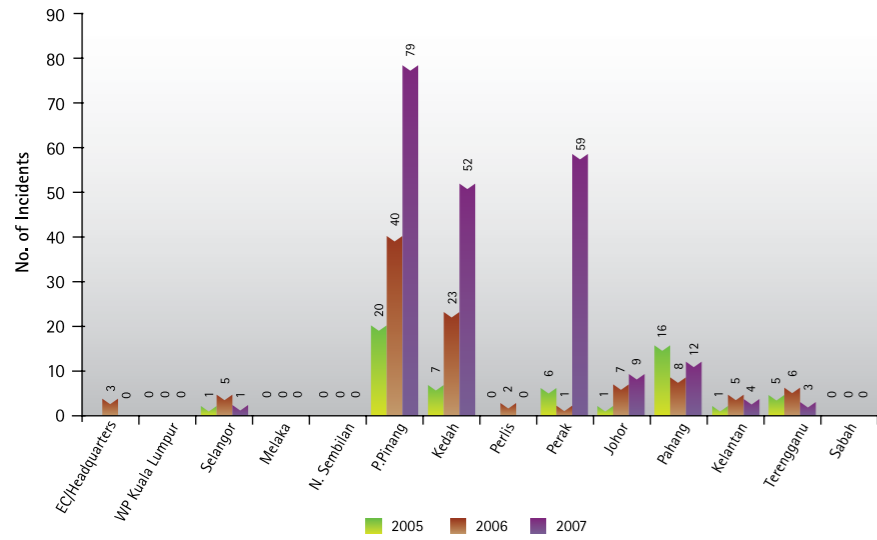
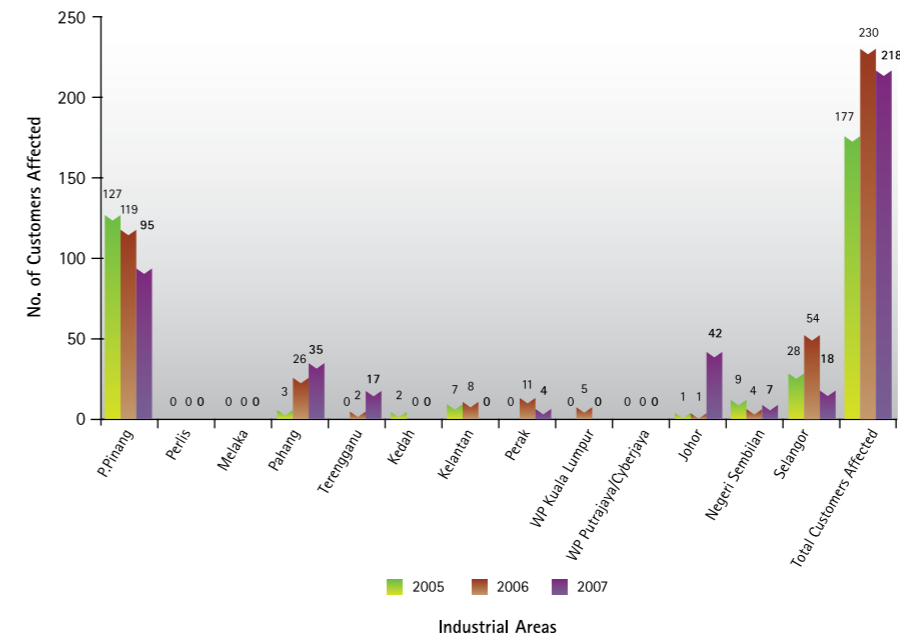


Figure 50 : Number of Incidents of Overvoltage Reported in Various States in Peninsular Malaysia and Sabah for Year 2005 to 2007



The number of overvoltage incidents was highest in Pulau Pinang with 79 incidents followed by Perak and Kedah with 59 and 52 incidents respectively.

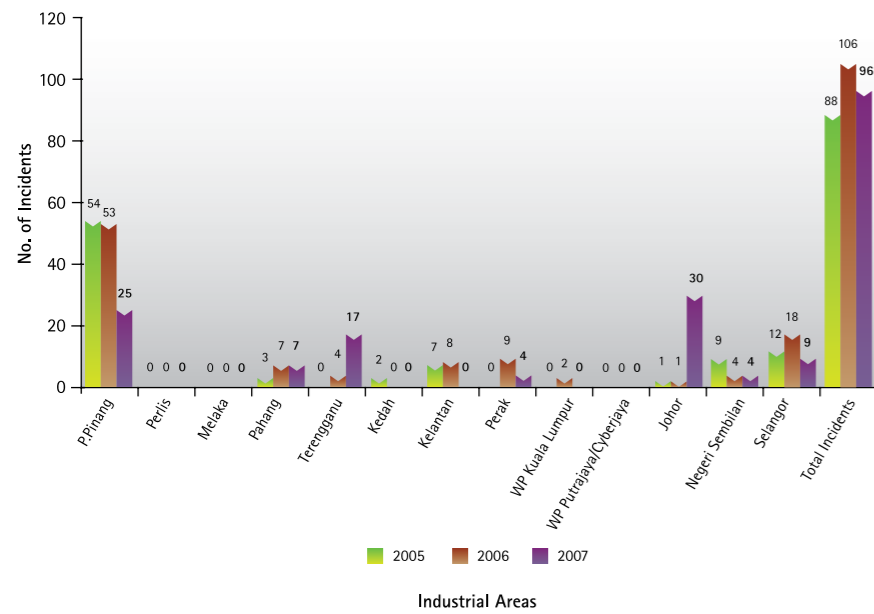
Figure 52 : Number of Customers in the Major Industrial Estates Affected by Voltage Dips for Year 2005 to 2007



At the end of December 2007, the number of consumers affected by the incidents also dropped by 5.2% to 218 from 230 in 2006.

Voltage Dips In TNB's Supply System

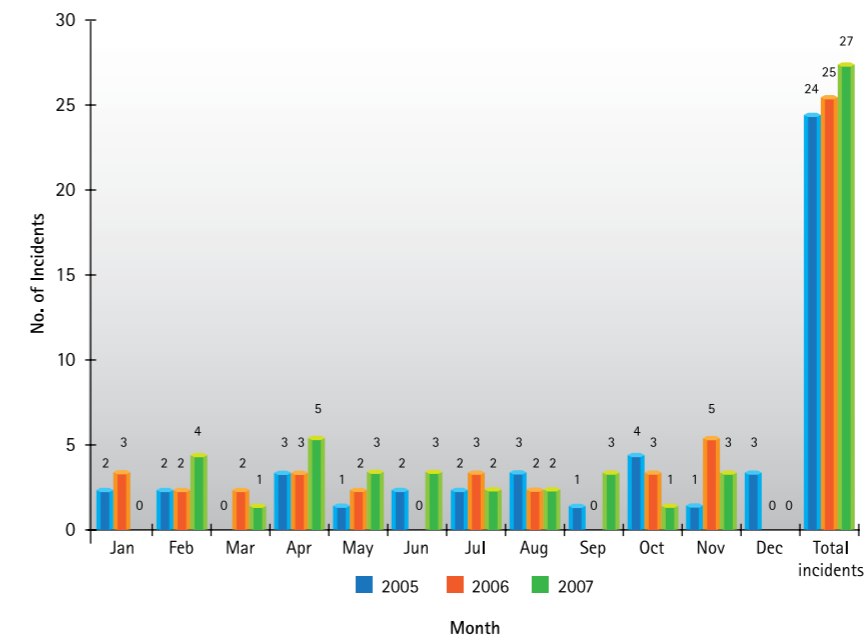
Figure 51 : Number of Voltage Dip Incidents Reported in Major Industrial Estates in Peninsular Malaysia for Year 2005 to 2007



At the end of December 2007, the number of voltage dips incidents reported at major industrial areas in Peninsular Malaysia was 96 incidents, i.e. a drop of 9.4% from 106 incidents in 2006.

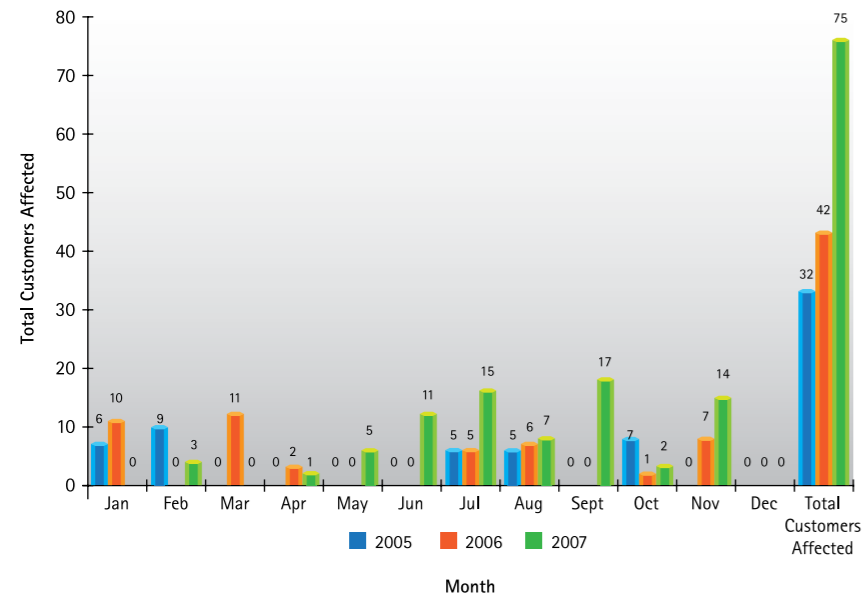
Voltage Dips In KHTP Supply System

Figure 53 : Number of Voltage Dip Incidents in Kulim Hi Tech Park (KHTP) from the Year 2005 to 2007



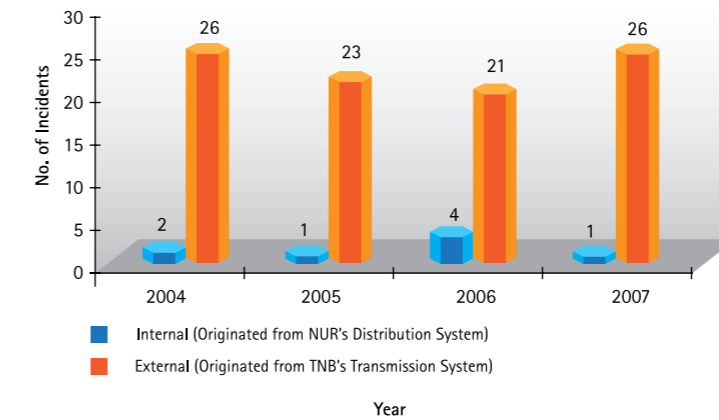
The number of voltage dip incidents in KHTP reported in 2007 increased slightly to 27 from 25 in 2006.

Figure 54 : Number of Customers in KHTP Affected by Voltage Dips from the Year 2005 to 2007



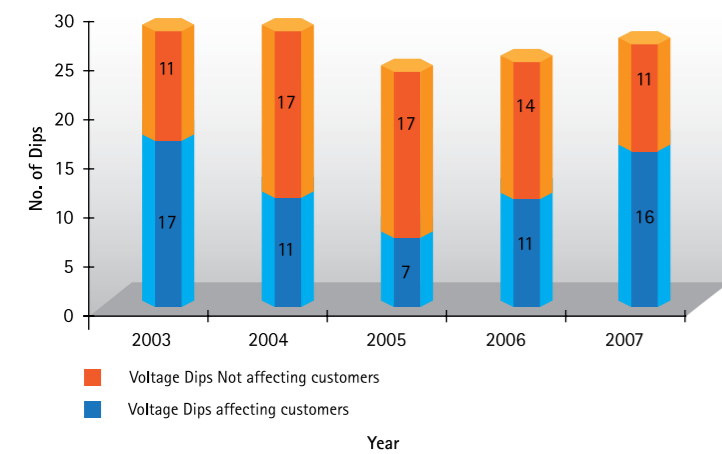
The number of consumers affected by the voltage dip incidents increased to 75 from 42 in 2006.

Figure 56 : Incidents of Voltage Dips Affecting Consumers in KHTP



Over the last 4 years, the number of voltage dip incidents affecting consumers in Kulim Hi-Tech Park and originating from TNB's transmission system were higher compared with incidents originated from NUR's distribution system itself. The number of voltage dip incidents originating from NUR's distribution system decreased from 4 incidents in 2006 to 1 incident in 2007.

Figure 55 : Number of Voltage Dips Incidents Affecting Customers and Not Affecting Customers from the Year 2003 to 2007



The number of voltage dips incidents affecting customers increased to 16 compared to 11 in 2006.

QUALITY OF SERVICE

Annual Performance Report on Customer Services

Every year TNB, SESB and NUR are required to submit annual report on the performance of customer services which cover 15 types of services, as stipulated under their licence conditions. In order to meet the customer's needs and strive for better performance, the standard of performance of electricity supply services of TNB are currently being reviewed.

SESB and NUR submitted annual report on the performance of customer services based on condition 42 (for SESB) and condition 34 (for NUR) using the new standard of performance of customer services are as shown in Appendix II and Appendix III. However, TNB's report was based on the old standard of performance of customer services which cover 15 types of services as shown in Appendix I.

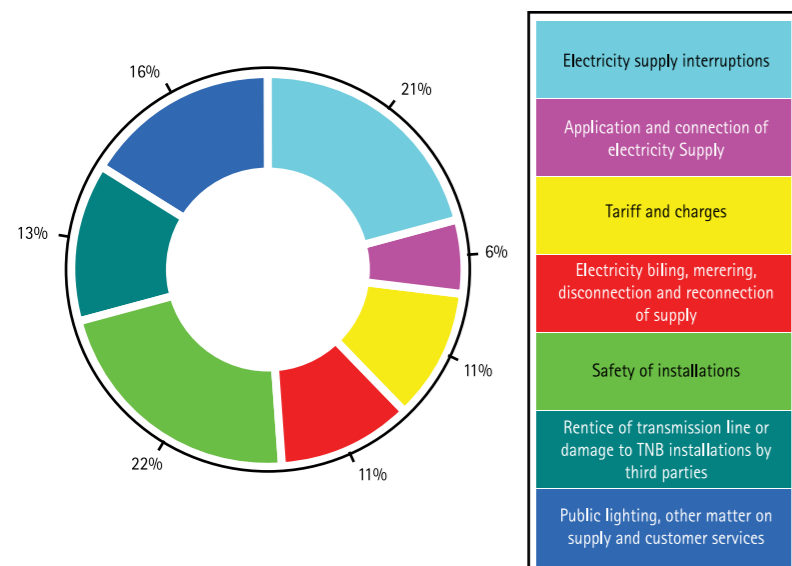
COMPLAINTS RECEIVED BY THE ENERGY COMMISSION

Table 10 : Number and Type of Complaints Received by the Energy Commission for Year 2004 to 2007

Electricity Supply Services				
Issues	No. of Complaints Received			
	2004	2005	2006	2007
Electricity supply interruptions	15	31	33	31
Application and connection of electricity supply	19	21	18	9
Tariff and charges	13	14	37	16
Electricity billing, metering, disconnection and reconnection of supply	10	12	39	16
Safety of installations	18	5	10	33
Rentice of transmission line or damage to TNB installations by third parties	10	16	19	19
Public lighting, other matter on supply and customer services	16	18	34	23
TOTAL	101	117	190	147
Quality of Supply				
Overvoltage	94	57	100	219
Power quality (dips, surges etc.)	6	3	4	6
TOTAL	100	60	104	225

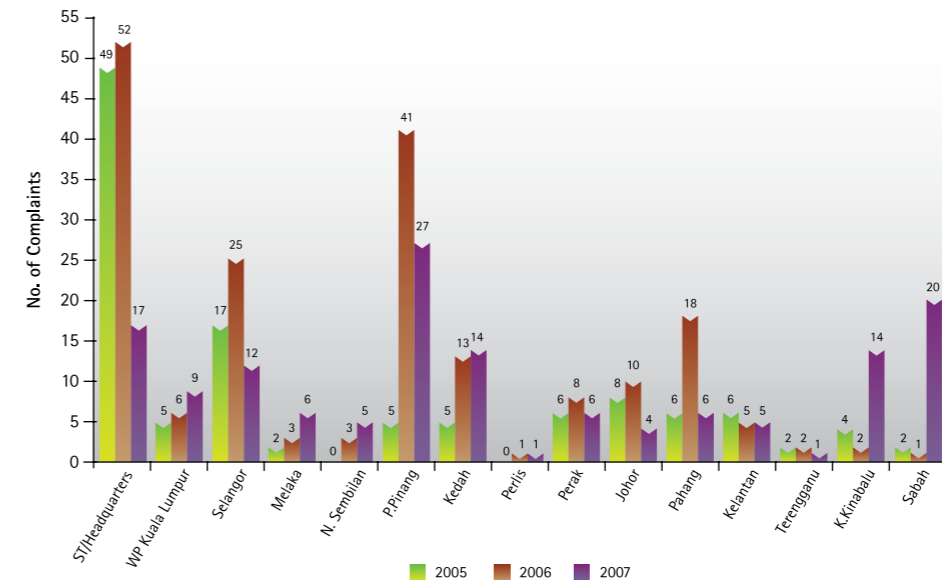
In 2007, the number of complaints increased significantly from 294 complaints in 2006 to 372 complaints. The number of complaints pertaining to electricity supply services had decreased, but complaints of overvoltage incidents increased significantly from the previous year.

Figure 57 : Statistics of Complaints of Electricity Supply Services Received in 2007



Of the total complaints of electricity supply services received in 2007, the complaints on safety of installations and supply interruptions were the highest at 22% and 21% respectively. This was followed by the complaints regarding public lighting, other matter on supply and customer services.

Figure 58 : Statistics of Complaints of Electricity Supply Services Reported in Various States in Peninsular Malaysia for Year 2005 to 2007



Of the overall complaints, Pulau Pinang recorded the highest number with 27 complaints in 2007.

A total of 330 complaints or 89% of the complaints reported in 2007 were resolved, where 125 complaints were on supply services and 205 complaints were on quality of supply issues. Various actions had been taken and carried out from time to times by the Energy Commission and utilities to resolve the complaints such as site investigations, conducting forum or dialogue, meetings with the relevant parties etc.

Some of the major complaints resolved in 2007 were :

Table 11 : Status of Resolution of Complaints in December 2007

	Services	Supply
No. of Cases Resolved	125	205
No. of Cases not Resolved Yet	22	20
Total Cases	147	225

- Complaint on TNB for imposing surcharge of 1% on a compound basis on electricity bills;
- Dispute regarding back-billing to consumers suspected of using electricity dishonestly;
- Incidents of overvoltage resulting in damage to consumers electrical appliances;
- Delay on the part of TNB in giving the supply to consumers.

AVERAGE SELLING PRICES OF ELECTRICITY

Average Selling Prices of Utilities

Table 12 : Average Selling Prices of Electricity in Malaysia and Some Countries in Asia in 2007

Utility/ Country	Domestic (sen/kWh)	Commercial (sen/kWh)	Industrial (sen/kWh)	Public Lighting (sen/kWh)	Agriculture (sen/kWh)	Overall (sen/kWh)
TNB	24.66	30.77	23.79	16.92	29.99	26.09
SESB	22.28	28.83	23.79	29.89	N/A	25.17
Sarawak Energy Berhad	31.19	32.06	23.00	47.08	N/A	28.47
Egat, Thailand	32.44	34.95	29.69	N/A	26.44	31.04
PLN, Indonesia	22.67	28.24	23.23	23.74	N/A	23.44
Meralco, Philippines	64.88	59.89	52.20	N/A	N/A	60.19
Kepeco, Korea	37.01	38.94	25.26	29.23	N/A	30.91
CLP, Hong Kong	N/A	N/A	N/A	N/A	N/A	43.57
Taipower, Taiwan	26.42	27.26	18.76	10.83	N/A	21.64
Tepeco, Japan	61.14	66.86	66.86	N/A	N/A	61.83

With the average increase of 12% in electricity tariff which took effect on 1st June 2006, the average selling prices of TNB in 2007 was 26.1 sen/kWh.

Notes :

1. Average Selling Prices of TNB and SESB are for Financial Year Ended September 2006 to August 2007
2. Average Selling Prices for TEPCO, Japan are for Financial Year Ended April 2006 to March 2007
3. Average Selling Prices for Taipower, Taiwan and Kepeco, Korea are from January 2007 to June 2007
4. Average Selling Prices for CLP, Hong Kong are from 3rd Quarter Report January 2007 to September 2007

N/A – Not Available
Source : Tenaga Nasional Berhad

Figure 59 : Comparison of Average Selling Prices of Electricity for Domestic Customers in 2007

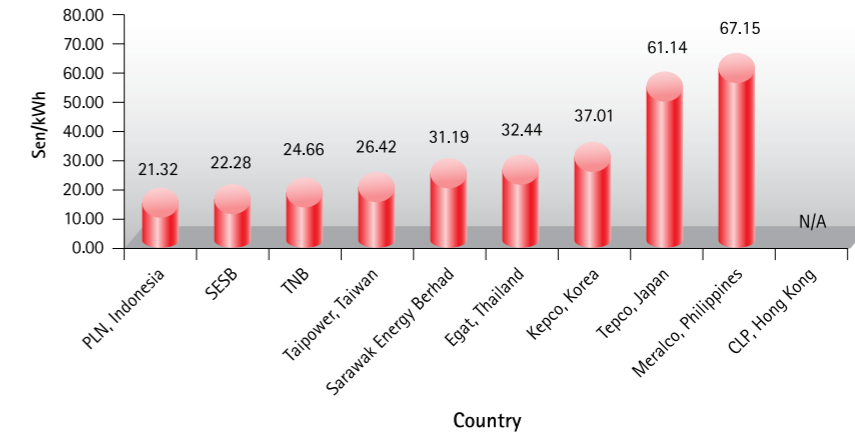


Figure 60 : Comparison of Average Selling Prices of Electricity for Commercial Customers in 2007

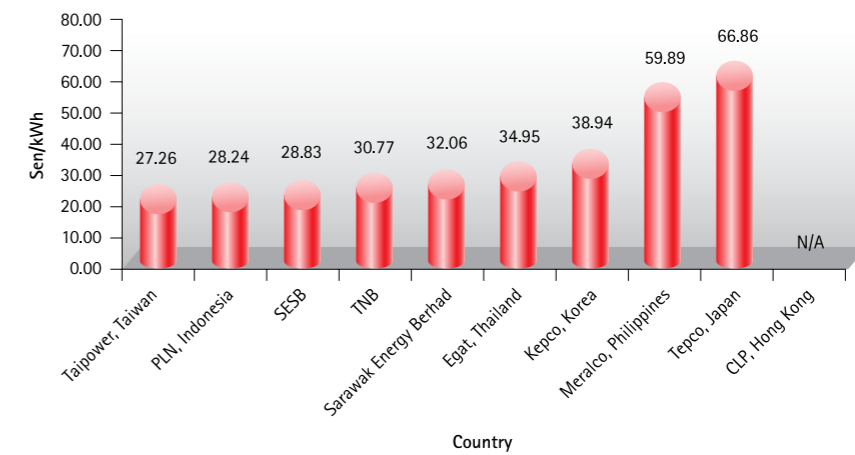


Figure 61 : Comparison of Average Selling Prices of Electricity for Industrial Customers in 2007

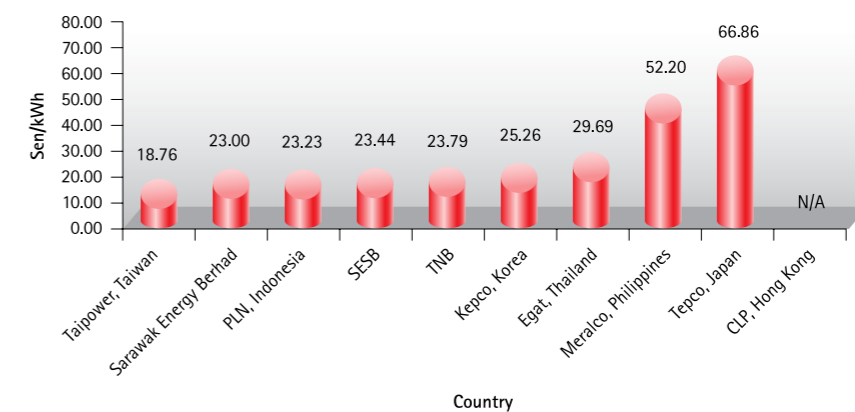


Figure 62 : Comparison of Average Selling Prices of Electricity for Street Lighting in 2007

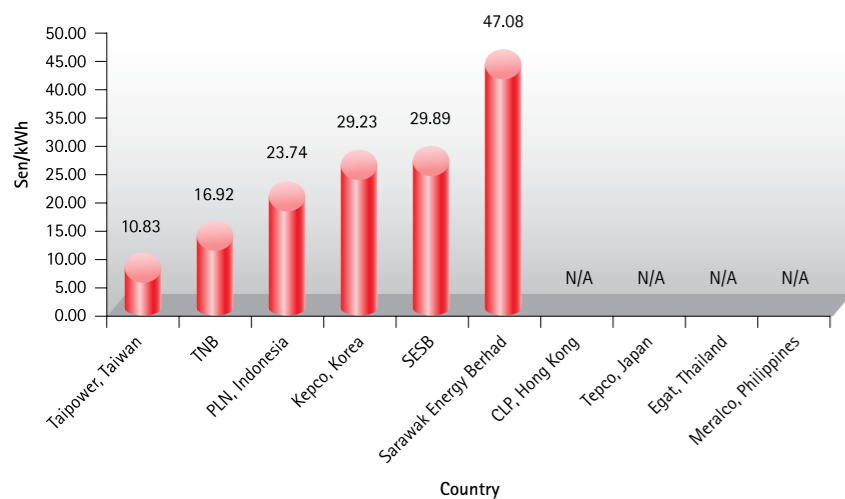
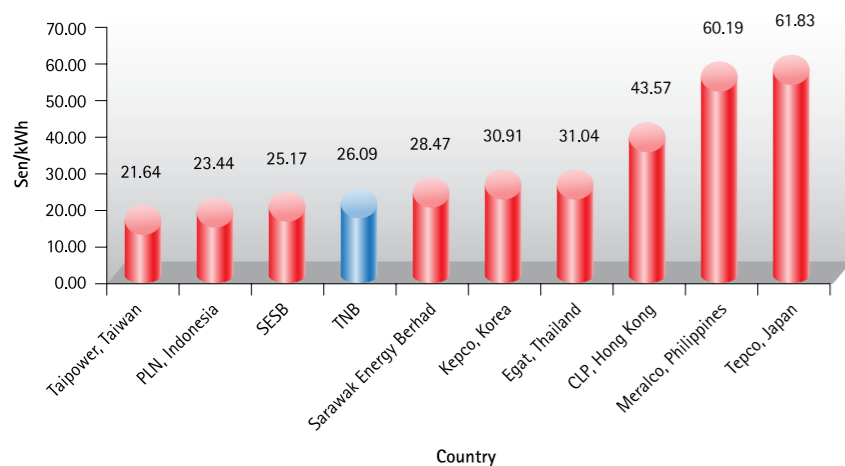


Figure 63 : Comparison of Average Selling Prices of Electricity in 2007



The average selling price of TNB in 2007 did not increase significantly from the previous year. In nominal term, the average selling price of TNB is still the 4th lowest in the region.

APPENDIX I

REPORT ON THE PERFORMANCE OF CUSTOMER SERVICES OF TNB FOR YEARS 2003 TO 2007

Details	Performance in 2003	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
1. Connection of Electricity Supply					
A. Change Of Consumers					
No. of applications	127,648	131,723	175,887	109,159	87,870
Connection within 2 working days after an appointment for connection (%)	99%	97%	98%	98%	99%
B. New Supply (Low Voltage)					
i. Individual Applications Under Normal Conditions					
No. of applications	248,267	247,984	277,347	218,872	210,258
Connection within 2 working days after an appointment for connection (%)	99%	96%	96%	97%	99%
ii. Individual Applications Under Abnormal Conditions					
No. of applications	8,929	12,174	15,786	4,275	2,585
Connection within 2 weeks after an appointment for connection (%)	98%	100%	95%	99%	97%
iii. Bulk Supply Application And Housing Schemes					
No. of applications	120,936	106,819	156,606	125,466	111,692
Connection within 1 month after an appointment for connection (%)	99%	100%	99%	98%	100%
2. Supply Restoration After Breakdowns					
i. Reports					
No. of reports	1,114,240	1,156,186	2,616,759	1,367,415	985,508
Consumers being given report numbers (%)	82%	84%	92%	87%	92%
ii. Minor Breakdowns					
No. of minor breakdowns	66,321	84,203	115,226	152,175	206,533
Breakdown rectified within 4 hours (%)	96%	96%	91%	99%	98%
iii. Major/Extra Ordinary Breakdowns					
No. of major breakdowns	7,476	8,440	19,469	13,728	14,232
Restoration within 2 working days (%)	99%	97%	48%	100%	99%

Details	Performance in 2003	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
3. Supply Reconnection After Disconnection					
No. of supply disconnections	983,017	654,946	864,208	807,729	983,033
Bills paid before 1:00 p.m. on disconnection day	555,666	355,150	556,397	484,600	572,163
Supply reconnection on the same day for bills paid before 1:00 p.m. (%)	99%	100%	98%	100%	95%
4. Supply Interruptions Which Are Planned / Scheduled					
No. of scheduled interruptions	6,673	8,831	8,117	14,807	11,273
Consumers given 24 hours notice (%)	95%	90%	86%	98%	98%
Consumers not given notice (%)	2%	2%	6%	2%	2%
5. Meter Reading					
No. of consumers with estimated readings exceeding 3 consecutive months	360,160	355,318	353,369	447,339	599,834
Notice given to customers with estimated readings exceeding 3 consecutive months (%)	97%	97%	98%	99%	100%
6. Enquiries / Written Complaints From Consumers					
i. Written enquiries including questions regarding accounts/bills					
No. of written complaints received	5,067	7,009	8,601	9,210	7,140
Reply within 7 working days (%)	100%	98%	99%	99%	100%
7. Complaints Through Telephone					
No. of complaints through telephone which could not be settled	35,694	29,145	22,555	75,065	53,918
Consumers recontacted within 24 hours (%)	99%	99%	97%	100%	100%
8. Appointment For Meter Accuracy Check					
No. of appointments for meter accuracy check	6,645	10,057	10,884	12,067	21,760
Meter accuracy check carried out within 2 working days (%)	100%	99%	98%	98%	100%

Details	Performance in 2003	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
9. Meter Replacement					
No. of meters replacement	275,353	97,935	122,472	100,763	104,587
Meter replacement within 2 weeks (%)	100%	98%	99%	99%	98%
10. Appointment With Consumers					
i. For Appointments Outside TNB Premises					
Arrival of TNB officers not more than 30 minutes from agreed time (%)	100%	100%	100%	100%	100%
ii. Postponement by TNB					
Subsequent appointment made within 2 working days (%)	99%	97%	93%	100%	99%
11. Deposits					
No. of consumers found after 6 months that their deposits exceed average consumption of 2 months	26,955	28,239	4,635	1,343	2,469
Consumers who have the excess deposits returned (%)	100%	94%	99%	100%	99%
12. Refund of Consumer Deposits					
No. of consumers who have forwarded all required documents for refund of deposits	94,041	87,330	107,362	96,043	185,178
Consumers who have their deposits refunded within 2 months (%)	98%	97%	97%	98%	100%
13. Collection					
Proof of payment sent to payment via mail within 7 working days (%)	97%	97%	100%	100%	98%
14. Supply Disconnection					
i. With 24 hours Notice	6,077	1,714	32,598	15,709	65,520
No. of disconnections due to dangerous consumer installations	3,854	1,103	29,455	1,103	62,977
No. of disconnections due to suspicion of theft of electricity	317	609	3,105	14,089	79
No. of disconnections due to electricity meter being damaged	1,906	2	38	517	2,464

Details	Performance in 2003	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
ii. Without Any Notice	365,494	235,338	369,386	200,003	114,163
No. of disconnections due to failure to pay the bills within 15 days after issuance of bill	353,168	211,032	317,527	193,735	104,572
No. of disconnections due to failure to pay additional deposits within 7 days from the date of notice.	12,323	22,136	50,998	5,278	9,587
No. of disconnections of installations which are dangerous.	3	2,170	861	990	4
15. Special Consumers Who Face Problems In Paying Electric Bills	448	599	782	522	354
No. of handicapped consumers who appealed to avoid disconnection.	40	65	95	44	19
No. of senior consumers who appealed to avoid disconnection.	56	77	227	248	111
No. of handicapped consumers who were assisted in payment of bills.	164	195	203	126	98
No. of senior consumers who were assisted in payment of bills.	188	262	257	104	126

Source : Tenaga Nasional Berhad

APPENDIX II

REPORT ON THE PERFORMANCE OF CUSTOMER SERVICES OF SESB FOR YEARS 2003 TO 2007

Details	Performance in 2003	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
1. Connection of Electricity Supply					
A. Change of Consumers					
No. of applications	6,401	9,597	7,600	11,410	13,213
Connection within 1 working day after an appointment for connection (%)	85.9%	92.3%	92.0%	88.5%	90.3%
B. New Supply (Low Voltage)					
i. Individual Applications Under Normal Conditions					
No. of applications	14,166	7,513	16,571	17,130	10,466
Connection within 2 working days after an appointment for connection (%)	71.7%	60.2%	70.0%	96.3%	83.0%
ii. Bulk Supply Application And Housing Schemes					
No. of applications	525	653	5,342	6,165	5,712
Connection within 2 weeks after an appointment for connection (%)	80.0%	56.5%	69.9%	58.2%	77.6%
2. Supply Restoration After Breakdowns					
i. Reports					
No. of reports	149,172	157,866	223,354	260,572	247,927
The information could not being given in that times was contacted again within 15 minutes (No. of Consumers)	1,457	3,126	2,628	3,500	2,060
Consumers being given report numbers (%)	100%	97.7%	95.0%	95.9%	95.5%
The consumers where the information could not being given in that times was contacted again within 15 minutes (%)	0.98%	1.98%	1.18%	1.34%	0.83%
ii. Minor Breakdowns					
No. of minor breakdowns	8,597	11,467	14,919	21,584	20,857
Breakdown rectified within 2 hours (%)	100%	94.9%	80.0%	81.5%	78.9%
iii. Major/Extra Ordinary Breakdowns					
No. of major breakdowns	1,271	791	3,124	928	2,993
Restoration within 12 hours (%)	83.6%	89.9%	90.0%	81.9%	79.3%

Details	Performance in 2003	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
3. Supply Reconnection After Disconnection					
No. of supply disconnections	63,480	52,126	56,746	74,474	77,350
Bills paid before 1:00 p.m. on disconnection day	30,674	26,793	55,611	70,510	42,681
Supply reconnection on the same day for bills paid before 1:00 p.m. (%)	48.3%	98.2%	98.0%	94.7%	55.2%
4. Supply Interruptions Which Are Planned / Scheduled					
i) Scheduled Interruptions					
No. of scheduled interruptions	802	1,003	1,659	2,010	618
Consumers being given notice within 7 days before interruptions	100%	72.9%	80.0%	80.0%	66.4%
ii) Planning of Scheduled Interruptions					
No. of scheduled interruptions planning of yearly and monthly	67	70	231	154	320
No. of large consumers which was expected affecting	1,286	9,393	30,052	120,099	164,790
No. of large consumers which was expected affecting informed about the planning of scheduled interruptions (%)	100.0%	90.7%	90.0%	82.5%	100.0%
5. Meter Reading					
No. of consumers with estimated readings exceeding 3 consecutive months	8,389	12,215	13,251	4,398	5,525
Notice given to customers with estimated readings exceeding 3 consecutive months (%)	25.5%	47.5%	49.5%	1.32%	50.0%
6. Enquiries / Written Complaints From Consumers					
i. Written Enquiries					
No. of written enquiries received	176	364	262	228	310
Reply within 5 working days (%)	52.8%	49.7%	51.5%	58.3%	85.5%
ii. Enquiries Through Telephone					
No. of complaints through telephone which could not be settled	1,246	1,620	7,017	2,291	1,682

Details	Performance in 2003	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
Consumers recontacted within 24 hours (%)	15.9%	15.4%	41.6%	11.3%	8.0%
iii. Enquiries in Counter					
No. of complaints through counter which could not be settled	592	3,229	9,237	1,457	1,158
Consumers recontacted within 24 hours (%)	2.61%	11.30%	16.9%	3.55%	3.05%
7. Service Counter					
No. of consumers who were getting the services in counter	155,031	230,389	153,360	177,060	323,427
Consumers that the waiting time should not exceed 15 minutes (%)	84.4%	81.7%	80.0%	81.9%	87.0%
8. Appointment For Meter Accuracy Check					
No. of appointments for meter accuracy check	989	2,328	2,025	1,251	2,226
Meter accuracy check carried out within 2 working days (%)	88.9%	62.1%	51.9%	40.1%	49.2%
9. Meter Replacement					
No. of meters replacement	3,956	1,358	3,704	3,681	4,629
Meter replacement within 2 working days (%)	74.2%	66.9%	67.3%	61.3%	51.03%
10. Appointment With Consumers					
i. For Appointments Outside SESB Premises					
Arrival of SESB officers not later than from agreed time (%)	95.9%	87.9%	82.6%	83.5%	90.4%
ii. Postponement by SESB					
Subsequent appointment made within 1 working day (%)	52.4%	84.2%	79.7%	79.8%	48.9%
11. Deposits					
No. of consumers found after 6 months that their deposits exceed average consumption of 2 months	12,798	2,035	1,244	1,351	5,797
Consumers who have the excess deposits returned (%)	6.5%	91.2%	89.9%	89.9%	27.9%

Details	Performance in 2003	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
12. Refund of Consumer Deposits					
No. of consumers who have forwarded all required documents for refund of deposits	4,744	4,579	5,820	5,660	6,214
Consumers who have their deposits refunded within 1 month (%)	69.4%	74.3%	75.0%	79.5%	86.3%
13. Collection					
Proof of payment sent to payment via mail within 2 working days (%)	58.6%	0.0%	73.6%	75.0%	92.3%
14. Supply Disconnection					
i. With 24 hours Notice					
No. of disconnections due to dangerous consumer installations	4,619	415	500	480	286
No. of disconnections due to suspicion of theft of electricity	228	227	492	410	89
No. of disconnections due to electricity meter being damaged	160	320	310	250	10
ii. With More Than 24 hours Notice					
No. of disconnections due to failure to pay the bills within 15 days after issuance of bill	25,983	52,126	56,746	36,003	25,583
No. of disconnections due to failure to pay additional deposits within 7 days from the date of notice	1,021	1,478	315	231	195
iii. Without Any Notice					
No. of disconnections of installations which are dangerous	14	21	30	25	162

Details	Performance in 2003	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
15. Special Consumers Who Face Problems In Paying Electric Bills					
No. of handicapped consumers who appealed to avoid disconnection.	24	28	40	1	0
No. of senior consumers who appealed to avoid disconnection.	51	34	105	63	3
No. of handicapped consumers who were assisted in payment of bills.	23	12	1	1	26
No. of senior consumers who were assisted in payment of bills.	30	1	35	1	70
16. Voltage Outside Standard					
i. No enhancement Work on Network is Required					
No. of complaints	39	26	1,274	2,998	815
Complaints was settled within 2 days from the date of made complaint (%)	100.0%	92.3%	98.7%	95.0%	95.7%
ii. Network Enhancement Work is Required					
No. of Complaints	26	19	53	20	72
Complaints was settled within 3 months from the date of made complaint (%)	30.8%	68.4%	88.7%	35.0%	51.4%
17. New / Increase of Supply Application Reply					
i. No New Substation Required					
No. of applications	1,947	2,295	1,759	1,744	2,797
Applications being reply within 1 week from the date of made application (%)	91.1%	69.3%	73.9%	76.8%	79.0%
ii. New Substation Required					
No. of applications	145	20	79	50	59
Applications being reply within 2 weeks from the date of made application (%)	99.3%	90.0%	70.9%	70.0%	81.4%

Details	Performance in 2003	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
18. Transferring of Meter Location Upon Consumer Request					
Transferring of meter location upon consumer which was felt an necessary and applicable (No. of application)	9	33	110	49	23
Applications which was necessary and being felt an applicable was settled within 3 working days (%)	77.8%	72.7%	83.6%	34.7%	69.6%
19. Education of Energy Efficiency					
Consumers education of energy efficiency and electricity accident, including the activities that nearest of installation and electricity line (No. of programmes)	17	10	8	6	10
20. Power Quality Improvement					
No. of activities to improve of power quality	104	142	84	214	581

Note : (N/A) Not Available

Source : Sabah Electricity Sdn. Bhd.

APPENDIX III

REPORT ON THE PERFORMANCE OF CUSTOMER SERVICES
OF NUR DISTRIBUTION SDN. BHD.
FOR THE YEARS 2004 TO 2007

Details	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
1. Connection of Electricity Supply				
A. Change of Consumers				
No. of applications	17	26	11	20
Connection within 1 working day after an appointment for connection (%)	100%	100%	100%	100%
B. New Supply (Low Voltage)				
i. Individual Applications Under Normal Conditions				
No. of applications	221	170	249	117
Connection within 1 working day after an appointment for connection (%)	100%	100%	100%	100%
ii. Bulk Supply Application And Housing Schemes				
No. of applications	43	0	0	0
Connection within 1 week after an appointment for connection (%)	100%	N/A	N/A	N/A
2. Supply Restoration After Breakdowns				
i. Reports				
No. of reports	N/A	N/A	N/A	N/A
Consumers being given report numbers (%)	N/A	N/A	N/A	N/A
ii. Minor Breakdowns				
No. of minor breakdowns	27	19	15	16
Breakdown rectified within 2 hours (%)	85%	90%	100%	100%
iii. Major/Extra Ordinary Breakdowns				
No. of major breakdowns	10	30	15	24
Restoration within 24 hours (%)	90%	100%	93%	100%

Details	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
3. Supply Reconnection After Disconnection				
No. of supply disconnections	138	46	128	152
Bills paid before 1:00 p.m. on disconnection day	136	46	128	152
Supply reconnection on the same day for bills paid before 1:00 p.m. (%)	99%	100%	100%	100%
4. Supply Interruptions Which Are Planned / Scheduled				
No. of scheduled interruptions	61	52	28	39
Consumers given 7 days notice (%)	90%	81%	100%	92%
5. Meter Reading				
No. of consumers with estimated readings exceeding 2 consecutive months	140	60	51	47
Notice given to customers with estimated readings exceeding 2 consecutive months (%)	99%	95%	92%	100%
6. Enquiries / Written Complaints From Consumers				
i. Written enquiries including question regarding accounts/bills				
No. of written complaints received	45	66	51	54
Reply within 5 working days (%)	100%	99%	100%	100%
7. Service Counter				
Consumers that the waiting time should not exceed 20 minutes (%)	100%	N/A	N/A	N/A
8. Appointment for Meter Accuracy Check				
No. of appointments for meter accuracy check	9	21	9	14
Meter accuracy check carried out within 1 working day (%)	100%	100%	100%	100%

Details	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
9. Meter Replacement				
No. of meter replacement	4	19	6	5
Meter replacement within 2 working days (%)	100%	100%	100%	100%
10.Appointment With Consumers				
i. For appointments Outside NUR Premises				
Arrival of NUR officers not more than 15 minutes from agreed time (No. of appointments)	299	280	328	193
ii. Postponement by NUR				
Subsequent appointment made within 1 working day (%)	100%	100%	100%	100%
11.Deposits				
No. of consumers found after 6 months that their deposits exceed average consumption of 2 months	0	0	0	0
Consumers who have the excess deposits returned (%)	N/A	N/A	N/A	N/A
12.Refund of Consumer Deposits				
No. of consumers who have forwarded all required documents for refund of deposits	79	51	65	88
Consumers who have their deposits refunded within 15 working days (%)	2.5%	43%	48%	88%
13.Collection				
Proof of payment sent to payment via mail within 5 working days (%)	N/A	93%	92%	98%

Details	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
14.Supply Disconnection				
i. With 24 hours Notice				
No. of disconnections due to dangerous consumer installations	N/A	N/A	N/A	N/A
No. of disconnections due to suspicion of theft of electricity	N/A	N/A	N/A	N/A
No. of disconnections due to electricity meter being damaged	N/A	N/A	N/A	N/A
ii. Without Any Notice				
No. of disconnections due to failure to pay bills within 15 days after issuance of bil	N/A	N/A	N/A	N/A
No. of disconnections due to failure to pay additional deposits within 7 days from the date of notice	153	39	124	162
No. of disconnections of installations which are dangerous	6	1	N/A	N/A
15.Special Consumers Who Face Problems in Paying Electric Bills				
Special arrangement by NUR to collect from handicapped and senior consumers (No. of consumers)	0	0	0	0
16.Voltage Outside Standard				
i. No enhancement Work on Network is Required				
No. of complaints	2	0	2	2
Complaints was settled within 2 days from the date of made complaint (%)	100%	N/A	100%	100%
ii.Network Enhancement Work is Required				
No. of Complaints	0	0	0	0
Complaints was settled within 6 months from the date of made complaint (%)	N/A	N/A	N/A	N/A

INDUSTRY STATISTICS AND INFORMATION

Details	Performance in 2004	Performance in 2005	Performance in 2006	Performance in 2007
17.New / Increase of Supply Application Reply				
i. No New Substation Required				
No. of applications	1	13	25	8
Applications being reply within 1 week from the date of made application (%)	100%	100%	100%	100%
ii.New Substation Required				
No. of applications	1	0	0	0
Applications being reply within 2 weeks from the date of made application (%)	100%	N/A	N/A	N/A
18.Transferring of Meter Location Upon Consumer Request				
Transferring of meter location upon consumer which was felt an necessary and applicable (No. of application)	4	2	3	1
Applications which was necessary and being felt an applicable was settled within 3 working days (%)	100%	100%	100%	100%
19.Education of Energy Efficiency				
Consumers education of energy efficiency and electricity accident, including the activities that nearest of installation and electricity line (No. of programmes)	4	4	4	4
20.Power Quality Improvement				
No. of activities to improve of power quality	93	63	68	67

Note : (N/A) Not Available

- Tariff Rates in Malaysia
- Statistics of Tenaga Nasional Berhad (TNB)
- Statistics of Sabah Electricity Sdn. Bhd. (SESB)
- Statistics of Sarawak Energy Berhad
- List of Independent Power Producers (IPPs)
- List of Small Renewable Energy Power Producers (SREP)
- List of Electricity Distributors
- List of Major Co-Generators
- Statistics of Self-Generation
- Other Important Statistics and Information of the Electricity Supply Industry
- Key Contacts

TARIFF RATES IN MALAYSIA

TARIFF RATES FOR TENAGA NASIONAL BERHAD

No	Tariff Category	Unit	Rates
1	Tariff A – Domestic Tariff		
	First 200 kWh (1-200 kWh) per month	sen/kWh	21.8
	Next 800 kWh (201-1,000 kWh) per month	sen/kWh	28.9
	Over 1,000 kWh (1,001 kWh onwards) per month	sen/kWh	31.2
The minimum monthly charge is RM3.00			
2	Tariff B – Low Voltage Commercial Tariff For all kWh The minimum monthly charge is RM7.20	sen/kWh	32.3
3	Tariff C1 – Medium Voltage General Commercial Tariff		
	For each kilowatt of maximum demand per month	RM/kW	19.50
	For all kWh	sen/kWh	23.4
The minimum monthly charge is RM600.00			
4	Tariff C2 – Medium Voltage Peak/Off-Peak Commercial Tariff		
	For each kilowatt of maximum demand per month during the peak period	RM/kW	29.00
	For all kWh during the peak period	sen/kWh	23.4
	For all kWh during the off-peak period	sen/kWh	14.4
The minimum monthly charge is RM600.00			
5	Tariff D – Low Voltage Industrial Tariff For all kWh The minimum monthly charge is RM7.20	sen/kWh	29.0
	Tariff Ds – Special Industries Tariff (for consumers who qualify only) For all kWh The minimum monthly charge is RM7.20	sen/kWh	27.2
6	Tariff E1 – Medium Voltage General Industrial Tariff		
	For each kilowatt of maximum demand per month	RM/kW	19.50
	For all kWh	sen/kWh	22.2
	The minimum monthly charge is RM600.00		
6	Tariff E1s – Special Industrial Tariff (for consumers who qualify only)		
	For each kilowatt of maximum demand per month	RM/kW	15.10
	For all kWh	sen/kWh	21.5
The minimum monthly charge is RM600.00			
7	Tariff E2 – Medium Voltage Peak / Off-Peak Industrial Tariff		
	For each kilowatt of maximum demand per month during the peak period	RM/kW	24.40
	For all kWh during the peak period	sen/kWh	23.4
	For all kWh during the off-peak period	sen/kWh	14.4
The minimum monthly charge is RM600.00			
7	Tariff E2s – Special Industrial Tariff (for consumers who qualify only)		
	For each kilowatt of maximum demand per month during the peak period	RM/kW	21.00
	For all kWh during the peak period	sen/kWh	21.5
	For all kWh during the off-peak period	sen/kWh	12.3
The minimum monthly charge is RM600.00			

TARIFF RATES FOR TOP-UP AND STANDBY SERVICES (ONLY FOR CO-GENERATORS)

Tariff rates for Top-up and Standby Services (Only for Co-generators) are set out as follow:-

No	Tariff Category	Unit	Rates
8	Tariff E3 – High Voltage Peak / Off-Peak Industrial Tariff For each kilowatt of maximum demand per month during the peak period For all kWh during the peak period For all kWh during the off-peak period The minimum monthly charge is RM600.00 Tariff E3s – Special Industrial Tariff (for consumers who qualify only) For each kilowatt of maximum demand per month during the peak period For all kWh during the peak period For all kWh during the off-peak period The minimum monthly charge is RM600.00	RM/kW	23.40
		sen/kWh	22.2
		sen/kWh	13.3
9	Tariff F – Low Voltage Mining Tariff For all kWh The minimum monthly charge is RM120.00	RM/kW	18.50
		sen/kWh	20.3
		sen/kWh	11.2
10	Tariff F1 – Medium Voltage General Mining Tariff For each kilowatt of maximum demand per month For all kWh The minimum monthly charge is RM120.00	RM/kW	13.60
		sen/kWh	20.1
11	Tariff F2 – Medium Voltage Peak / Off-Peak Mining Tariff For each kilowatt of maximum demand per month during the peak period For all kWh during the peak period For all kWh during off-peak period The minimum monthly charge is RM120.00	RM/kW	19.20
		sen/kWh	20.1
		sen/kWh	11.1
12	Tariff G – Street Lighting Tariff For all kWh (including maintenance) For all kWh (excluding maintenance) The minimum monthly charge is 15% of the calculated bill in a month	sen/kWh	19.6
		sen/kWh	12.3
13	Tariff G1 – Neon & Floodlight Tariff For all kWh The minimum monthly charge is 15% of the calculated bill in a month	sen/kWh	13.4
14	Tariff H – Low Voltage Specific Agriculture Tariff For all kWh The minimum monthly charge is RM7.20	sen/kWh	30.3
15	Tariff H1 – Medium Voltage General Specific Agriculture Tariff For each kilowatt of maximum demand per month For all kWh The minimum monthly charge is RM600.00	RM/kW	19.50
		sen/kWh	22.6
16	Tariff H2 – Medium Voltage Peak / Off-Peak Specific Agriculture Tariff For each kilowatt of maximum demand per month during the peak period For all kWh during the peak period For all kWh during the off-peak period The minimum monthly charge is RM600.00	RM/kW	26.20
		sen/kWh	23.4
		sen/kWh	14.4

No	Tariff Category	Unit	Rates		
			Top-up	Standby	
				Firm	Non-Firm
1	Tariff C1 – Medium Voltage General Commercial Tariff Maximum demand charge per month For all kWh	RM/kW sen/kWh	19.50 23.4	28.00	10.40
2	Tariff C2 – Medium Voltage Peak/Off-Peak Commercial Tariff For each kilowatt of maximum demand per month during the peak period For all kWh during the peak period For all kWh during the off-peak period	RM/kW sen/kWh sen/kWh	29.00 23.4 14.4	28.00	11.80
3	Tariff E1 – Medium Voltage General Industrial Tariff Maximum demand charge per month For all kWh	RM/kW sen/kWh	19.50 22.2	28.00	9.90
4	Tariff E2 – Medium Voltage Peak/Off-Peak Industrial Tariff For each kilowatt of maximum demand per month during the peak period For all kWh during the peak period For all kWh during the off-peak period	RM/kW sen/kWh sen/kWh	24.40 23.4 14.4	28.00	9.70
5	Tariff E3 – High Voltage Peak/Off-Peak Industrial Tariff For each kilowatt of maximum demand per month during the peak period For all kWh during the peak period For all kWh during the off-peak period	RM/kW sen/kWh sen/kWh	23.40 22.2 13.3	28.00	8.50
6	Tariff F1 – Medium Voltage General Mining Tariff Maximum demand charge per month For all kWh	RM/kW sen/kWh	13.60 20.1	28.00	5.40
7	Tariff F2 – Medium Voltage Peak/Off-Peak Mining Tariff For each kilowatt of maximum demand per month during the peak period For all kWh during the peak period For all kWh during the off-peak period	RM/kW sen/kWh sen/kWh	19.20 20.1 11.1	28.00	7.50

TARIFF RATES FOR SABAH ELECTRICITY SENDIRIAN BERHAD (SESB)

No	Tariff Category	Unit	Rates
1	Domestic		
	0-40 units per month	sen/kWh	24
	41-200 units per month	sen/kWh	16
	Above 200 units per month	sen/kWh	28
	Minimum monthly charge	RM	5.00
2	Commercial Class 1		
	0-1,000 units per month	sen/kWh	32
	Above 1,000 units per month	sen/kWh	27
	Minimum monthly charge	RM	15.00
3	Commercial Class 2 (For consumers with maximum demand above 500 kW)		
	Maximum demand charge per month	RM/kW	15.00
	All units per month	sen/kWh	25
	Minimum monthly charge	RM	1,000.00
4	Industrial Class 1		
	0-2,000 units per month	sen/kWh	32
	Above 2,000 units per month	sen/kWh	26
	Minimum monthly charge	RM	15.00
5	Industrial Class 2 (For consumers with maximum demand above 500 kW)		
	Maximum demand charge per month	RM/kW	15.00
	All units per month	sen/kWh	20
	Minimum monthly charge	RM	1,000.00
6	Public Lighting All units per month	sen/kWh	30

TARIFF RATES FOR WILAYAH PERSEKUTUAN LABUAN TARIFF STRUCTURE AND RATES

No	Tariff Category	Unit	Rates
1	Domestic (DM)		
	0-40 kWh per month	sen/kWh	24
	41-200 kWh per month	sen/kWh	16
	201-above kWh per month	sen/kWh	28
	Minimum change	RM	5.00
2	Low Voltage Commercial (B)		
	For all units	sen/kWh	24
	Minimum change	RM	6.00
3	Medium Voltage General Commercial (C1)		
	For each kilowatt of maximum demand per month	RM/kW	12.00
	All units	sen/kWh	18
	Minimum charge	RM	500.00
4	Medium Voltage Peak/Off Peak Commercial (C2)		
	For each kilowatt of maximum demand per month during the peak period	RM/kW	19.00
	All units during the peak period	sen/kWh	18
	All units during the off-peak period	sen/kWh	8
	Minimum charge	RM	500.00
5	Low Voltage Industrial Tariff (D)		
	For all units	sen/kWh	21
	Minimum charge	RM	6.00
6	Medium Voltage General Industrial (E1)		
	For each kilowatt of maximum demand per month	RM/kW	12.00
	All units	sen/kWh	16
	Minimum charge	RM	500.00
7	Medium Voltage Peak / Off-Peak Industrial (E2)		
	For each kilowatt of maximum demand per month during the peak period	RM/kW	17.00
	All units during the peak period	sen/kWh	16
	All units during the off-peak period	sen/kWh	8
	Minimum charge	RM	500.00
8	Low Voltage Mining (F)		
	For all units	sen/kWh	19
	Minimum charge	RM	100.00
9	Medium Voltage Mining (F1)		
	For each kilowatt of maximum demand per month	RM/kW	12.00
	All units	sen/kWh	16
	Minimum charge	RM	100.00
10	Public Lighting All units	sen/kWh	30

NEW TARIFF RATES FOR SARAWAK ENERGY BERHAD (EFFECTIVE 1 APRIL 2007)

No	Tariff Category	Unit	Rates
1	Tariff C1 – Commercial For the first 100 units per month For the next 4900 units per month For each additional unit per month Minimum monthly charge	sen/kWh sen/kWh sen/kWh RM	40 34 30 10.00
2	Tariff C2 – Commercial Demand For each kilowatt of maximum demand per month For each unit Minimum monthly charge	RM/kW sen/kWh RM/kW	16.00 25 16.00 per kilowatt X Billing Demand
3	Tariff C3 – Commercial Peak/Off – Peak Demand For each kilowatt of maximum demand per month during the peak period For each unit during the peak period For each unit during the off-peak period Minimum monthly charge	RM/kW sen/kWh sen/kWh RM/kW	20.00 25 14.4 20.00 per kilowatt X Billing Demand
4	Tariff D – Domestic For the first 100 units per month For the next 300 units per month For each additional unit per month Minimum monthly charge	sen/kWh sen/kWh sen/kWh RM	34 29 33 5.00
5	Tariff I1 – Industrial For the first 100 units per month For the next 2900 units per month For each additional unit per month Minimum monthly charge	sen/kWh sen/kWh sen/kWh RM	40 30 27 10.00
6	Tariff I2 – Industrial Demand For each kilowatt of maximum demand per month For each unit Minimum monthly charge	RM/kW sen/kWh RM/kW	16.00 22.2 16.00 per kilowatt X Billing Demand

No	Tariff Category	Unit	Rates
7	Tariff I3 – Industrial Peak/Off – Peak Demand For each kilowatt of maximum demand per month during the peak period For each unit during the peak period For each unit during the off peak period Minimum monthly charge	sen/kWh sen/kWh sen/kWh RM	20.00 23.4 14.4 20.00 per kilowatt X Billing Demand
8	Tariff PL – Public & Street Lighting For each unit Minimum monthly charge	sen/kWh RM	47 10.00

Tenaga Nasional Berhad (TNB)

	2001	2002	2003	2004	2005	2006	2007
A. Sales of Energy (GWh)							
1. Domestic	10,315	10,939	11,765	12,530	13,497	14,132	15,048
2. Commercial	16,196	17,032	18,367	19,967	21,675	23,284	25,123
3. Industrial	30,754	31,371	33,440	35,732	37,115	37,142	38,320
4. Public Lighting	590	629	663	682	767	838	884
5. Mining	67	64	56	54	48	42	34
6. Export	5	19	193	605	1,694	2,323	2,477
7. Others	-	-	-	-	-	10	166
Total***	57,927	60,054	64,484	69,570	74,796	77,771	82,052

*** Total energy sales includes own generation and purchase from IPPs

	2001	2002	2003	2004	2005	2006	2007
B. Generation Mix (GWh)							
1. Hydro	4,992	4,444	4,032	4,656	4,908	5,301	4,879
2. Natural Gas	22,826	21,636	16,719	15,859	18,569	21,293	20,473
3. Coal	6,238	8,953	7,599	6,129	##	-	-
4. MFO	1,600	3,573	330	185	5	111	14.4
5. Diesel	-	-	-	-	-	41	35.8
6. Others	-	-	-	-	-	-	-
Total***	35,891	38,606	28,680	26,842	23,482	26,746	25,402

Notes :

Starting from the year 2005, TNB Janamanjung and KEV are classified as IPPs

*** Own generation only

Statistics of Tenaga Nasional Berhad (TNB)

Tenaga Nasional Berhad (TNB)

	2001	2002	2003	2004	2005	2006	2007
C. No. of Consumers							
1. Domestic	4,354,125	4,569,628	4,788,255	5,009,377	5,210,747	5,397,799	5,563,951
2. Commercial	821,801	862,826	903,981	940,359	976,368	1,014,907	1,056,954
3. Industrial	21,483	21,382	21,317	21,249	24,064	24,843	24,929
4. Public Lighting	26,439	27,793	37,391	39,071	42,032	39,233	41,796
5. Mining	42	45	32	31	28	18	14
6. Others (Agriculture)	-	-	-	-	-	481	782
Total	5,223,890	5,481,674	5,750,976	6,010,087	6,253,239	6,477,281	6,688,426

D. Generation Capacity (MW)							
1. Hydro	1,874	1,911	1,911	1,911	1,881	1,911	1,911
2. Natural Gas	3,427	3,302	3,430	3,156	3,871	4,367	4,367
3. Coal	1,524	1,447	1,421	3,670	##	-	-
4. MFO	1,405	1,396	1,402	574	266	-	-
5. Diesel	-	-	-	-	-	68	68
6. Others	-	-	-	-	-	-	-
7. Total Generation	8,230	8,056	8,164	9,311	6,018	6,346	6,346
8. Overall Availability (%)	N/A	N/A	85	83	86	91	91
9. Cost Of Generation (sen/kWh)							
a) Own Generation	10.89	11.25	10.20	9.3	9.8	9.38	8.18
b) (Energy Purchased	14.84	15.26	14.95	N/A	17.78	15.32	15.30
c) Overall Cost - (a) & (b)	12.70	13.05	11.69	N/A	14.33	N/A	13.4

Tenaga Nasional Berhad (TNB)

	2001	2002	2003	2004	2005	2006	2007
E. Transmission System Capacity							
1. Transmission System Lines/ Cables (km)							
i. 500 KV	* 890	* 890	* 890	* 890	* 890	* 890	* 890
ii. 275 KV	5,574	5,736	6,103	6,180	6,248	6,730	6737
iii. 132 KV	9,576	9,164	9,943	10,161	10,672	10,436	11,009
iv. 66 KV	346	346	171	171	171	171	68.7
2. Transmission Substations							
i. Number	374	349	@ 407	366	375	@ 435	441
ii. Capacity (MVA)	51,033	56,673	61,335	65,476	69,381	@ 75,189	76,223
3. Performance							
a) Number of Incidents of Trippings	117	118	418	104	90	525	66
b) Unsupplied Energy (MWh)	2,789	3,662	2,734	9,232	21,939	1,586	2,121

F. Distribution System Capacity							
1. Distribution System Lines/ Cables (km)							
i. Overhead Lines	174,479	199,920	168,731	218,282	155,281	159,483	161,080
ii. Underground Cables	220,536	228,804	273,700	315,197	322,856	327,238	343,665
2. Distribution Substations							
i. Number	45,987	47,483	48,916	50,509	56,679	58,265	58,905
ii. Capacity (MVA)	38,191	41,231	41,954	44,579	48,377	48,906	48,961
3. Performance							
Number of Interruption of Supply	47,296	31,328	27,047	29,932	*85,811	57,808	54,479

Tenaga Nasional Berhad (TNB)

	2001	2002	2003	2004	2005	2006	2007
G. Performance Highlights							
1. Maximum Demand (MW)	10,060	10,783	11,329	12,023	12,493	12,990	13,620
2. Total Units Generated (GWh)	35,891	38,606	28,680	26,842	23,482	26,746	25,402
3. Total Units Sold (GWh)	57,927	60,054	64,484	69,570	74,796	77,771	82,052
4. Sales of Electricity (RM million)	13,453	14,097	15,050	16,224	17,009	N/A	20,696
5. Installed Generation Capacity (MW)**	8,230	8,055	8,163	9,311	6,018	6,346	6,346
6. Total Number of Employees	23,063	23,589	24,124	24,887	24,259	24,429	24,950
7. Revenue Per Employee (RM/Employee)	0.58	0.60	0.62	0.65	0.70	N/A	0.82
8. Units Sold Per Employee (GWh/Employee)	2.51	2.55	2.67	2.80	3.08	3.18	3.29
9. Generation Capacity Per Employee (MW/Employee)	0.36	0.34	0.34	0.37	0.25	0.26	0.25
10. Total Units Purchased (GWh)	28,817	31,391	43,200	54,755	60,409	61,916	67,225
11. Total Units Exported (GWh)	5	19	193	605	1,694	2,323	2,477
12. Total Units Imported (GWh)	5	9	0.4	-	1.2	3.8	2.4
13. Overall System Average Interruption Duration Index (SAIDI) (minutes/customer/year)	281	149	114	156	166	105	88

Notes :

1. † Inclusion of generation using distillate
2. * 440km operated at 275kV
3. ** Generation capacities of TNB Generation Sdn. Bhd. and TNB Hidro Sdn. Bhd.
4. # Excluding LV overhead lines
5. @ Including 48 Consumer's Substation
6. Years indicated are financial years
7. * This figure includes interruptions experienced by single consumer for a period more than 1 minute.

The data shown above is for financial year of the company. The data for calendar year differs slightly from the above data.

Source : Tenaga Nasional Berhad (TNB)

Statistics of Sabah Electricity Sdn. Bhd. (SESB)

Sabah Electricity Sdn. Bhd. (SESB)

	2001	2002	2003	2004	2005	2006	2007
A. Sales of Energy (GWh)							
1. Domestic	646	691	725	801	899	937	1039
2. Commercial	766	839	874	950	1,034	1,104	1240
3. Industrial	564	622	699	771	797	889	993
4. Public Lighting	29	30	34	35	39	39	45
5. Mining	-	-	-	-	-	-	-
6. Export	-	-	-	-	-	-	-
7. Others	-	-	-	-	-	-	-
Total***	2,005	2,182	2,332	2,557	2,769	2,969	3,317

*** Total energy sales includes own generation and purchase from IPPs

	2001	2002	2003	2004	2005	2006	2007
B. Generation Mix (GWh)							
1. Hydro	461	437	453	450	469	547	538
2. Gas	258	388	471	466	539	591	664
3. Coal	-	-	-	-	-	-	-
4. MFO	-	-	-	-	-	159	123
5. Diesel	420	427	477	478	131	311	307
6. Others	-	-	-	-	-	50	63
Total***	1,139	1,252	1,401	1,394	1,139	1,658	1,695

*** Own generation only

Sabah Electricity Sdn. Bhd. (SESB)

	2001	2002	2003	2004	2005	2006	2007
C. No. of Consumers							
1. Domestic	252,869	261,447	265,795	280,325	292,025	305,527	318,955
2. Commercial	45,142	46,797	47,550	49,888	52,010	54,843	58,345
3. Industrial	2,628	2,613	2,598	2,628	2,634	2,653	2,706
4. Public Lighting	2,342	2,524	2,672	2,959	3,088	3,357	3,710
5. Mining	-	-	-	-	-	-	0
6. Others	-	-	-	-	-	-	0
Total	302,981	313,381	318,585	335,800	349,757	366,380	383,716

	2001	2002	2003	2004	2005	2006	2007
D. Generation Capacity (MW)							
1. Hydro	66	66	66	66	51	51	51
2. Gas	104	104	104	104	104	106	106
3. Coal	-	-	-	-	-	-	-
4. MFO	-	-	-	-	-	108	81
5. Diesel	311	302	290	290	194	88	97
6. Others [Rural Electrifications - Diesel & Mini-Hydro]	*6	*6	*6	*6	-	-	-
7. Total Generation	487	478	466	466	349	353	335
8. Overall Availability (%)	N/A	82.32	83.50	78.40	77.60	85.20	82.90
9. Cost Of Generation (sen/kWh)							
a) Own Generation	13.86	18.10	17.62	21.02	24.30	12.90	12.20
b) Energy Purchased	26.70	26.70	23.35	25.79	25.80	20.40	20.60
c) Overall Cost - (a) & (b)	21.04	21.04	20.90	24.00	25.20	16.90#	17.00#

* Mini-hydro

The cost with oil subsidies

Sabah Electricity Sdn. Bhd. (SESB)

	2001	2002	2003	2004	2005	2006	2007
E. Transmission System Capacity							
1. Transmission System Lines/ Cables (km)							
i. 500 KV	-	-	-	-	-	-	-
ii. 275 KV	-	-	-	-	-	640	492
iii. 132 KV	542	542	1,870	1,227	1,552	927	1,587
iv. 66 KV	123	123	122	123	123	123	123
2. Transmission Substations							
i. Number	17	17	23	26	31	30	34
ii. Capacity (MVA)	1,005	1,005	1,410	2,258	2,332	2,299	3,603
3. Performance							
a) Number of Incidents of Trippings	N/A	31	22	25	18	36	136
b) Unsupplied Energy (MWh)	2,153	548	660	573	476	866	763

	2001	2002	2003	2004	2005	2006	2007
F. Distribution System Capacity							
1. Distribution System Lines/ Cables (km)							
i. Overhead Lines	12,056	13,020	13,500	* 4,987	* 5,167	* 5,180	* 5,893
ii. Underground Cables	1,220	1,281	1,400	* 455	* 471	* 468	* 623
2. Distribution Substations							
i. Number	4,411	4,453	4,196	4,687	4,727	4,929	5,008
ii. Capacity (MVA)	1,433	2,296	2,265	2,500	2,803	3,852	3,937
3. Performance							
Number of Interruption of Supply	10,442	9,457	10,083	14,308	23,441	25,778	23,590

* Only 33 and 11 kV

Sabah Electricity Sdn. Bhd. (SESB)

	2001	2002	2003	2004	2005	2006	2007
G. Performance Highlights							
1. Maximum Demand (MW)	366	391	448	481	548	594	625
2. Total Units Generated (GWh)	1,139	1,252	1,401	1,394	1,139	1,658	1,695
3. Total Units Sold (GWh)	2,005	2,182	2,332	2,557	2,769	2,969	3,317
4. Sales of Electricity (RM million)	496	598	591	640	697	638	838
5. Installed Generation Capacity (MW)	487	478	466	466	349	353	335
6. Total Number of Employees	2,062	2,097	2,096	2,084	2,058	2,200	2,315
7. Revenue Per Employee (RM/Employee)	0.24	0.29	0.28	0.31	0.34	0.29	0.36
8. Units Sold Per Employee (GWh/Employee)	0.97	1.04	1.11	1.23	1.35	1.35	1.43
9. Generation Capacity Per Employee (MW/Employee)	0.24	0.23	0.22	0.22	0.17	0.16	0.14
10. Total Units Purchased (GWh)	1,365	1,457	1,583	1,863	1,999	2,058	2,363
11. Total Units Exported (GWh)	-	-	-	-	-	-	-
12. Total Units Imported (GWh)	-	-	-	-	-	-	-
13. Overall System Average Interruption Duration Index (SAIDI) (minutes/customer/year)	2,279	1,779	1,729	2,594	2,722	2,778	1,987

Note : Years indicated are financial years

Source : Sabah Electricity Sdn. Bhd. (SESB)

Statistics of Sarawak Energy Berhad

Sarawak Energy Berhad

	2001	2002	2003	2004	2005	2006	2007
A. Sales of Energy (GWh)							
1. Domestic	742	805	864	919	992	1,040	1098
2. Commercial	972	1,025	1,107	1,165	1,242	1,324	1421
3. Industrial	1,321	1,381	1,463	1,553	1,661	1,627	1691
4. Public Lighting	32	37	37	41	47	54	62
5. Mining	-	-	-	-	-	-	-
6. Export	-	-	-	-	-	-	-
7. Others	-	-	-	-	-	-	-
Total***	3,067	3,248	3,471	3,678	3,942	4,045	4,272

*** Total energy sales includes own generation and purchase from IPPs

	2001	2002	2003	2004	2005	2006	2007
B. Generation Mix (GWh)							
1. Hydro	503	388	454	371	527	363	428
2. Gas	1,175	1,460	1,449	1,438	1,466	1,665	1790
3. Coal	-	-	-	-	-	-	-
4. Oil	249	124	-	-	-	-	-
5. Diesel	176	319	499	251	217	291	334
6. Others	-	-	-	-	-	-	-
Total***	2,103	2,291	2,402	2,060	2,210	2,319	2,552

*** Own generation only

Sarawak Energy Berhad

	2001	2002	2003	2004	2005	2006	2007
C. No. of Consumers							
1. Domestic	284,711	302,571	323,659	336,439	348,377	364,586	376,137
2. Commercial	51,899	53,993	56,069	58,259	60,336	62,399	64,787
3. Industrial	814	831	838	867	879	882	889
4. Public Lighting	3,800	4,150	4,437	4,783	5,175	5,534	5,937
5. Mining	-	-	-	-	-	-	-
6. Others	-	-	-	-	-	-	-
Total	341,224	361,545	385,003	400,348	414,767	433,401	447,750

D. Generation Capacity (MW)							
1. Hydro	101	101	101	101	101	101	101
2. Gas	291	289	288	274	271	271	271
3. Coal	-	-	-	-	-	-	-
4. Oil	75	50	-	-	-	-	-
5. Diesel	92	117	171	170	174	175	177
6. Others	-	-	-	-	-	-	-
7. Total Generation	559	557	560	545	546	547	549
8. Overall Availability (%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9. Cost Of Generation (sen/kWh)							
a) Own Generation	13.02	11.48	12.16	14.0	14.5	16.6	14.9
b) Energy Purchased	12.2	15.83	11.81	10.7	12.9	12.7	12.5
c) Overall Cost - (a) & (b)	12.68	13.2	12.02	12.3	13.7	14.6	13.6

Sarawak Energy Berhad

	2001	2002	2003	2004	2005	2006	2007
E. Transmission System Capacity							
1. Transmission System Lines/Cables (km)							
i. 500 KV	-	-	-	-	-	-	-
ii. 275 KV	765	765	765	765	765	765	765
iii. 132 KV	135	136	136	138	138	138	138
iv. 66 KV	-	-	-	-	-	-	-
2. Transmission Substations							
i. Number	17	17	17	18	20	21	20
ii. Capacity (MVA)	3,251	3,251	3,251	3,491	3,811	4,166	4,166
3. Performance							
a) System Minutes	26	37	2	21	8	14.5	0.5
b) Number of Incidents of Trippings	30	34	21	9	3	9	1
c) Unsupplied Energy (MWh)	225	517	17.5	269	103	289	9.6

F. Distribution System Capacity							
1. Distribution System Lines/Cables (km)							
i. Overhead Lines	14,525	15,208	16,072	16,790	16,470	17,002	17,126
ii. Underground Cables	3,353	3,553	3,757	4,173	4,426	4,753	5,040
2. Distribution Substations							
i. Number	5,532	5,554	6,249	6,893	7,508	7,588	7,926
ii. Capacity (MVA)	3,855	3,933	4,200	4,668	5,329	5,295	5,642
3. Performance							
Number of Interruption of Supply	6,004	4,167	6,590	4,244	4,489	7,409	7,915

Sarawak Energy Berhad

	2001	2002	2003	2004	2005	2006	2007
G. Performance Highlights							
1. Maximum Demand (MW)	574	604	643	685	743	773	834
2. Total Units Generated (GWh)	2,103	2,291	2,402	2,060	2,210	2,319	2,552
3. Total Units Sold (GWh)	3,067	3,248	3,471	3,678	3,942	4,045	4,272
4. Sales of Electricity (RM million)	812	864	927	977	1,047	1,090	1,216
5. Installed Generation Capacity (MW)	559	557	560	545	546	547	549
6. Total Number of Employees	2,029	2,025	2,028	2,058	2,042	2,037	2,054
7. Revenue Per Employee (RM/Employee)	0.40	0.43	0.46	0.47	0.51	0.54	0.59
8. Units Sold Per Employee (GWh/Employee)	1.51	1.60	1.71	1.79	1.92	1.99	2.08
9. Generation Capacity Per Employee (MW/Employee)	0.28	0.28	0.28	0.26	0.27	0.27	0.27
10. Total Units Purchased (GWh)	1,451	1,506	1,657	1,840	2,400	2,537	2,639
11. Total Units Exported (GWh)	-	-	-	-	-	-	-
12. Total Units Imported (GWh)	-	-	-	-	-	-	-
13. Overall System Average Interruption Duration Index (SAIDI) (minutes/customer/year)	731	611	421	327	310	365	303

Note : Years indicated are financial years

Source : Sarawak Energy Berhad

LIST OF INDEPENDENT POWER PRODUCERS (IPPs)

Independent Power Producers (IPPs)

No	Licensee	Type of Plant	Licensed Capacity (MW)	Units Generated (GWh)	Units Sold (GWh)	Date of Issue of Licence
1	YTL Power Generation Sdn. Bhd. (a) Paka, Terengganu (b) Pasir Gudang, Johor	2x404MW (Combined Cycle) 1x404MW (Combined Cycle)	808 404	7,837	7,432	07-04-1993
2	Genting Sanyen Power Sdn. Bhd. Kuala Langat, Selangor	1x762MW (Combined Cycle)	762	5,614	5,548	01-07-1993
3	Segari Energy Ventures Sdn. Bhd. Lumut, Perak	2x651.5MW (Combined Cycle)	1,303	6,113	6,012	15-07-1993
4	Powertek Bhd. Alor Gajah, Melaka	4x110MW (Gas Turbines)	440	79	79	01-12-1993
5	Port Dickson Power Bhd. Tanjung Gemuk, Port Dickson	4x110MW (Gas Turbines)	440	182	175	01-12-1993
6	ARL Tenaga Sdn. Bhd. Melawa, Sabah	4x12.5MW (Diesel Engines)	50	123	115	14-06-1994
7	Musteq Hydro Sdn. Bhd. Sg. Kenerong, Kelantan	2x10MW (Mini Hydro)	20	112	112	18-11-1994
8	Serudong Power Sdn. Bhd. Tawau, Sabah	3x12MW (Diesel Engines)	36	234	219	01-04-1995
9	Stratavest Sdn. Bhd. Sandakan, Sabah	4x15MW (Diesel Engines)	60	398	385	01-10-1996
10	Ranhill Powertron Sdn. Bhd. Karambunai, Sabah	4x30MW (Gas Turbines)	120	793	790	13-06-2006
11	TNB Generation Sdn. Bhd. **	4,435MW (Various types of thermal plants)	4,435	20,523	20,117	01-09-1997
12	Sandakan Power Corporation Sdn. Bhd. Sandakan, Sabah	4x8.5MW (Diesel Engines)	34	234	206	29-11-1997
13	TNB Janamanjung Sdn. Bhd. **	3x690MW (Coal)	2,100	11,247	10,332	21-05-1998
14	Teknologi Tenaga Perlis Consortium Sdn. Bhd. Kuala Sungai Baru, Perlis	1x650MW (Combined Cycle)	650	5,446	5,372	26-08-1998
15	Nur Generation Sdn. Bhd. Kulim High-Tech Industrial Park, Kedah	2x110MW (Combined Cycle)	440	648	619	17-09-1998
16	Pahlawan Power Sdn. Bhd. Stesen Janakuasa Melaka, Tanjung Keling, Melaka.	1x334MW (Combined Cycle)	334	2,156	2,124	26-05-1999

Independent Power Producers (IPPs)

No	Licensee	Type of Plant	Licensed Capacity (MW)	Units Generated (GWh)	Units Sold (GWh)	Date of Issue of Licence
17	TNB Hidro Sdn. Bhd. **	1,911MW (Hydro)	1,911	4,879	4,818	01-09-2000
18	Prai Power Sdn. Bhd. Daerah Seberang Perai Tengah Pulau Pinang	1x350MW (Combined Cycle)	350	2,483	2,426	20-02-2001
19	GB3 Sdn. Bhd. Lumut, Perak.	1x640MW (Combined Cycle)	640	4,311	4,237	07-08-2001
20	Panglima Power Sdn. Bhd. Alor Gajah, Melaka.	1x720MW (Combined Cycle)	720	5,420	5,318	07-08-2001
21	Tanjung Bin Power Sdn. Bhd. Tanjung Bin, Mukim Serkat, Daerah Pontian, Johor.	3x700MW (Coal)	2,100	8,296	7,737	26-09-2003
22	Kapar Energy Ventures Sdn. Bhd. Mukim Kapar, Daerah Klang Selangor.	2x300MW (Thermal) 2x300MW, 2x500MW (Coal) 2x110MW (Gas Turbines)	2,420	10,057	9,400	01-07-2004
23	Sepangar Bay Corporation Sdn. Bhd. Kota Kinabalu Industrial Park Kota Kinabalu, Sabah	1x100MW (Combined Cycle)	100	473	465	18-05-2006
24	Jimah Energy Ventures Sdn. Bhd. Mukim Jimah, Port Dickson, Negeri Sembilan.	2x700MW (Coal)	1,400	*	*	22-03-2005
25	Sejingkat Power Corporation Sdn. Bhd. Kuching, Sarawak ***	100MW (Coal)	100	638	N/A	N/A
26	Sarawak Power Generation Sdn. Bhd. Bintulu, Sarawak ***	210MW (Combined Cycle)	210	1,373	N/A	N/A
27	PPLS Power Generation	110MW (Coal)	110	628	N/A	N/A

- * Under Construction
- ** Wholly Owned Subsidiaries of TNB
- *** Wholly Owned Subsidiaries of SESCO

Renewable Energy Power Producers

LIST OF SMALL RENEWABLE ENERGY POWER PRODUCERS (SREP)

No	Licensee and Location	Type of Plant	Licensed Capacity (MW)	Energy Sources	Units Generated (MWh)	Units Sold (MWh)	Date of Issue of Licence
1	Bumibiopower Sdn. Bhd. Pantai Remis, Perak.	Steam Turbines	6	Empty Fruit Bunch	*	*	13-10-2001
2	Jana Landfill Sdn. Bhd. Air Hitam Sanitary Landfill, Seri Kembangan, Selangor.	Gas Turbines	2	Landfill Gas	4,104	4,104	13-10-2001
3	TSH Bio Energy Sdn. Bhd. Km 65, Jalan Tawau-Kunak, Tawau, Sabah.	Steam Turbines	14	Waste from Palm Oil	66,552	49,563	14-10-2003
4	Potensi Gaya Sdn. Bhd. Sungai Burong Palm Oil Mill, Km 44, Tawau-Lahad Datu Highway, Tawau, Sabah.	Steam Turbines	7	Empty Fruit Bunch	*	*	14-10-2003
5	Alaf Ekspresi Sdn. Bhd. Apas Balung Mill, Tawau-Lahad Datu Highway, Km 35, Locked Bag 28, Borneo Samudra, 91009 Tawau, Sabah.	Steam Turbines	8	Waste from Palm Oil	*	*	14-10-2003
6	Naluri Ventures Sdn. Bhd. PLO 808, Jalan Keluli 11, Kaw Perindustrian Pasir Gudang, Mukim Plentong, Daerah Johor Bahru, 81700 Pasir Gudang, Johor.	Steam Turbines	12	Waste from Palm Oil	*	*	17-03-2005
7	Seguntor Bioenergy Sdn.Bhd. Lot NT.073020309, Mukim Seguntor, 90736 Sandakan, Sabah.	Steam Turbines	11.5	EFB	*	*	30-11-2007
8	Kina Biopower Sdn. Bhd. Lot 16359, Mukim Seguntor, 90736 Sandakan, Sabah.	Steam Turbines	11.5	EFB	*	*	30-11-2007
9	Recycle Energy Sdn. Bhd. Resource Recovery Centre / Refuse Derived - Fuel Waste To Energy Plant, Lot 3041 & 3042, Mukim Semenyih, Kajang, Selangor.	Steam Turbines	8.9	Refuse Derived Fuel	*	*	11-12-2007

* Not Operated Yet

LIST OF ELECTRICITY DISTRIBUTORS

List of Electricity Distributors

No	Licensee and Contact Address	Area of Supply	Licensed Capacity (MW)	Date of Issue of Licence
1	MTBE Malaysia Sdn. Bhd. Lot 111, Kawasan Perindustrial Gebeng, Peti Surat 1, Balok, 26080 Kuantan, Pahang. Tel : 09 - 585 6700 Fax : 09 - 583 4743 / 583 4090	Lot 111 Gebeng Industrial Estate 26080 Kuantan Pahang.	5.6	18-05-1992
2	Kuantan Port Consortium Sdn. Bhd. Wisma KPC, KM. 25, Tanjung Gelang, Peti Surat 199, 25720 Kuantan, Pahang. Tel : 09 - 585 6700 Fax : 09 - 583 4743 / 583 4090	Kawasan Pelabuhan Kuantan Kuantan Pahang.	3.5	01-07-1994
3	C3 Power Sdn. Bhd. Block F, Lot 51, Ground Floor, Jati Commercial Centre, P.O. Box 80737, 87017 F.T. Labuan, Sabah. Tel : 087 - 411 175 Fax : 087 - 419 731	Temporary Settlement in some areas in Labuan, Sandakan and Semporna.	5.85	15-03-1995
4	Sunway Pyramid Sdn. Bhd. Lot LL1.10 Sunway Pyramid, No. 3, Jalan PJS 11/15, Bandar Sunway, 46150 Petaling Jaya, Selangor. Tel : 03 - 7494 3000 Fax : 03 - 7492 8666	Atas Sebahagian PT 9312 dan 9313 Mukim Damansara Daerah Petaling 47400 Petaling Jaya, Selangor.	15 @	30-05-1995
5	Gas District Cooling (KLIA) Sdn. Bhd. Jalan KLIA S5 (KLIA Selatan), Southern Support Zone 64000 KLIA, Sepang, Selangor. Tel : 03 - 8787 4326 Fax : 03 - 8787 4282	Kuala Lumpur International Airport Daerah Sepang Selangor.	60.0 *	01-01-1996
6	Kelang Port Authority Beg Berkunci 202, Jalan Pelabuhan Utara, 42005 Pelabuhan Klang, Selangor. Tel : 03 - 3168 8211 Fax : 03 - 3167 0211 / 3168 9117	Klang Port Authority Premis Jalan Pelabuhan 42005 Port Klang Selangor.	5.8	25-03-1997
7	Jaya Jusco Stores Bhd. Jusco Kinta City Shopping Centre 1st Floor, Kinta City Management Office No. 2, Jalan The Lean Swee Off Jalan Sultan Azlan Shah Utara 31400 Ipoh, Perak. Tel : 05 - 547 06761 / 548 4668 Fax : 05 - 546 0899	AEON Kinta City Shopping Centre Ipoh Perak.	2.0	1-08-1997
8	Pengkalan Bekalan Kemaman Sdn. Bhd. Peti Surat 64, 24007 Kemaman, Terengganu. Tel : 09 - 863 1566 Fax : 09 - 863 1716	Kawasan Pangkalan Bekalan Kemaman Kemaman Terengganu.	0.35	01-12-1997

List of Electricity Distributors

No	Licensee and Contact Address	Area of Supply	Licensed Capacity (MW)	Date of Issue of Licence
9	See Sen Chemical Bhd PT 3940, Kawasan Perindustrian Teluk Kalong 24000 Kemaman, Terengganu. Tel : 09 - 863 2142 / 863 2304 Fax : 09 - 863 2143	Lot 3940 Kawasan Perindustrian Telok Kalong Mukim Kemaman Terengganu.	6.0 *	01-01-1998
10	Cryovac (Malaysia) Sdn. Bhd. Lot 115, Gebeng Industrial Estate, Peti Surat 30, Balok, 26080 Kuantan, Pahang. Tel : 09 - 583 6625 Fax : 09 - 583 6643	Gebeng Industrial Estates Pahang.	3.5	04-02-1998
11	Malaysia Airports (Sepang) Sdn. Bhd. 3rd & 4th Floor, Airport Management Centre, KL International Airport, 64000 KLIA, Selangor. Tel : 03 - 8776 2000 Fax : 03 - 8926 5510 / 8926 5209	Kuala Lumpur International Airport Sepang Selangor.	46.0	14-02-1998
12	Petronas Gas Bhd. Centralized Utility Facilities(CUF), Integrated Petrochemical Complex, KM 105, Jalan Kuantan/Kuala Terengganu, 24300 Kertih, Kemaman, Terengganu. Tel : 09 - 830 5000 Fax : 09 - 830 5514 / 827 2508	Petrochemical Complex Kerteh Industrial Area Terengganu.	210.0 *	28-05-1998
13	Petronas Gas Bhd. Centralized Utility Facilities(CUF), Integrated Petrochemical Complex, Lot 139A, Gebeng Industrial Area Phase III, 26080 Kuantan, Pahang. Tel : 09 - 583 6200 Fax : 09 - 583 9949 / 586 3311	Petrochemical Complex Gebeng Industrial Area Pahang.	105.0 *	28-05-1998
14	K.K.I.P. Power Sdn. Bhd. No. G21 & G22, KKIP Amenity Centre, Lot 11B, Export Oriented Industrial Zone Phase 1, Kota Kinabalu Industrial Park, Jalan Sepangar, Menggatal, 88460 Kota Kinabalu, Sabah. Tel : 088 - 471 800 / 471 801 Fax : 088 - 498 17711	Kota Kinabalu Industrial Park (KKIP) Sabah.	20.0 - 210.0	15-06-1998
15	Nur Distribution Sdn. Bhd. (Receivers and Managers Appointed), Central Control Building(CCB), Lot 30, Jalan Hi-Tech 4, Kulim Hi-Tech Park, 09000 Kulim, Kedah. Tel : 04 - 401 0100 Fax : 04 - 401 0344 / 401 0311	Kulim Hi-Tech Industrial Park Kedah.	440.0	17-09-1998
16	Shell Refining Company (FOM) Berhad Sdn. Bhd. Batu 1, Jalan Pantai, 71000 Port Dickson, Negeri Sembilan. Tel : 06 - 647 1311 Fax : 06 - 647 4780	Batu 1, Jalan Pantai 71000 Port Dickson Negeri Sembilan.	35.0 *	10-08-1999

List of Electricity Distributors

No	Licensee and Contact Address	Area of Supply	Licensed Capacity (MW)	Date of Issue of Licence
17	Gas District Cooling (KLCC) Sdn. Bhd. c/o KLCC Urusharta Sdn. Bhd., Level 36, Tower 2, Petronas Twin Tower, Kuala Lumpur City Centre, 50088 Kuala Lumpur. Tel : 03 - 2382 8000 Fax : 03 - 2382 8795	Bangunan DCC 1 / DCC 2 KLCC DCS/Co Generation Plant Persiaran KLCC, Jalan Ampang 50088 Kuala Lumpur.	40.0 *	30-08-2000
18	Jaya Jusco Stores Sdn. Bhd. Jusco Taman Maluri Shopping Centre, 1st. Floor, Jalan Jejaka, Taman Maluri, Cheras, 55100 Kuala Lumpur. Tel : 03 - 9285 5222 Fax : 03 - 9285 9999	Lot 33, 2386, 2595, 2596 dan 2388, Jalan Jejaka, Taman Jaya Maluri, Cheras Seksyen 90A Kuala Lumpur.	3.4	2-10-2000
19	Genting Utilities & Services Sdn. Bhd. Tingkat 24, Wisma Genting, Jalan Sultan Ismail, 50250 Kuala Lumpur. Tel : 03 - 2161 2288 Fax : 03 - 2161 5304	Genting Highlands Area Negeri Pahang/Selangor.	48.0	17-10-2000
20	TCL Industries (M) Sdn. Bhd. Plot No: 4248, Teluk Kalong Industrial Estate, 24007 Kemaman, Terengganu. Tel : 09 - 863 3029 Fax : 09 - 863 3085 / 863 2340	Plot No. 4248 Telok Kalong Industrial Estate 24007 Kemaman Terengganu.	7.0 *	15-09-2003
21	Ikano Corporation Sdn. Bhd. No. 2, Jalan PJU 7/2, Mutiara Damansara, 47800 Petaling Jaya, Selangor. Tel : 03 - 7726 9999 Fax : 03 - 7726 6277	Lot PT 400038 Mutiara Damansara Selangor.	7.9	23-12-2003
22	Jaya Jusco Stores Berhad Jusco Taman Universiti Shopping Centre, No. 4, Jalan Pendidikan, Taman Universiti, 81300 Skudai, Johor. Tel : 07 - 520 8700 Fax : 07 - 521 3000	PTD 62861, Jalan Pendidikan Taman Universiti Mukim Pulai, Daerah Johor Bahru Johor.	3.11	28-02-2004
23	Makmuran Sdn. Bhd. Mile 2 1/2, Jalan Ulu Patikang, 89008 Keningau, Sabah. Tel : 087 - 333 335 / 331 791 Fax : 087 - 331 064	Batu 2 1/2, Jalan Ulu Patikang Keningau Sabah.	1.8 *	27-03-2004
24	Intitute of Technology Petronas Sdn. Bhd. Bandar Seri Iskandar, 31750 Tronoh, Perak. Tel : 05 - 368 8000 Fax : 05 - 365 4075 / 365 4093	Kampus Universiti Teknologi Petronas Tronoh Perak.	8.4 *	26-01-2006
25	Eng Lian Enterprise Sdn. Bhd. 9, Jalan Ampang #05-00, 50450 Kuala Lumpur. Tel : 03 - 2056 0600 Fax : 03 - 2056 0700	Lot 51533 Mukim Kuala Lumpur Kuala Lumpur.	2.29	01-03-2006

List of Electricity Distributors

No	Licensee and Contact Address	Area of Supply	Licensed Capacity (MW)	Date of Issue of Licence
26	Aeon Co. (M) Bhd. AEON Metro Prima Shopping Centre, 1st. Floor, Management Office, No. 1, Jalan Metro Prima, 52100 Kepong, Kuala Lumpur. Tel : 03 - 6259 1122 Fax : 03 - 6259 2805	Lot 20954 Mukim Batu Kuala Lumpur.	4.83	15-3-2006
27	Fawanis Sdn. Bhd. 13th Floor, Wisma Denmark, 86, Jalan Ampang, 50450 Kuala Lumpur. Tel : 03 - 2032 2111 Fax : 03 - 2078 4679 / 2078 3450	Queen's Park Retail Centre Lot 392, Batu 2 - 2 1/2 Jalan Cheras Kuala Lumpur.	0.94	11-5-2006
28	Evergreen Intermerge Sdn. Bhd. Teck Guab Regency, 318, Jalan St Patrick , off Jalan Belunu, P.O. Box No. 33, 91007 Tawau, Sabah. Tel : 089 - 772 275 / 772 276 Fax : 089 - 769 955	Cacao Paramount Sdn. Bhd. Lot CL 1053 23797, Km 3 Tanjung Batu Laut Tawau, Sabah.	6 ∞	10-10-2006
29	Seo Energy Sdn. Bhd. KM 8, Jalan Batu Sapi, Karamunting, P.O. Box 2605, 90729 Sandakan, Sabah. Tel : 089 - 611 011 Fax : 089 - 611 014 / 617 355	Sandakan Edible Oils Sdn. Bhd. KM 8, Jalan Batu Sapi Karamunting, Sandakan Sabah.	1.2 ∞	10-10-2006
30	Wirazone Sdn. Bhd. Level 13A, Block 3B, Plaza Sentral, Jalan Stesen Sentral 5, 50470 Kuala Lumpur. Tel : 03 - 2263 3388 Fax : 03 - 2263 3366	Kaw. Pembangunan Kuala Lumpur Sentral Kuala Lumpur.	100	15-10-2006
31	Sunway Carnival Sdn. Bhd. LG-68 management Office, Sunway Carnival Mall, 3068, Jalan Todak, Pusat Bandar Seberang Jaya, 13700 Seberang Jaya, Pulau Pinang. Tel : 04 - 397 9888 Fax : 04 - 397 9883	Lot 5497, 5498 dan 5499 Daerah Seberang Perai Tengah Pulau Pinang.	5	01-11-2006
32	Asian Supply Base Sdn. Bhd. Ranca-Ranca Industrial Estate, P.O. Box 80751, 87017 Labuan F.T., Sabah. Tel : 087 - 411 611 / 411 614 Fax : 087 - 415 477	Asian Supply Base Lot 206291581, Daerah Labuan Wilayah Persekutuan Labuan Sabah.	7.5	13-11-2006
33	ASM Properties Sdn. Bhd. Suite 5.4, Tingkat 5, Maju Junction Mall, 1001 Jalan Sultan Ismail, 50250 Kuala Lumpur. Tel : 03 - 2772 8500 Fax : 02 - 2772 8501	Maju Junction Mall Lot PT 19, Seksyen 46 Kuala Lumpur.	10.8	24-11-2006

List of Electricity Distributors

No	Licensee and Contact Address	Area of Supply	Licensed Capacity (MW)	Date of Issue of Licence
34	Profound Heritage Sdn. Bhd. 1, Lorong Grace Square, Jalan Pantai Sembulan, 88100 Kota Kinabalu, Sabah. Tel : 088 - 318 801 / 318 802 Fax : 088 - 233 362	Sutera Harbour Resort Lot2, LA. 93010260 Kota Kinabalu Sabah.	38.0 *	15-12-2006
35	Lembaga Tabung Haji Bangunan Lembaga Tabung Haji, 201, Jalan Tun Razak, 50400 Kuala Lumpur. Tel : 03 - 2161 2233 Fax : 03 - 2161 4450	Menara TH Perdana Lot 101, Mukim Kuala Lumpur Kuala Lumpur.	3.0	29-12-2006
36	Bio Fuel Asia Sdn. Bhd. d/a TSH-Wilmar (BF) Sdn. Bhd., TB9, KM 7, Apas Road, TSH Industrial Estate, 91000 Tawau, Sabah. Tel : 089 - 912 020 / 911 056 Fax : 089 - 913 000	TSH Edible Oils Sdn. Bhd. PL 26166110 & 246290228 Kunak, Lahad Datu Sabah.	10.0	29-12-2006
37	AEON Co. (M) Bhd. AEON Cheras Selatan Shopping Centre, Aras 1, Lebuhr Tun Hussien Onn, 43200 Balakong, Selangor. Tel : 03 - 9080 3498 Fax : 03 - 9080 3598	AEON Cheras Selatan Shopping Centre PT 41977 (Sebahagian Lot 2225) Mukim Cheras, Daerah Hulu Langat Selangor.	3.85	05-02-2007
38	Bahagaya Sdn. Bhd. TB 4327, Block 31, 2nd Floor, Fajar Complex, Jalan Haji Karim, 91000 Tawau, Sabah. Tel : 089 - 757 911 Fax : 089 - 761 022	Rajang Plywood (Sabah) Sdn. Bhd. CLS 105486762, 105486771 dan PT2000100538 Sungai Umas, Umas Mukim Merotai, Tawau 91000 Sabah.	3	07-03-2007
39	Urusharta Cemerlang Sdn. Bhd. Level 20 Menara Uni. Asia, 1008 Jalan Sultan Ismail. 50250 Kuala Lumpur. Tel : 03 - 2716 1088 Fax : 03 - 2711 8988 / 2711 6288	Pavilion Kuala Lumpur Lot 174, 185, 187, 188, 281 (Lot Baru : 332) dan 260 Jalan Bukit Bintang/ Jalan Raja Chulan Seksyen 67, Kuala Lumpur.	22.1	14-03-2007
40	AEON Co. (M) Bhd. Jusco Seremban 2 Shopping Centre, 112 Persiaran S2 B1, Seremban 2, 70300 Seremban, Negeri Sembilan. Tel : 06 - 601 5643 Fax : 06 - 601 5645	AEON Seremban 2 Lot PT 10787 HS(D) 97966 & PT 10790 HS(D) 97969, Mukim Rasah Daerah Seremban Negeri Sembilan.	7.05	30-03-2007
41	Mid Valley City Energy Sdn. Bhd. Penthouse Menara IGB Mid Valley City, Lingkar Syed Putra, 59200 Kuala Lumpur. Tel : 03 - 2289 8989 Fax : 03 - 2289 8802	The Gardens (Phase 2) Lot PT13, Mukim Kuala Lumpur Daerah Kuala Lumpur 59200 Wilayah Persekutuan.	40	03-05-2007

List of Electricity Distributors

No	Licensee and Contact Address	Area of Supply	Licensed Capacity (MW)	Date of Issue of Licence
42	Bandar Utama City Corporation Sdn. Bhd. 1, Persiaran Bandar Utama, Bandar Utama, 47800 Petaling Jaya, Selangor. Tel : 03 - 7728 8878 Fax : 03 - 7728 9978	Kawasan Pembangunan Bandar Utama Township Petaling Jaya.	100	10-05-2007
43	Perbadanan Memajukan Iktisad Negeri Terengganu Tingkat 14, Menara Permint, Jalan Sultan Ismail, 20200 Kuala Terengganu, Terengganu. Tel : 09 - 622 2155 Fax : 09 - 623 3880	Pulau Kapas, Mukim Rusila Daerah Marang 21600 Terengganu.	0.45 £	01-06-2007
44	Fusion Energy Sdn. Bhd. Lot 2319, Kaw. Perindustrian Olak Lempit, Mukim Tanjung 12, 42700 Banting, Selangor. Tel : 03 - 3182 2000 Fax : 03 - 3182 2382 / 3182 2279	Lion Group Complex Lot 2319, 2320, 2321, 2323, 2582, 2823 dan 2824, Mukim Tanjung Dua Belas Daerah Kuala Langat 42700 Selangor.	418 #	12-06-2007
45	Petronas Methanol (Labuan) Sdn. Bhd. Kawasan Perindustrian Ranca-Ranca, Peti Surat No. 80079, 87010 Wilayah Persekutuan Labuan. Tel : 087 - 411 211 Fax : 088 - 417 304	Kawasan Perindustrian Ranca-Ranca Labuan 87010 Wilayah Persekutuan Labuan.	40.8	18-07-2007
46	Powertraco Sdn. Bhd. 95A, Jalan Bunga Raya, Kepayan, 88200 Kota Kinabalu, Sabah. Tel : 088 - 240 853 Fax : 088 - 260 853	Tawau Plywood Manufacturing Sdn. Bhd. CL 105362614, 105362623, 105451385 dan 105527875, KM 289, Jalan Merotai Kg. Manusi, 91017 Tawau, Sabah.	3	19-07-2007
47	Eng Lian Enterprise Sdn. Bhd. 9 Jalan Ampang #05-00, 50450 KUALA LUMPUR. Tel : 03 - 2056 0600 Fax : 03 - 2056 0700	Bangsar Village II Lot 43872, 43873 dan 43874 Mukim Kuala Lumpur, Daerah Kuala Lumpur 59100 Wilayah Persekutuan	3.12	03-09-2007
48	Y.S. Tang Holdings Sdn. Bhd. 1-888, KB Mall, Jalan Hamzah, 15050 Kota Bharu, Kelantan. Tel : 09 - 747 6622 Fax : 09 - 747 5225 / 747 5900	KB Mall, PT 101, Jalan Hamzah Seksyen 16, Bandar Kota Bharu 15050 Kelantan.	3.16	18-09-2007
49	Jurus Kota Sdn. Bhd. 2nd Floor, Alor Star Mall, Kawasan Perusahaan Tandop Baru, 06400 Alor Star, Kedah. Tel : 04 - 772 9233 Fax : 04 - 771 2033 / 772 1233	Alor Star Mall, Lot 801 £ 802 Dalam Kawasan Perniagaan Dan Industri Kecil Sri Tandop 1, Mukim Pengkalan Kundor Daerah Kota Setar Kedah.	3.59	18-09-2007

List of Electricity Distributors

No	Licensee and Contact Address	Area of Supply	Licensed Capacity (MW)	Date of Issue of Licence
50	Astral Realty Sdn. Bhd. AIM Point Plaza, Aras Podium, Jalan Emas 15, 42700 Banting, Selangor. Tel : 03 - 3181 3703 Fax : 03 - 3187 8003 / 3187 8066	PUTRA Square, Lot 423 (PN 5596) Mukim Kuantan, 25000 Kuantan Pahang.	4.79	10-10-2007
51	C S Khin Developments Sdn. Bhd. Suite 601, 6th Floor, Wisma Mirama, Jalan Wisma Putra, 50460 Kuala Lumpur. Tel : 03 - 2142 1666 Fax : 03 - 2148 1229	Wisma Mirama, Lot 888, Seksyen 69 50460 Kuala Lumpur Wilayah Persekutuan.	0.85	10-10-2007
52	Wisma Central Management Corporation Box #198, lot 2, 142A, 1st Floor, Wisma Central, Jalan Ampang, 50450 Kuala Lumpur. Tel : 03 - 2161 7522 / 2161 7721 Fax : 03 - 2161 9721	Wisma Central, Geran 10015, Lot 150 Seksyen 58, Bandar Kuala Lumpur 50450 Wilayah Persekutuan.	2.2	31-10-2007
53	AEON Co. (M) Bhd. AEON Bukit Tinggi Shopping Centre, Management Office Level 1, No. 1 Persiaran Batu Nilam 1/KS6, Bandar Bukit Tinggi 2, 41200 Klang, Selangor. Tel : 03 - 3326 2370 Fax : 03 - 3326 2371	AEON Co. (M) Bhd. Mall Lot PT 2042 HS(D) 105957 dan PT 2043 HS(D) 105958, Mukim Klang Daerah Klang Selangor.	12	11-12-2007
54	Tradewinds Properties Sdn. Bhd. 21st Floor, Wisma Zelan, No. 1, Jalan Tasik Permaisuri 2, Bandar Tun Razak, Cheras, 56000 Kuala Lumpur. Tel : 03 - 9106 3166 Fax : 03 - 9106 3177	Kompleks Antarabangsa Lot 1158, Seksyen 57 Mukim Bandar Kuala Lumpur Daerah Kuala Lumpur 50250 Wilayah Persekutuan.	4.97	11-12-2007

Notes : # Project Development Not Commenced Yet

* Generates Electricity by Co-Generation

@ Co-Generation Plant Not Operationed Yet

∞ Generates Electricity

£ Generates Electricity by Hybrid

LIST OF MAJOR CO-GENERATORS

List of Major Co-Generators

No	Licensee and Location	Capacity (MW)	Type of Licence	Fuels	Generation (MWh)
1	Perwaja Steel Sdn. Bhd. Loji Besi Penurunan Terus, Tanjung Berhala, Kemaman, Terengganu.	9.5	Private	Waste Heat From Industrial Process	38,883
2	Bernas Production Sdn. Bhd. Kompleks Mengering dan mengilang Padi LPN, Sekinchan, Selangor.	0.23	Private	Agriculture Waste	N/A
3	PadiBeras Nasional Bhd. Kompleks Bernas Sg. Ranggalam (Ulu Dedap), Kg. Gajah, Perak.	0.65	Private	Agriculture Waste	395
4	Padiberas Nasional Bhd. Kompleks Bernas Changkat Lada, Kg. Gajah, Perak.	0.65	Private	Agriculture Waste	108
5	Sime Plantations Sdn. Bhd. Tennamaran Palm Oil Mill, Batang Berjuntai, Selangor.	3.38	Private	Agriculture Waste	1,688
6	Sime Plantations Sdn.Bhd. Seri Intan Palm Oil Mill, Batu 5, Jalan Maharaja Lela, Teluk Intan, Perak.	3.42	Private	Agriculture Waste	10,928
7	Tractors Malaysia (1982) Sdn. Bhd. Lot 2, Section 2 dan Sebahagian Tanah lot 3410, Kampung Puchong, Mukim Daerah Petaling, Selangor.	1.25	Private	Natural Gas	1,643
8	Malaysian Mosaics Berhad Lot 641, 642 & 643, Mukim Kluang, Batu 3, Jalan Batu Pahat, Kluang, Johor.	4.21	Private	Natural Gas	6,087
9	Malaysian Newsprint Industries Sdn. Bhd. Lot 3771, Jalan Lencongan Mentakab-Temerloh, Temerloh Industrial Park, Mentakab, Pahang.	79.2	Private	Oil	69,177
10	Titan Petchem (M) Sdn. Bhd. PLO 257, 312, 425 dan 426, Jalan Tembaga 4, Pasir Gudang Industrial Estate, Pasir Gudang, Johor.	56	Private	Natural Gas	279,467
11	Titan Petrochemicals (M) Sdn. Bhd. PLO 8, Tanjung Langsung Industrial Park, Mukim Sg. Tiram, Johor Bharu, Johor.	42.6	Private	Natural Gas	168,397
12	CCM Chemicals Sdn. Bhd. Pasir Gudang Works, Plot 411, Kaw. 4, Jalan Perak Satu, Pasir Gudang, Johor.	15	Private	Natural Gas	Not In Operation

List of Major Co-Generators

No	Licensee and Location	Capacity (MW)	Type of Licence	Fuels	Generation (MWh)
13	Amoco Chemical (Malaysia) Sdn. Bhd. Lot 116, Gebeng Industrial Estate, Balok, Kuantan, Pahang.	21.6	Private	Natural Gas	Not In Operation
14	Tian Siang Oil Mill (Perak) Sdn. Bhd. Lot 2161, Beruas, Perak.	1.8	Private	Agriculture Waste	N/A
15	Central Sugars Refinery Sdn. Bhd. Batu Tiga, Shah Alam, Selangor.	9.23	Private	Diesel/MFO	27,402
16	BASF Petronas Chemicals Sdn. Bhd. Lot 139, Kawasan Perindustrian Gebeng, Kuantan, Pahang.	27.4	Private	Natural Gas	82,206
17	Penfibre Sdn. Bhd. Lot 109-114, Kawasan Perindustrian Bebas, Prai Zon 1, Prai, Pulau Pinang.	35.4	Private	Natural Gas	Not In Operation
18	Nibong Tebal Paper Mill Sdn. Bhd. 886, Jalan Bandar Baru, Sg. Kecil, Nibong Tebal, Pulau Pinang.	0.8	Private	Wood Dust	1,897
19	Gas District Cooling (Putrajaya) Sdn. Bhd. Plot 2U1, Putrajaya Precint 2, Wilayah Persekutuan Putrajaya.	10.74	Private	Natural Gas	26,796
20	Petronas Penapisan (Melaka) Sdn. Bhd. Kompleks Petronas Penapisan Melaka, Mukim Sungai Udang, Melaka.	145	Private	Natural Gas	Not In Operation
21	Gas District Cooling (Putrajaya) Sdn. Bhd. Plot 12371, Precint 1, WP Putrajaya, Lebuhraya Perdana Timur, Pusat Pentadbiran Kerajaan Persekutuan Putrajaya, Putrajaya.	6.5	Private	Natural Gas	21,057
22	Muda Paper Mills Sdn. Bhd. Lot 11207, Mukim Kajang, Daerah Hulu Langat, Selangor.	9.6	Private	Natural Gas	57,419
23	Ban Heng Bee Rice Mill (1952) Sdn. Bhd. Lot 2171, Jalan Bukit Raya, Mukim Bukit Raya Pendang, Kedah.	0.5	Private	Agriculture Waste	2,877
24	Petronas Fertilizer (Kedah) Sdn. Bhd. Lot 10750, Bandar Gurun, Daerah Kuala Muda, Kedah.	18.31	Private	Natural Gas	Not In Operation
25	Felda Palm Industries Sdn. Bhd. Kompleks Sahabat, Mukim Tungku, Lahad Datu, Sabah.	7.5	Private	EFB	16,449
26	Palm Energy Sdn. Bhd. Kwantas Oil Sdn. Bhd. Lot CL 115311138, Mukim Lahad Datu, Lahad Datu, Sabah.	6.5	Private	Agriculture Waste	21,811

List of Major Co-Generators

No	Licensee and Location	Capacity (MW)	Type of Licence	Fuels	Generation (MWh)
27	Sabah Forest Industries Sdn. Bhd. Mukim Kg. Sebuluh, Daerah Sipitang, Sabah.	57	Private	Wood Waste/ Diesel	266,827
28	TCL Industries (Malaysia) Sdn. Bhd. Plot No. 4248, Teluk Kalong Industrial Estate, Kemaman, Terengganu.	7	Public	Waste Heat from Industrial Process	N/A
29	Gas District Cooling (KLCC) Sdn. Bhd. Bangunan DCC 1/DCC 2, KLCC DCS/Cogeneration Plant, Persiaran KLCC, Jalan Ampang, Kuala Lumpur.	40	Public	Natural Gas	31,945
30	Gas District Cooling (KLIA) Sdn. Bhd. Kuala Lumpur International Airport, Daerah Sepang, Selangor.	60	Public	Natural Gas	217,293
31	See Sen Chemical Bhd. Lot 3940, Kawasan Perindustrian Telok Kalong, Mukim Kemaman, Terengganu.	6	Public	Waste Heat from Industrial Process	42,323
32	Shell Refining Company (FOM) Berhad Batu 1, Jalan Pantai, Port Dickson, Negeri Sembilan.	35	Public	Waste Gas from Industrial Process	11,882
33	Petronas Gas Bhd. Petrochemical Complex, Kerteh Industrial Area, Terengganu.	210	Public	Natural Gas	1,323,451
34	Petronas Gas Bhd. Petrochemical Complex, Gebeng Industrial Area, Kuantan, Pahang.	105	Public	Natural Gas	634,718
35	Intitute of Technology Petronas Sdn. Bhd. Kampus Universiti Teknologi Petronas, Tronoh, Perak.	8.4	Public	Natural Gas	34,528
36	Fusion Energy Sdn. Bhd. Lion Group Complex, Lot 2319, 2320, 2431, 2323, 2582, 2823 dan 2824, Mukim Tanjung 12, Banting, Selangor.	418	Public	Waste Gas from Industrial Process	Not In Operation
37	Bahagaya Sdn. Bhd. Rajang Plywood (Sabah) Sdn. Bhd. CLS 105486762, 105486771 dan PT2000100538 Sg. Umas, Umas, Mukim Merotai, Tawau, Sabah.	3	Public	EFB	7,666
38	Powertraco Sdn. Bhd. Kompleks Tawau Plywood Manufacturing Sdn. Bhd. CL 105362614, 105362623, 105451385 dan 105527875, KM 289, Jalan Merotai, Kg. Manusi, Tawau, Sabah.	3	Public	Waste Gas from Industrial Process	N/A

List of Major Co-Generators

No	Licensee and Location	Capacity (MW)	Type of Licence	Fuels	Generation (MWh)
39	Bio Fuel Asia Sdn. Bhd. TSH Edible Oils Sdn. Bhd. PL26166110 & 246290228 Kunak, Lahad Datu, Sabah.	10	Public	Wood Waste	N/A
40	Evergreen Intermerge Sdn. Bhd. Cacao Paramount Sdn. Bhd. Lot CI 105323797 KM 3, Tanjung Batu Laut Tawau, Sabah	6	Public	EFB	N/A
41	Makmuran Sdn. Bhd. Batu 2 1/2, Jalan Ulu Patikang, Keningau, Sabah.	1.8	Public	Agriculture Waste/Diesel	4,502
42	Seo Energy Sdn. Bhd. Sandakan Edible Oils Sdn. Bhd. KM 8, Jalan Batu Sapi Karamunting, Sandakan, Sabah.	1.2	Public	EFB	3,601
43	Petronas Methanol (Labuan) Sdn. Bhd. Kawasan Perindustrian Ranca-Ranca, Labuan, 87010 Wilayah Persekutuan Labuan Sabah.	40.8	Public	Natural Gas	102,348
44	Profound Heritage Sdn. Bhd. Sutera Harbour Resort, Lot 2, LA. 93010260 Kota Kinabalu, Sabah.	38	Public	Diesel	127,659

Notes :

1. a) Total capacity of major projects licensed

- Public	993.2 MW
- Private	574.0 MW
Total	1,567.2 MW

b) Total capacity of major projects Planned

- Public	418.0 MW
- Private	235.3 MW
Total	653.3 MW

c) Total capacity of major projects in Operation

- Public	575.2 MW
- Private	338.7 MW
Total	913.9 MW

2. a) Public Licence - The licensee generates for his own use and for supply to other persons.

b) Private Licence - The licensee generates for his own use only.

STATISTICS OF SELF-GENERATION

Statistics of Self-Generation

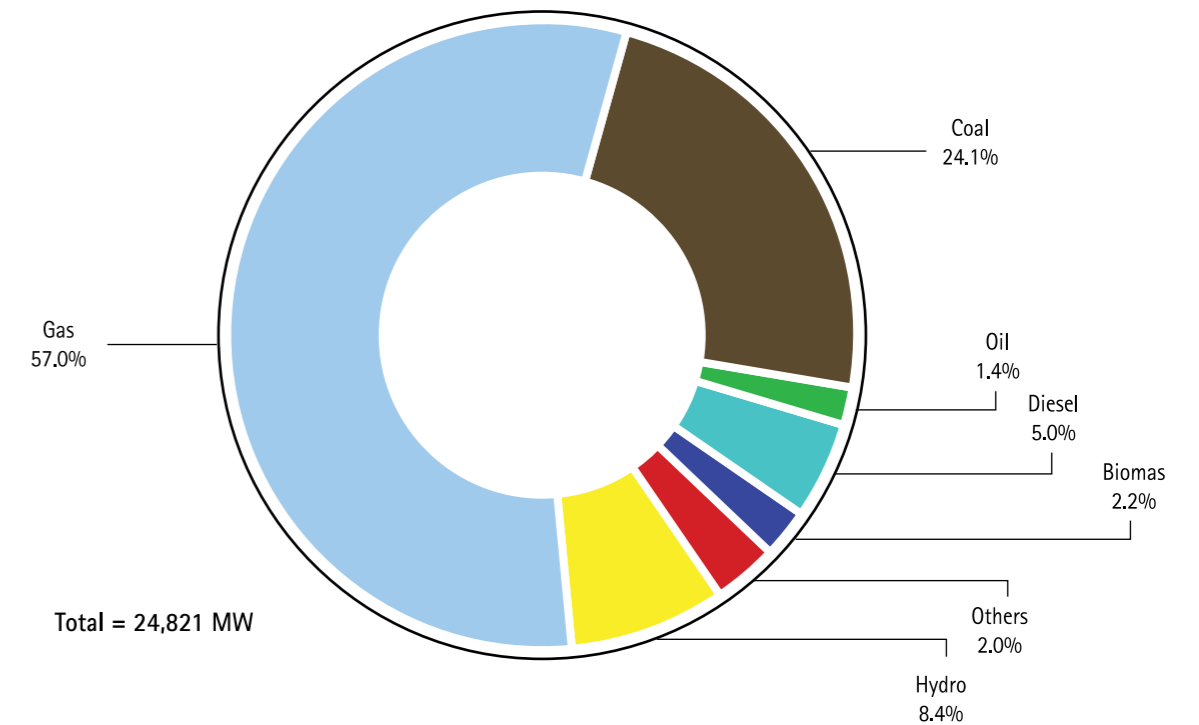
No. Self-Generation Licences	Generation Plant Mix (MW)				
	Gas	Diesel	Biomass	Others	Total
1,640	14	845	421	6.9	1,287

OTHER IMPORTANT STATISTICS AND INFORMATION OF THE ELECTRICITY SUPPLY INDUSTRY

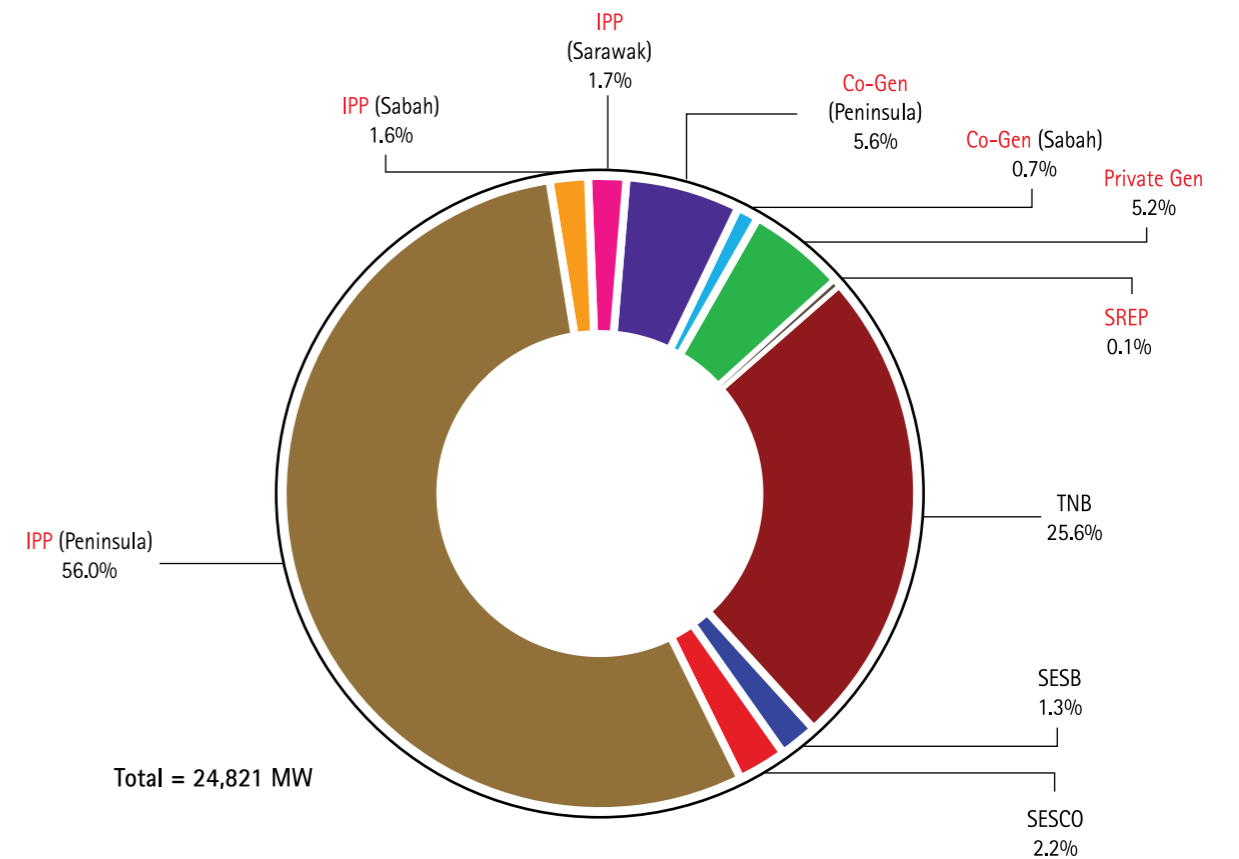
Statistics of Approved Projects According to Energy Sources

No	Energy Sources	Application Approved	Generation Capacity (MW)	Grid Connected Capacity (MW)	Percentage Connected to Grid (%)
1	Biomass Empty Fruit Bunch Wood Chips Rice Husk Municipal Solid Waste	-	-	-	-
		-	-	-	-
		-	-	-	-
		-	-	-	-
2	Landfill Gas	-	-	-	-
3	Biogas	1	0.8	0.8	7.4
4	Mini Hydro	1	10	10	92.4
5	Wind & Solar	-	-	-	-
Total		2	10.8	10.8	100

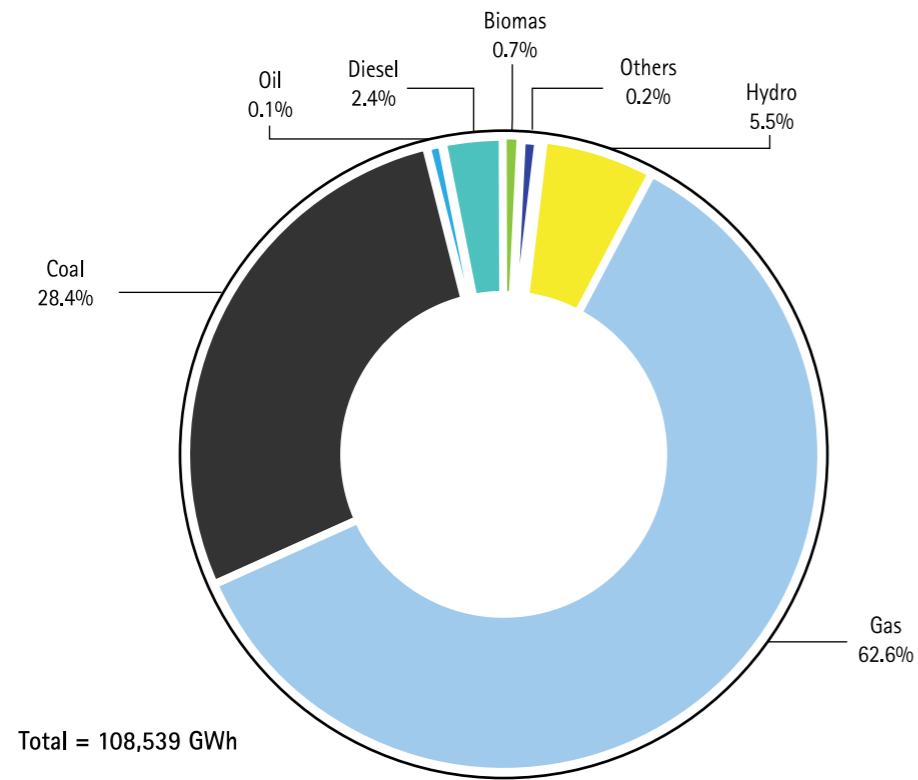
Generation Plant Mix in Malaysia



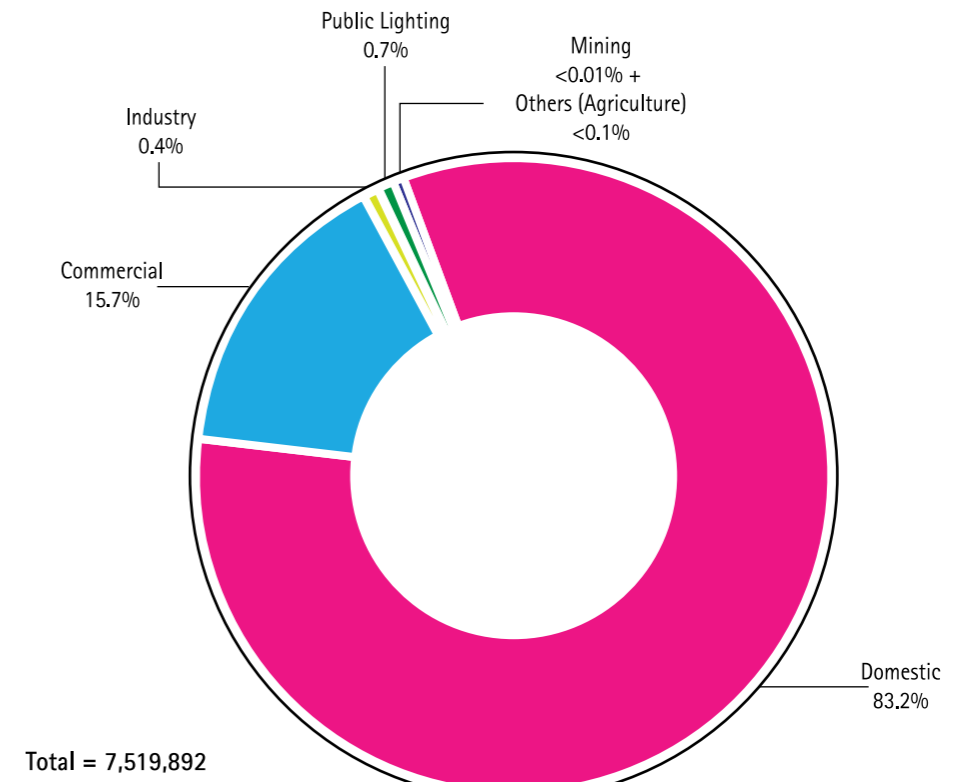
Generation Capacity of Major Power Producers in Malaysia



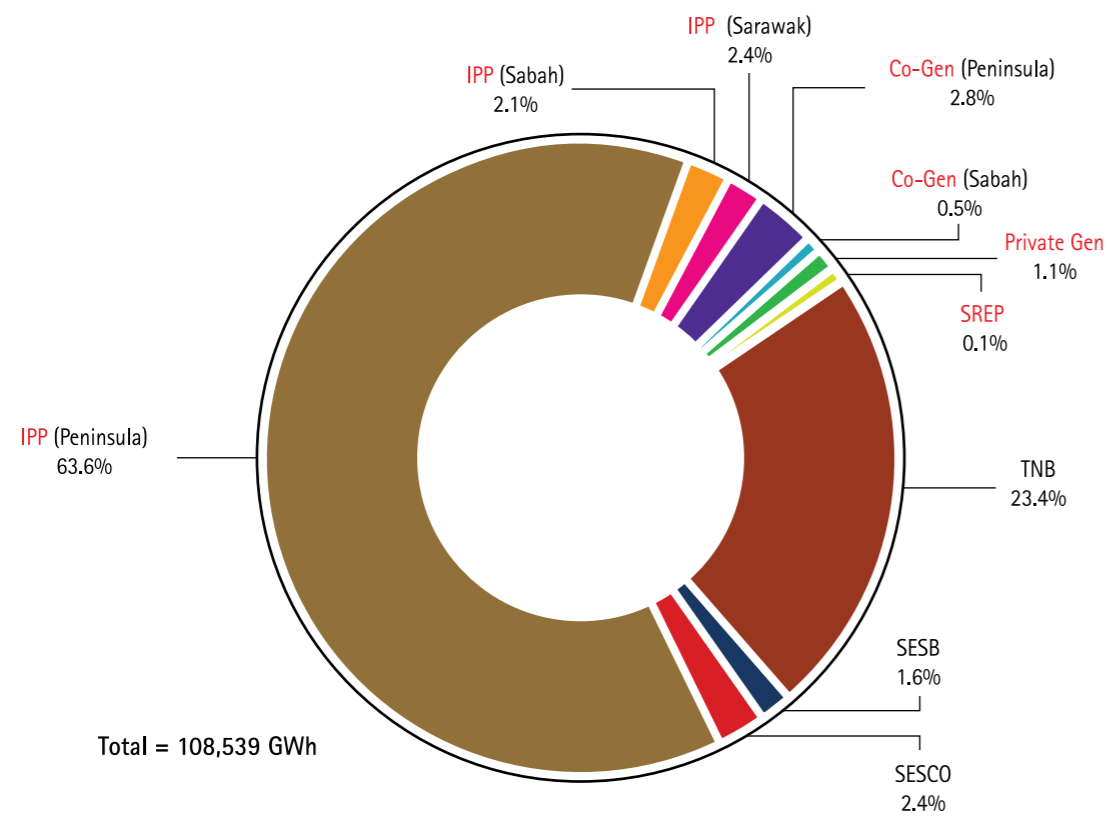
Generation Mix in Malaysia



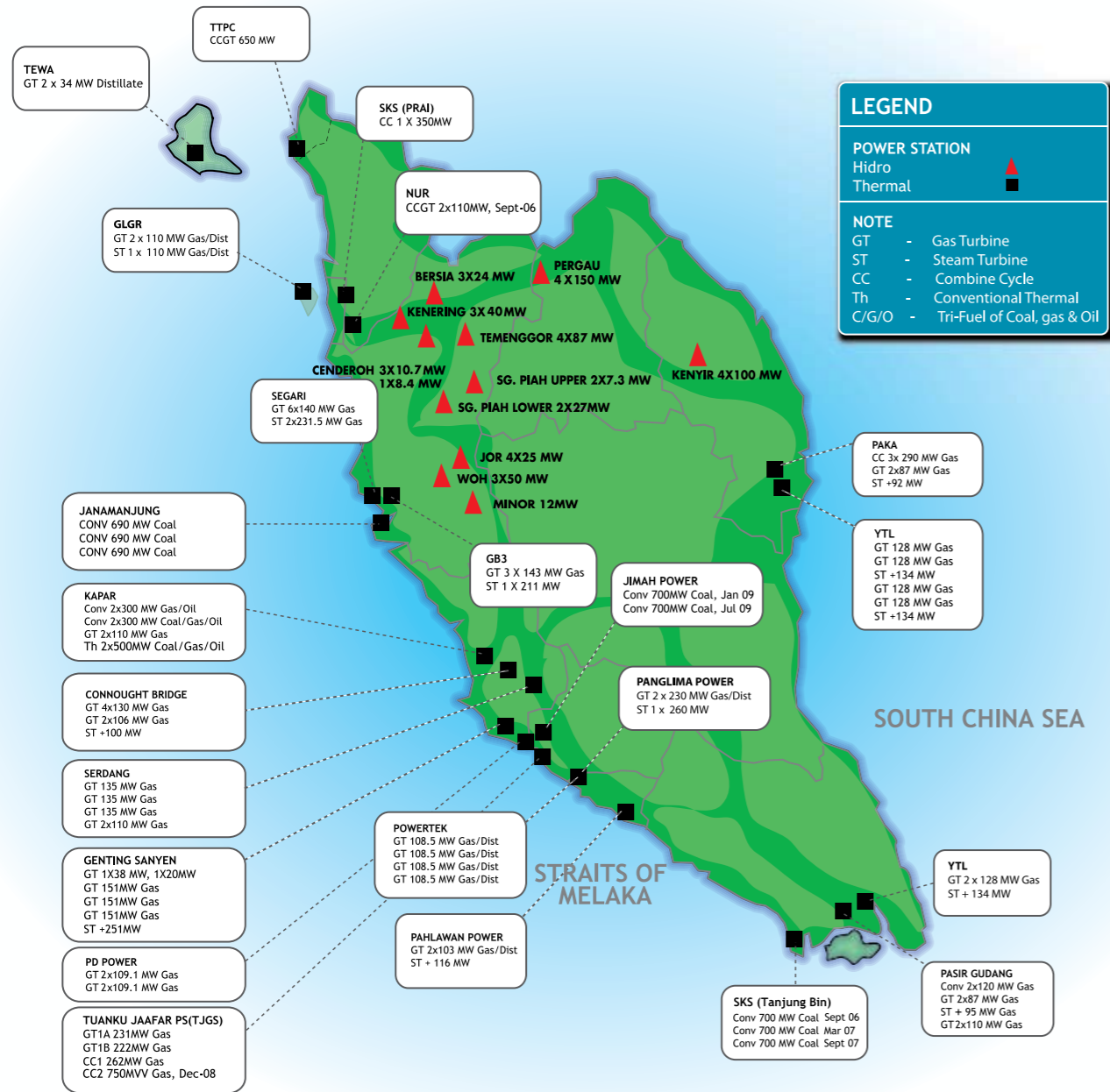
Electricity Consumer of TNB, SESB and Sarawak Energy Berhad According to Sectors



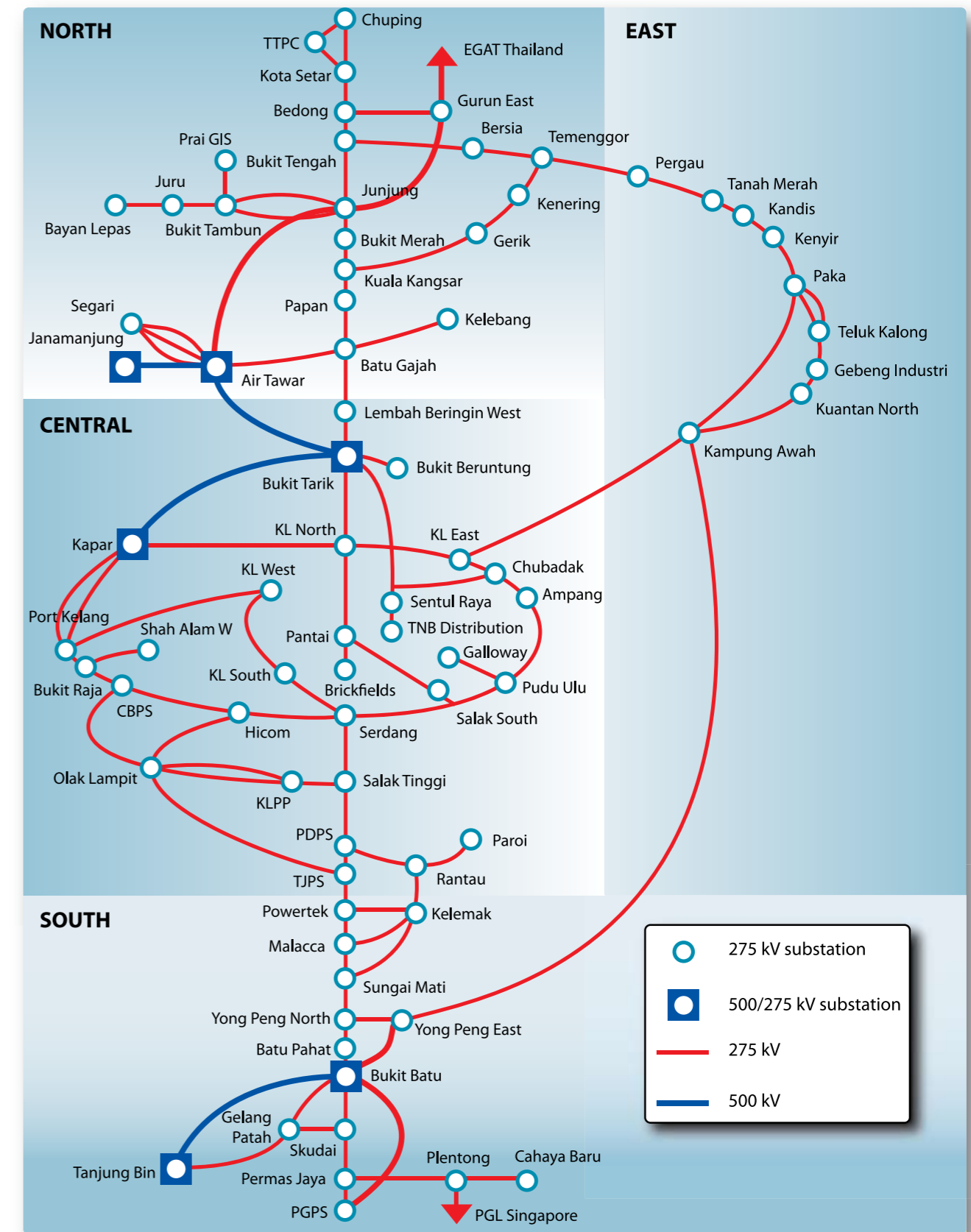
Generation by Major Power Producers in Malaysia



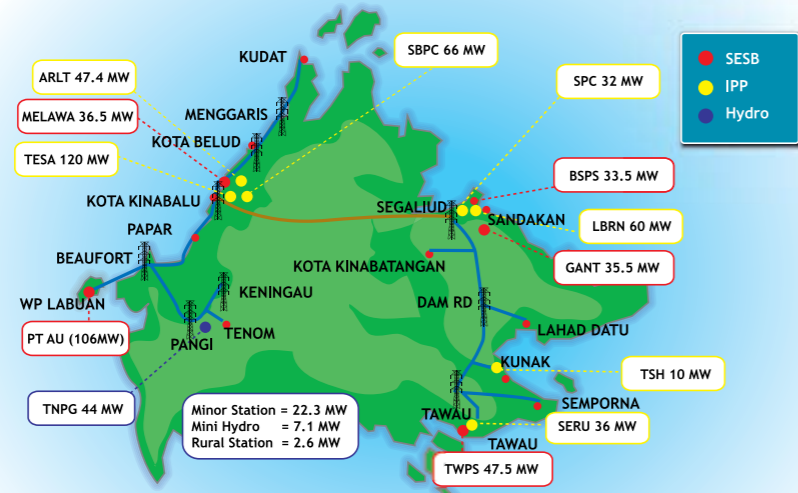
MAJOR GENERATION STATIONS IN PENINSULAR MALAYSIA



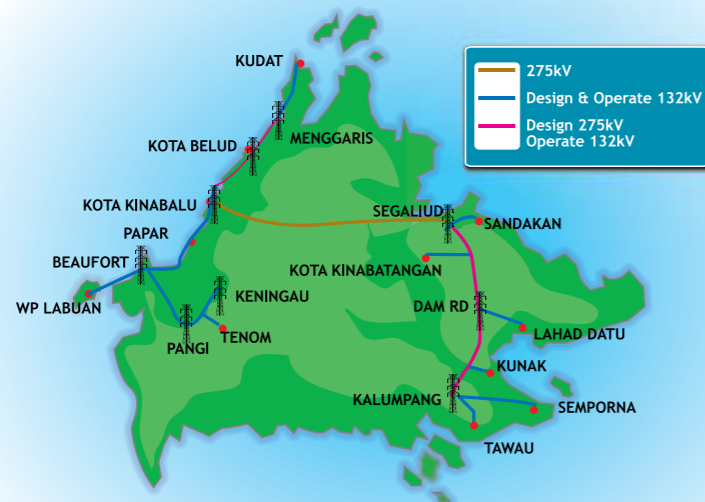
TNB GRID SYSTEM 2007



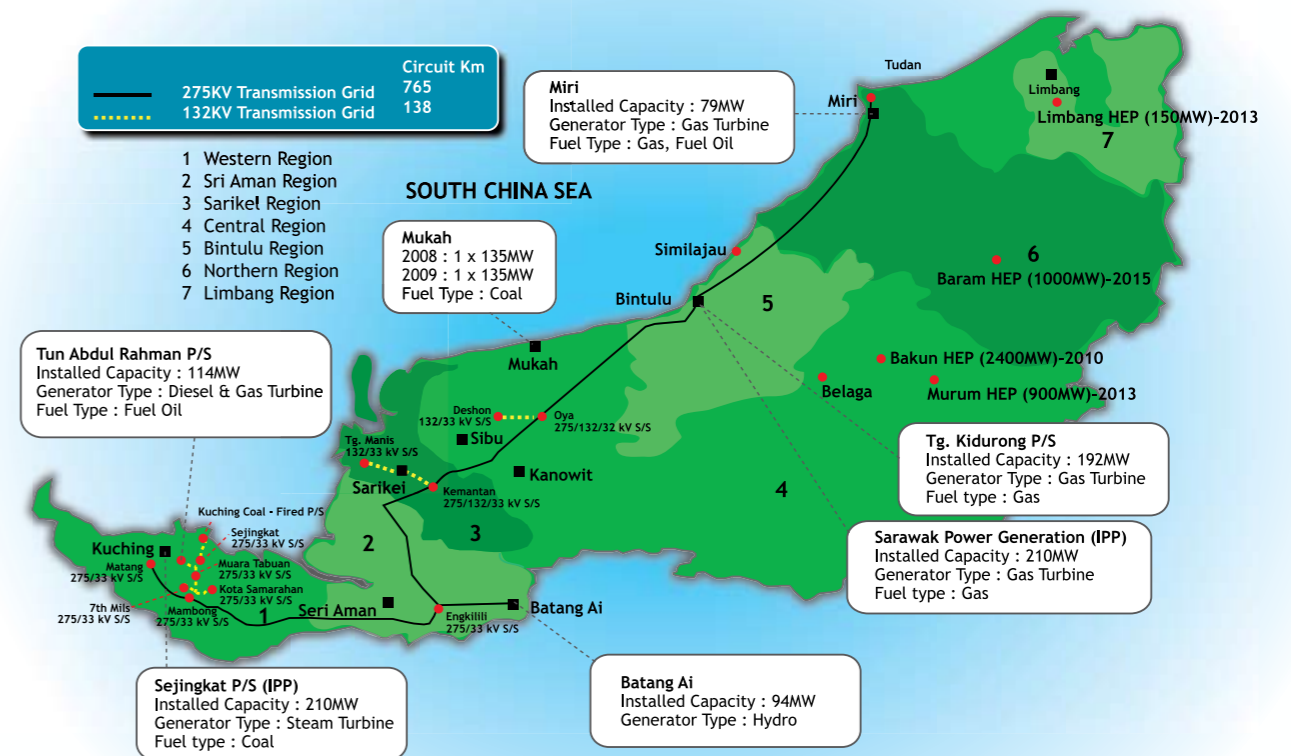
MAJOR GENERATION STATION IN SABAH



SESB GRID SYSTEM 2007



MAJOR GENERATION STATIONS AND GRID SYSTEM IN SARAWAK



KEY CONTACTS

KEY CONTACTS GOVERNMENT MINISTRIES AND DEPARTMENTS

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AND COMMUNICATIONS**
Block E4/5, Government Complex Parcel E
Federal Government Administrative Centre
62668 Putrajaya
Tel : 03-8883 6000
Fax : 03-8889 3712

**MINISTRY OF INTERNATIONAL TRADE
AND INDUSTRY (MITI)**
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Tel : 03-6203 3022
Fax : 03-6201 2337

MINISTRY OF FINANCE
Ministry of Finance Complex
No. 5, Persiaran Perdana Precint 2
Federal Government Administrative Centre
62592 Putrajaya
Tel : 03-8882 3000
Fax : 03-8882 3893 / 8882 3894

**MINISTRY OF PLANTATION INDUSTRIES
AND COMMODITIES**
No. 15, 6-13th Floor,
Persiaran Perdana, Presint 2
Federal Government Administrative Centre
62654 Putrajaya
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Fax : 03-8880 3445

**MINISTRY OF ENTREPRENEUR AND
CO-OPERATIVE DEVELOPMENT**
No. 18, Persiaran Perdana, Presint 2
Federal Government Administrative Centre
62652 Putrajaya
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Maju Junction, 1001, Jalan Sultan Ismail
50250 Kuala Lumpur
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Fax : 03-2691 4584

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Level 4, Plaza Sentral
Jalan Stesen Sentral 5
Kuala Lumpur Sentral
50470 Kuala Lumpur
Tel : 03-2267 3633
Fax : 03-2274 7970

ECONOMIC PLANNING UNIT
Prime Minister's Department
Block B5 & B6
Federal Government Administrative Centre
62502 Putrajaya
Tel : 03-8888 3333
Fax : 03-8888 3755

STATISTICS DEPARTMENT
Level 6, Block C6, Parcel C,
Federal Government Administrative Centre
62514 Putrajaya
Tel : 03-8885 7000 / 8885 7710
Fax : 03-8888 9250 / 8888 9248

**MALAYSIA EXTERNAL TRADE
DEVELOPMENT CORPORATION**
7th Floor, Wisma Sime Darby
Jalan Raja Laut
50350 Kuala Lumpur
Tel : 03-2616 3333
Fax : 03-2694 7362

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TENAGA NASIONAL BERHAD

No. 129, Jalan Bangsar
Peti Surat 11003
50732 Kuala Lumpur
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Fax : 03-2282 6754

TNB GENERATION SDN. BHD.

d/a Naib Presiden (Penjanaan)
Tenaga Nasional Berhad
Bahagian Penjanaan TNB,
4-8th Floor, Bangunan Penjanaan
No. 129, Jalan Bangsar
59200 Kuala Lumpur
Tel : 03-2284 0680/2284 0711
Fax : 03-2282 1073 / 2282 6886

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Level 43, Menara MAXIS
Kuala Lumpur City Centre
50088 Kuala Lumpur
Tel : 03-2381 6666
Fax : 03-2381 6677

GENTING SANYEN POWER SDN. BHD.

22nd Floor, Wisma Genting
Jalan Sultan Ismail
50250 Kuala Lumpur
Tel : 03-2333 2211
Fax : 03-2162 4032

ARL POWER SDN. BHD.

Mezzanine Floor, Wisma Ali Bawal 2
No. 11, Jalan Tandang
46050 Petaling Jaya
Selangor
Tel : 03-7784 0476
Fax: 03-7783 8485

SARAWAK ENERGY BERHAD

9th Floor, Wisma SESCO
Jalan Bako, Petra Jaya
93673 Kuching
Sarawak
Tel : 082-441 188
Fax : 082-444 186

SABAH ELECTRICITY SDN. BHD.

Wisma SESB
Jalan Tuanku Abdul Rahman
88673 Kota Kinabalu
Sabah
Tel : 088-282 699
Fax : 088-223 320

PORT DICKSON POWER BERHAD

Batu 2, Jalan Seremban
71000 Seremban
Negeri Sembilan
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Fax : 06-651 4236

YTL POWER GENERATION SDN. BHD.

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84, Jalan Raja Chulan
50200 Kuala Lumpur
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Fax : 03-2732 0560

SEGARI ENERGY VENTURES SDN. BHD.

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Fax : 03-2263 3322

MUSTEQ HYDRO SDN. BHD.

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Amcorp Trade Centre
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46050 Petaling Jaya
Selangor
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Fax : 03-7957 4793

SERUDONG POWER SDN. BHD.

Lot 8-05, Level 8, Menara Milenium
8, Jalan Damanlela
Bukit Damansara
50490 Kuala Lumpur
Tel : 03-2093 8818
Fax : 03-2093 7818

KEY CONTACTS UTILITIES AND MAJOR POWER PRODUCERS

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32nd Floor, Empire Tower
No. 182, Jalan Tun Razak
50400 Kuala Lumpur
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Fax : 03-2171 1149

STRATAVEST SDN. BHD.

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Amcorp Trade Centre
No. 18, Jalan Persiaran Barat
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Selangor
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Fax : 03-7957 4793

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5th Floor, East Wing Et Centrelink
Wisma Consplant 2
No. 7, Jalan SS 16/1
47500 Subang Jaya, Selangor
Tel : 03-5632 3633
Fax : 03-5631 3270 / 5631 0470 / 5632 6737

NUR GENERATION SDN. BHD.

Receiver And Managers Appointed
Central Control Building (CCB)
Lot 30, Jalan Hi-Tech 4
Kulim Hi-Tech Park
09000 Kulim, Kedah
Tel : 04-401 0100
Fax : 04-401 0150 / 401 0319

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Lot D20, 2nd Floor, Damai Plaza Phase III
Jalan Kayu Manis
88300 Kota Kinabalu, Sabah
Tel : 088-269 831 / 269 832
Fax : 088-267 517

TNB JANAMANJUNG SDN. BHD.

Stesen Janakuasa Sultan Azlan Shah
Jalan Semarak Api, Teluk Rubiah
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32040 Seri Manjung, Perak
Tel : 05-689 8000 / 688 4155 / 688 4140
Fax : 05-688 4309

PAHLAWAN POWER SDN. BHD.

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Kuala Lumpur City Centre
50088 Kuala Lumpur
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Fax : 03-2381 6677

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Bahagian Penjanaan
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Tel : 03-2284 0680 / 2284 0711
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PANGLIMA POWER SDN. BHD.

Stesen Janakuasa Elektrik
Teluk Gong
78200 Kuala Sungai Baru, Melaka
Tel : 06-3841 782
Fax : 06-3841 890

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Stesen Janaelektrik Sultan Salahuddin
Abdul Aziz
Peti Surat 220
42200 Kapar, Selangor
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Fax : 03-3250 7617

JIMAH ENERGY VENTURES SDN. BHD.

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Wisma UOA Damansara II
No. 6, Jalan Changkat Semantan
Damansara Heights
50490 Kuala Lumpur
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Fax : 03-2095 0822

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NOTES

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Fax : 03-2263 3399

GB3 SDN. BHD.

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