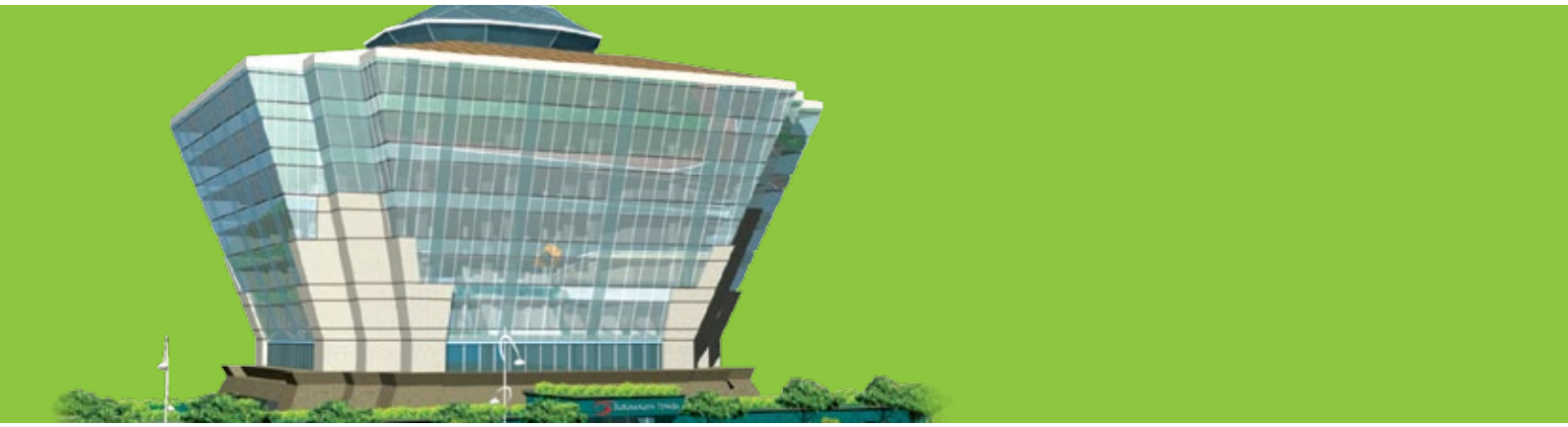
Suruhanjaya Tenaga
Energy Commission


# Annual Report 2009

# Contents



# Energy Commission 2009 Annual Report

The Energy Commission 2009 Annual Report is submitted to the Minister of Energy, Green Technology and Water in accordance to Section 33(3) Energy Commission Act 2001 that stipulates that "The Commission is obliged to submit a copy of its account statement that has been certified by an auditor and a copy of an auditor's report to the Minister soonest possible, who will tabled the statement and report to both Houses of Parliament, together with a report that outlines all the Commission's activities for the previous financial year".

# Al-Fatihah

# In Memoriam

## Allahyarham Dato' Ir. Pian Bin Sukro

**Chairman, Energy Commission**

Tiga puluh lapan tahun industri tenaga mengenalimu
Jiwa yang kental tidak mengenal erti lelah
Menggalas cabaran penuh liku
Demi Negara yang tercinta

Di perantauan membawa agenda Negara
Dalam damai menyahut panggilan Ilahi
Kami masih merinduimu
Kami meratapi pemergianmu!

Pimpinanmu tunggak kekuatan kami
Kasihmu meredup jiwa yang gundah
Perginya Dato' meluntur semangat waja
Perginya Dato', menerbangkan rasa dalam jiwa

Tiada lagi senda gurau
Yang menjadi selingan mesyuarat
Hanya tinggal kenangan rindu
Yang pasti meruntun jiwa

Astarghfirullah... berkali mohon keampunan pada Allah
Yang Maha Mengerti ...Maha Mengetahui
Suratan dan Takdir penentu segalanya
Kami pasrah qada' dan qadar Mu

Kami bersyukur kerana mengenali mu
Kami bersyukur Dato' sebahagian dari kami
3 tahun 7 bulan bersamamu di ST,
Masa yang singkat tetapi penuh bermakna

Perubahan dalam ST adalah kerana sentuhanmu
Pemikiran, Pandangan, Citarasa, Kehalusan dan Keindahan
Segalanya adalah sentuhan hati murni mu....
Meletakkan ST pada asas yang teguh...
Terima kasih atas segalanya
Budimu sentiasa kami sanjung dan kenang
Perjuanganmu akan diteruskan
Sifat-sifat murnimu sentiasa menjadi teladan

Setiap cabaran ada penyelesaiannya
Jika kemahuan tekad mencari
Amanat dan pemikiranmu menjadi pedoman
Dalam harungi kemelut industri

ST sudah dilandasan betul
Jangan diundur barang selangkah
Mari gembeling tenaga dan usaha
Jayakan aspirasi yang telah diamanat

# Condolences

***May Allah S.W.T shower blessings upon the soul of Allahyarham, and may his soul be placed amongst the righteous and pious.***



# Message From The Chairman

# Message From The Chairman


LOO TOOK GEE
Chairman

"The Commission embark on programs to intensify its personnel's competency development initiatives. A total of five percent from the entire human capital expenditure are utilised on competency training and development programs consisting of 70 different programs."

The year 2009 bear witness to a grave event that have a severe impact on the Energy Commission's precious human capital in totality. The passing of Allahyarham Dato' Ir. Pian bin Sukro, the Commission's Chairman on 30th October 2009 was a huge loss to the Commission and the energy sector in general.

At times when personnel's morale was at its highest and ready to take on challenges and responsibility of regulating the industry under the leadership and guidance from the late Allahyarham Dato' Ir. Pian; his demise is truly felt by one and all. The entire Commission's personnel would like to take this opportunity to extend our heartfelt and deepest condolences to the family of the late Allahyarham Dato' Ir. Pian. May Allah S.W.T shower the Allahyarham's soul with perpetual blessings and may he be placed amongst the righteous and pious.

### Transformation Initiatives

Throughout 2009, the Commission continuously pursued on several initiatives that aims to further develop the industry and enhances the industry's regulatory efficiency. The Commission also continues to elevate and enhances its personnel's competency level to a higher standard through the engagement of various training and education programs. Regulatory and enforcement activities are also being gradually enhanced throughout 2009.

In fulfilling its advisory role, the Commission submitted key inputs and opinion to the Government that were positively accepted and implemented as part of an initiative to tackle issues faced by the industry. Amongst these issues are:

- Effects from the fluctuation of global fuel price on the price of energy;
- Restructuring of the natural gas subsidy within Peninsular Malaysia applicable to the energy sector;
- New tariff structure for electricity and piped gas;
- Monitoring fuel supply for the power generation sector; and
- Power Generation capacity planning.

The Commission also pursued its initiatives to transform the industry's landscape, which was initiated in 2006 through the activation and implementation of the following programs:

- Regulation of Tenaga Nasional Berhad's (TNB) Supply Services Performance Standards which specifies the minimum service standard and guarantee on minimum service standard, and the stipulation of penalties for non-compliance;

- Implementation of Electricity Supply Quality Baseline Study in Peninsular Malaysia to ensure that electricity are supplied at a guaranteed standard of quality;

- Implementation of Management and Engineering Audit of TNB and independent power producers based on a new approach that aims to improve the audit results credibility;

- Revision to the Electricity Supply Act 1990 which includes new provisions related to electricity licensing, supply, safety and enforcement framework;

- Implementation of Policies, Standards and Safety Guidelines, which includes the preparation of guidelines for electrical wiring installation, installation of electric gates, utilisation of gas equipment and accessories and electrical wiring in residential buildings, as well as initiating a revision to the certification guidelines for wiring and piped gas and equipment installation;

The Commission was also instrumental in preventing disruptions in electricity supply in 2009 through its proposal on distribution of allocation for gas supply to the power sector. This effort successfully prevented the occurrence of a critical situation due to simultaneous lack of coal and gas supplies which had occurred in 2008. In mid-year 2009, the Government approved the proposal to redistribute 100 mmscfd of gas supplies from the power sector to the industry sector.

Apart from gas supplies, the supply of coal at a reasonable price and "fair despatching of coal power plants' are amongst the many issues that the Commission is still managing. In doing so, the Commission chaired a discussion and negotiation that call for an in-depth and comprehensive review on all related issues that would lead towards a mutual consensus that would benefit and protect the interest of parties involved including the electric supply system and the consumers.

In its effort to implement and improves its economic regulatory performance, the Commission is of the opinion that a comprehensive study is required to evaluate the actual electricity supply cost pertaining to each category of consumers. In November 2009, the Commission appointed SAHA International Limited to conduct a study on electricity and gas tariff revision in Peninsular Malaysia and Sabah. The revision envisioned to develop

"The Commission sees the issue of electricity supply in Sabah as another main challenge that has to be resolved in the coming years. For such a long time a resolution has yet to be found for the matter."

an economic regulatory framework that would be able to determine tariffs for consumers in addition to developing a more accurate tariff model. The outcome of the study will bring about a change in the tariff determination process from modified cost of service regulation to incentive based approach.

### Achievements in Year 2009

Monitoring on the quality of service and supplies provided by the utilities remain as the Commission's main activities. Throughout 2009, the Commission issued scheduled reports on the utilities supply service performance in order to ensure that the service provided meets the TNB's Supply Services Performance Standard and fulfil the minimum and guaranteed service requirement. Through the establishment of these standards, the utility service performance can be streamlined and the users' expectation fulfilled.

Beginning 2009, the Commission enforces the Efficient Management of Electrical Energy Regulations 2008. The Commission receives a total of 100 application as Energy Manager, in which 22 Energy Managers have been registered up to end of 2009. Notification letter on the implementation of the Efficient Management of Electrical Energy Regulations 2008 were issued to over 1000 electrical installation facilities that uses more than 3 million kWh for a consecutive 6 month period.

To ensure the realisation of the energy efficiency initiatives, the Commission had also developed an electrical appliance energy efficiency criteria for television, air-conditioner and fan. Apart from the existing energy efficiency criteria that has been set and implemented on refrigerator since 2008, similar criteria are being developed for all three categories of appliances. The Commission is also analysing the possibility of enforcing the energy efficiency labelling for appliances as mandatory through an approved legislation.

In its effort to ensure that the safety standard for electrical supply are met, the Commission up to end of 2009 have embarked to register a total 78,730 electrical competent person and 669 gas competent person under various categories. Continuous effort are being made to increase the number of competent person in the work market. This target is aligned to the projected increase in demand for competent person in tandem to the country's future economy advancement. Among the initiatives implemented in 2009 is the accreditation of local public technical intuitions throughout the country that offers electrical and gas competency courses. The Commission also provide accreditation to 108 public institutions to conduct electrical and gas competency related courses throughout the country in 2009.

The Commission has also approved over 4,018 applications for the importation and assembly of electrical appliances in 2009. The approval was issued by the Commission

to ensure that the appliances sold to users are safe and in compliance to the stipulated standard and voltage requirement.

Although continuous effort are being done to ensure that electrical accidents rate are reduced, 56 cases of electrical accidents are still being reported and investigated by the Commission including 35 fatality cases in 2009. In order to reduce the accident rate, continuous enforcement and educational programs are being implemented nationwide. The Commission also produced a Community Message Video Clip that was aired on Government owned and private local television stations to further educate the public on electrical safety aspect during the second half of 2009. The utilities provider are also served with reminders requesting them to comply and abide to the safety guidelines in addition to the enforcement and inspection conducted by the Commission on a regular basis, as most of the accident cases occurred within their premises.

Enforcement and investigations remained as the Commissions core regulatory activities. In 2009, the Commission focused its effort towards strengthening the framework on enhancing skill capabilities and increasing monitoring and enforcement activities.

Prosecution efforts have also been intensified resulting in the Commission's being able to indict 16 cases to court. Amongst the action taken are the issuance of compound on 11 cases that are found to have breached the stipulated guidelines and regulations. TNB was also served with 5 compounds for violating their licensing terms. Consequently, the energy sector sees an increase in the level of compliance to the stipulated guidelines and regulations amongst the license holders and those involved in the energy sector. The Commission is in view that these efforts should be continued, although constrained by the limited number of human resource and capability.

### Capacity Building

Throughout 2009, the Commission embarked on an accelerated effort to increase capacity building in terms of its human capital competency level, work procedures and operating system. By end of December 2009, the Commission boast a total workforce of 226 personnel compared to the 179 personnel in 2008. In realizing the government's aspiration to implement the 1Malaysia initiative, the Commission in 2009 recruited 11 personnel from Sabah and Sarawak.

The human capital competency development effort are further boosted through the utilisation of 5% from the human capital expenditure to be spent on training and competency development programs that consist of 70 type of programs. The competency development programs encompassed training in the field of competency behaviour, regulatory and supervision, enforcement and technical

practices. We anticipate that the investment made would be able to cultivate an outstanding, dedicated and skilled work force able to fulfil their entrusted duties.

In tandem to the current need and future expectation on its operating capability, the Commission took measures to enhance its operating system regularly. Online Registration of Contractors (OLRC) has been implemented in Malacca and Negeri Sembilan Regional Office to facilitate registration activities and provide convenient access for the acquisition of pertinent information from the Commission. The system will be implemented to all Regional Offices nationwide beginning 2010.

### International Network

In addition of its existing membership in international organisation such as the *Energy Regulators Regional Association (ERRA)*, *East Asia and Pacific Infrastructure Regulators Forum (EAPIRF)* the Commission in 2009 became a member of the I*nternational Federation for the Safety of Electrical Users (FISUEL)*, which is an international organisation based in Paris, France. Our participation in these international organisations provides a platform for the Commission to share precious experience in the field of regulatory and enforcement activation and to participate and benefit from enforcement capacity building development programs conducted by these organisations from time to time.

In 2009, the Commission initiated a collaboration agreement with the *California Energy Resources Conservation and Development Commission* and the *Lawrence Berkeley National Laboratory* that aspire to impart experience sharing in the field of regulatory and enforcement initiatives and gain beneficial knowledge through active participation in its capacity development programs in the field of regulatory and enforcement, development of renewable energy and energy supply and consumption efficiency.

On the 11th and 12th November 2009, the Commission hosted the 8th ASEAN Consultative Committee for Standards and Quality Joint Sectoral Committee on Eletrical and Electronic Equipment. The aim was to discuss the progress of activities which includes the listing of Conformance Assessment Bodies, monitoring of the transposition of the Agreement on the ASEAN Harmonised Electrical and Electronic Equipment Regulatory Regime to national legislation, and to update its collaboration partnership status forged with international organisations and dialogue partners.

The Commission participated in various programs and international activities in 2009 including the *World Gas Conference,* organised in Buenos Aires and the *World Energy Regulators Forum* in Athens and the *ASEAN Ministers on Energy Meeting (AMEM)* in Myanmar.

The establishment of the *Chair of Energy Economics (Kursi)* that has been planned since 2006 was finally realised in 2009 through the appointment of Dr. Rajendra K. Pachauri, Director General of the Energy Resources Institute of India as the inaugural Kursi Chairperson. Dr. Pachauri is a prominent international figure in the field of energy, economic and environmental science. He is the Chairman of the *Intergovernmental Panel on Climate Change*, who has been accorded the Nobel Prize in 2007. Kursi was initiated in partnership with UNITEN and operates via the *Institute of Energy Policy and Research*, UNITEN. The establishment of Kursi will assist in enhancing our country's level of expertise and research development in the field of energy and economy.

### Advancing into 2010

Come 2010, the Commission will embark on 2 major transformation initiatives encompassing the Commission's organisational governance, location and work culture. The revision made in the Energy Commission Act (Amendment) 2009, approved by the Parliament in December 2009, stipulates the separation of duties between the Chairman and the Chief Executive Officers, increase in the number of Energy Commission members from the existing seven to 11 members, Commission's membership term, implementation of the Statutory Bodies Act (Accounts and Annual Reports) 1980, disbursement of allocation for human capital development and limitation on entering contracts worth up to RM10 million without the Minister's approval. These revisions are made in order to increase work efficiency and effectiveness, accountability, governance and the Commission's integrity as the regulatory body that governs the electricity and piped gas supply industry.

The relocation of the Energy Commission's headquarter to the Diamond Building in Precinct 2, Putrajaya, which is an energy efficient and sustainable building that is scheduled for completion in March 2010, lays claim to a shift in the cultural and working mind-set that aptly complements the status of such a building, which aspires to be one of Putrajaya's landmark not just in form but functionality as well. These transformation will create a huge impact on the Commission's precious human capital work ethics, and hopefully will enhance their performance and efficiency level adding towards the Commission's overall effectiveness.

The Commission sees the issue of electricity supply in Sabah as another main challenge that need to be resolved in the coming years. For an extended period of time a solution have yet to be found and the Commission is hoping that all parties involved will extend their fullest cooperation to resolve the issue swiftly and amicably.

With the Government's intensified focus on measuring performance through Key Performance Indicators, the Commission needs to orientate its efforts towards achieving results. Therefore, the Commission's workforce must be

"Supervision of the quality of service and the quality of supply by utilities remain the Commission's prime activity."

ready and equipped to manage enhanced responsibility and accountability as envisaged by the Commission.

The renegotiation issue on the Power Purchase Agreement, energy and fuel price and reduction of subsidies continues to remain as the Commission's key challenges in 2010. It is expected that the studies conducted on the energy sector by Khazanah Nasional Berhad will provide a clear indication on the direction of the nation's energy sector. Other than that, the Commission will also firm up on the issue of fuel sufficiency, the transparency of system operators and that the improvement of the working structure on economic monitoring will be given special attention to ensure that the national energy sector is at its most optimum level to cater towards the country's future economic growth.

The Commission will continue to drive and regulate the energy sector to achieve its optimum capability. This commitment will ensure that consumer receives reliable, safe and sufficient energy supply. License holders and parties that are authorised by the Commission need to improve their role and functions and share common responsibility with the Commission in accomplishing the said objective. The Commission is accessible to any input that would assist in the reformation of the energy sector towards achieving a win-win situation for all parties.

The Commission is aware that without the cooperation from all parties involved, we would not be able to effectively execute and achieve all that have been planned. With that note, we extend our heartfelt appreciation and gratefulness to the YB Minister of Energy, Green Technology and Water and the Ministry of Energy, Green Technology and Water (KeTTHA) and the Commission Members who have extend their expertise and time to provide pertinent guidance to the Commission's management team. I sincerely extend my thankfulness for their invaluable dedication and commitment.

In conclusion, allow me to express my deepest gratitude to the Commission's precious workforce on their diligent effort that have enable the Commission to continuously strive for excellence and progressively grow in strength and authority.

LOO TOOK GEE



# Corporate Information

# Corporate Information

## Vision

The Energy Commission strives to be a highly effective energy regulator as well as the authority on energy matters.

## Mission

The Commission aspire to strike a balance between consumer and energy provider needs to ensure a reliable, consistent and safe supply of energy at a reasonable rate; to protect public interest and promote competitive market and economic development in a secured environment.

## Core Values

- Excellence
- Reliability
- Sense of Fairness and Fair Play

## Clients Charter

The Energy Commission is committed to the following:-

- To set up a dynamic and progressive regulatory system that promotes the development of the electricity and gas industry;
- To carry out on-going services in electricity and gas supply regulation that protects the consumers' interest;
- To carry out effective legal enforcement; and
- To provide efficient and hospitable regulatory service within the stipulated time frame in the processing of license and authorisation letter issuance.

# Roles And Functions

- Advise the Minister on all matters pertaining to the energy supply activities;
- Implement, enforce and review the stipulate energy supply laws and regulations;

  - Energy Commission Act 2001 (Amendment 2010)
  - Electricity Supply Act 1990 (Amendment 2001)
  - Gas Supply Act 1993 (Amendment 2001)
  - Electricity Regulations (Compound of Offences) 2001
  - Gas Supply Order (Compoundable Offences) 2006
  - Electricity Regulations 1994 (Amendment 2003)
  - Gas Supply Regulations 1997 (Amendment 2000)
  - License Holders Supply Regulations 1990 (Amendment 2002)
  - Efficient Electrical Energy Management Regulations 2008

- To protect consumer interests;
- To promote efficiency and safety within the electrical and piped gas supply industry;
- Encourage healthy competition and prevent abuse of power or monopoly within the electricity and piped gas supply industry;
- To promote application of renewable energy and energy conservation;
- To promote research and development of new techniques connected to electricity supply and consumption and supply of gas via pipeline;
- To promote self regulation.

# Energy Commission Members

## Chairman

Allahyarham Dato' Ir. Pian Bin Sukro
(Until 30th October 2009)

**From left to right**

Miss Loo Took Gee
Interim Chairman
(As of 13th November 2009)

## Members

Dato' Dr. Ali Bin Hamsa

Datuk Pg. Hassanel Bin Datuk Pg. Haji Mohd Tahir
(As of 1st September 2009)

Datuk Ir. (Dr.) Abdul Rahim Bin Haji Hashim
(As of 1st September 2009)

Dato' Ir. Aishah Binti Dato' Haji Abdul Rauf
(As of 1st September 2009)

Ir. Dr. Philip Tan Chee Lin
(As of 1st September 2009)

Datuk Awang Bin Haji Samat
(Until 31st August 2009)

Dato' Ir. Engku Hashim Al-Edrus
(Until 31st August 2009)

Dato' Ir. Lee Yee Cheong
(Until 31st August 2009)

Encik Muri Bin Muhammad
(Until 31st August 2009)

# Energy Commission Meetings

## Energy Commission Meetings

| No. | Date | Energy Commission Meetings | Venue |
|---|---|---|---|
| 1. | 12th February 2009 | Energy Commission Meeting No. 1/2009 | Headquarters |
| 2. | 2nd April 2009 | Energy Commission Meeting No. 2/2009 | Headquarters |
| 3. | 19th May 2009 | Energy Commission Meeting No. 3/2009 | Putrajaya |
| 4. | 14th July 2009 | Energy Commission Meeting No. 4/2009 | Paka, Terengganu |
| 5. | 25th August 2009 | Energy Commission Meeting No. 5/2009 | Headquarters |
| 6. | 8th December 2009 | Energy Commission Meeting No. 6/2009 | Headquarters |

## Energy Commission Committees Meetings

Finance and Tender Committee Meetings / Finance and Audit Committee Meetings

| No. | Date | Finance and Tender Committee (JK&T) Meetings / Finance and Audit Committee (JK&A) Meetings |
|---|---|---|
| 1. | 19th March 2009 | JK&T Meeting No. 1/2009 |
| 2. | 11th June 2009 | JK&A Meeting No. 1/2009 |
| 3. | 13th July 2009 | JK&A Special Meeting No. 1/2009 |
| 4. | 10th August 2009 | JK&A Meeting No. 2/2009 |
| 5. | 25th August 2009 | JK&A Meeting No. 3/2009 |

Note: The Finance and Tender Committee has been replaced by the Finance and Audit Committee.

## Licensing Committee (Management & the Energy Commission) [JKBP (P&ST)] Meetings

| No. | Date | Joint Licensing Committee (Management & the Commission) [JKBP (P&ST)] Meetings |
|---|---|---|
| 1. | 10th February 2009 | JKBP (P&ST) Meeting No. 1/2009 |
| 2. | 30th March 2009 | JKBP (P&ST) Meeting No. 2/2009 |
| 3. | 11th May 2009 | JKBP (P&ST) Meeting No. 3/2009 |
| 4. | 9th July 2009 | JKBP (P&ST) Meeting No. 4/2009 |
| 5. | 21st August 2009 | JKBP (P&ST) Meeting No. 5/2009 |
| 6 | 21st December 2009 | JKBP (P&ST) Meeting No. 6/2009 |

## Services and Employment Committee (JKP&P) Meetings

| No. | Date | Services and Employment Committee (JKP&P) Meetings |
|---|---|---|
| 1. | 18th March 2009 | JKP&P Meeting No. 1/2009 |
| 2. | 23rd April 2009 | JKP&P Meeting No. 2/2009 |
| 3. | 23rd June 2009 | JKP&P Meeting No. 3/2009 |
| 4. | 21st August 2009 | JKP&P Meeting No. 4/2009 |

# Energy Commission Management Team

Allahyarham Dato' Ir. Pian bin Sukro
Chairman
(Until 30th October 2009)


Miss Loo Took Gee
Interim Chairman

Ir. Ahmad Fauzi bin Hasan
Chief Operating Officer

Ir. Azhar bin Omar
Director (Electricity Supply)

Ir. Othman bin Omar
Director (Enforcement and Regional Coordination)

Ir. Francis Xavier Jacob
Director (Energy Management)

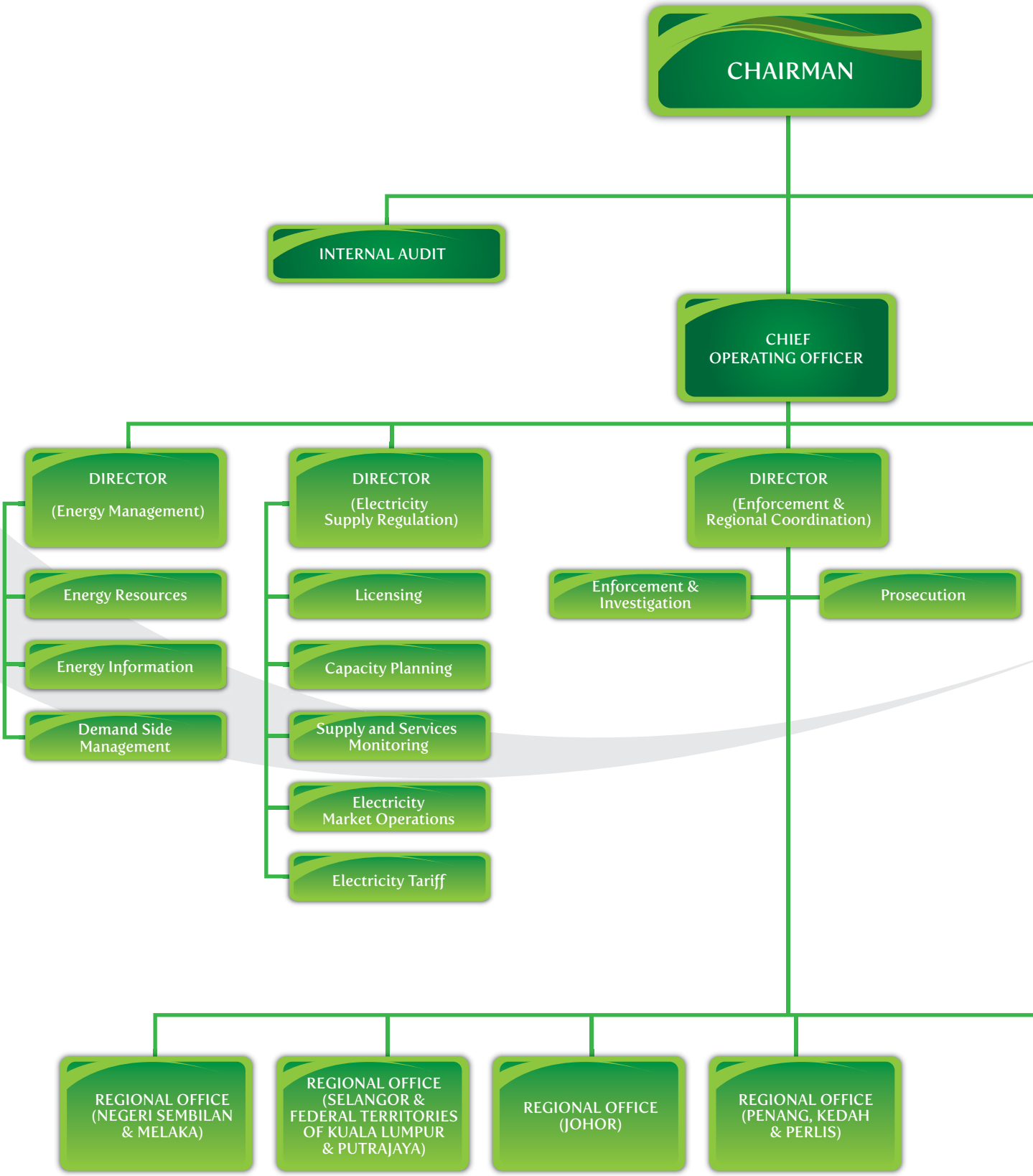
Puan Asma Aini binti Mohd Nadzri
Director (Corporate Services)
(As of 1st May 2009)

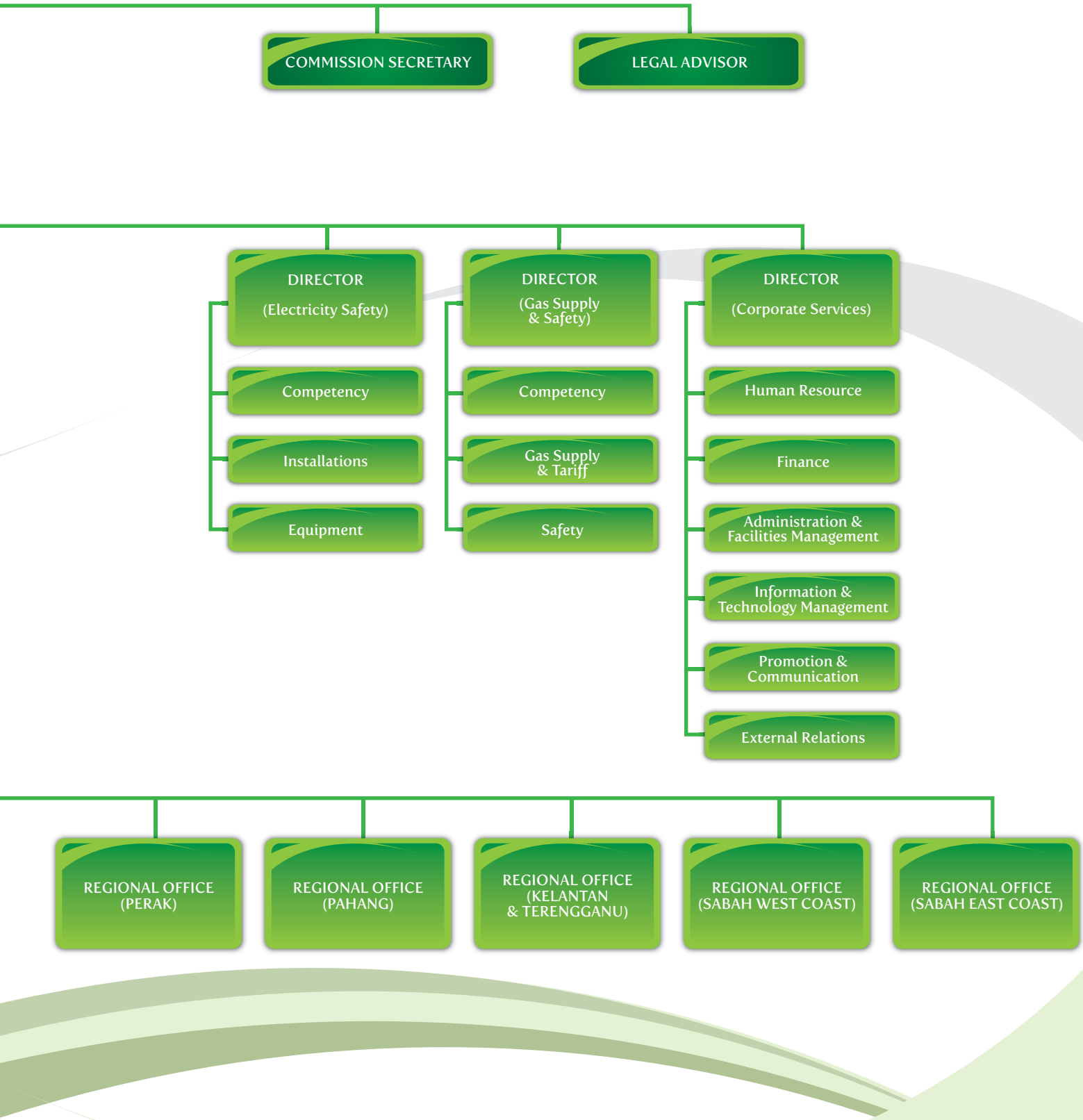
Ir. Ismail bin Anuar
Director (Electricity Safety)
(Until 14th November 2009)

Dr. Sulaiman bin Abdullah
Director (Safety and Gas Supply)

Puan Murtadza binti Mohd Kasim
Director (Support Services)
(Until 24th March 2009)

# Organisational Structure




COMMISSION SECRETARY
LEGAL ADVISOR
DIRECTOR (Electricity Safety)
Competency
Installations
Equipment
DIRECTOR (Gas Supply & Safety)
Competency
Gas Supply & Tariff
Safety
DIRECTOR (Corporate Services)
Human Resource
Finance
Administration & Facilities Management
Information & Technology Management
Promotion & Communication
External Relations
REGIONAL OFFICE (PERAK)
REGIONAL OFFICE (PAHANG)
REGIONAL OFFICE (KELANTAN & TERENGGANU)
REGIONAL OFFICE (SABAH WEST COAST)
REGIONAL OFFICE (SABAH EAST COAST)

# Significant Events

## 2001

- The Commission has been established under the Energy Commission Act 2001, on 1st May 2001.
- The Commission formed its first organisational structure on 1st September.

## 2002

- The Commission took over the functions of the Department of Electricity Supply *(Jabatan Bekalan Elektrik)* and its responsibilities under related Acts and Regulations on 2nd January 2002. The Commission commenced regulatory activities on 2nd January 2002.

## 2003

- The Commission re-located to Menara TH Perdana office building in April 2003.
- The Commission set the direction for its Corporate Strategic Plan 2003 - 2005, Vision and Mission as well as Core Values.
- The Commission introduced the benchmark for the Malaysian Electricity Supply Industry (MESI).

## 2004

- The Commission implemented a revised study on the Grid System performance in Peninsular Malaysia.
- The Commission led Malaysian delegation to the ASEAN Electrical And Electronic Mutual Recognition Agreement (ASEAN EE MRA) Meeting.

## 2005

- The Commission spearheaded the Energy Consultative Panel (Panel Perunding Tenaga) that aims to foster cooperation between stakeholders in the energy sector.
- The Commission carried out a study on the Electricity Tariff Revision.
- The Commission introduced a plan for the development a sustainable building in Putrajaya via a Memorandum of Understanding in September 2005.

## 2006

- The Commission reviewed its organisational structure in tandem with the current development taking place and according to the growth requirement for the nation's energy industry.
- The Commission revised the electrical and piped gas safety regulatory regime.
- The Commission undertook a comprehensive review on the financial and technical performance of Independent Power Producers.

## 2007

- The Commission initiated the construction of a Diamond Shape headquarter, designed with energy efficient and sustainable features on Lot PT 7556, Presint 2, Putrajaya in June 2007.
- The Commission carried out an Energy Blueprint Study in September.
- The Commission revised its personnel terms and conditions of services and launched a revised set of Vision, Mission and Core Values.

## 2008

- The Commission open up its ninth Regional Office covering the State of Malacca and Negeri Sembilan.
- The Commission formulated and prepared the Electricity Supply Bill Draft to replace the Electricity Supply Act 1990.
- The Commission drafted a new Grid Code and Distribution Code applicable within the electricity supply sector.
- The Commission spearheaded the establishment of the Energy Council of Malaysia (ECOM) on 1st July 2008.

## 2009

- The Energy Commission Bill (Revised) 2009 was duly approved by the Parliament in December 2009.
- The Commission implemented a Management Performance System Study to evaluate staff performance based on Key Performance Index and competency level.
- The Commission conducted a study on the Electricity and Gas Tariff in Peninsular Malaysia and Sabah.
- The Commission instigated the natural gas price revision in view to the declining of crude oil prices in the global market.
- The Commission founded the Chair on Energy Economics at UNITEN.



# Industry Reports

# Industry Developments (Electricity And Gas)

## POWER GENERATION

### Supply Situation in Peninsular Malaysia

Peninsular Malaysia recorded sufficient electrical supply at a comfortable level. The reserved margin recorded in 2009 was within the vicinity of 53% compared to 41% the previous year. The grid system recorded an increase of 1.7% in maximum demand from 14,007 MW to 14,245 MW on 12 August 2009.

Installed power generation capacity increased to 21,817 MW, due to the commencement of operations by the Jimah Energy Ventures Sdn. Bhd. 2 x 700 Power Station in Port Dickson, Negeri Sembilan in the month of January and July 2009. The power generation capacity are further boosted with the work commencement of the Tuanku Ja'afar Power Generation Station (PD2) that generated a gas turbine capacity of 694 MW for the second combined cycle block in January 2009. TNB power generation stations produced a total capacity of 7,040 MW equivalent to 32.3% to the entire output while the remaining output are generated by independent power producers.

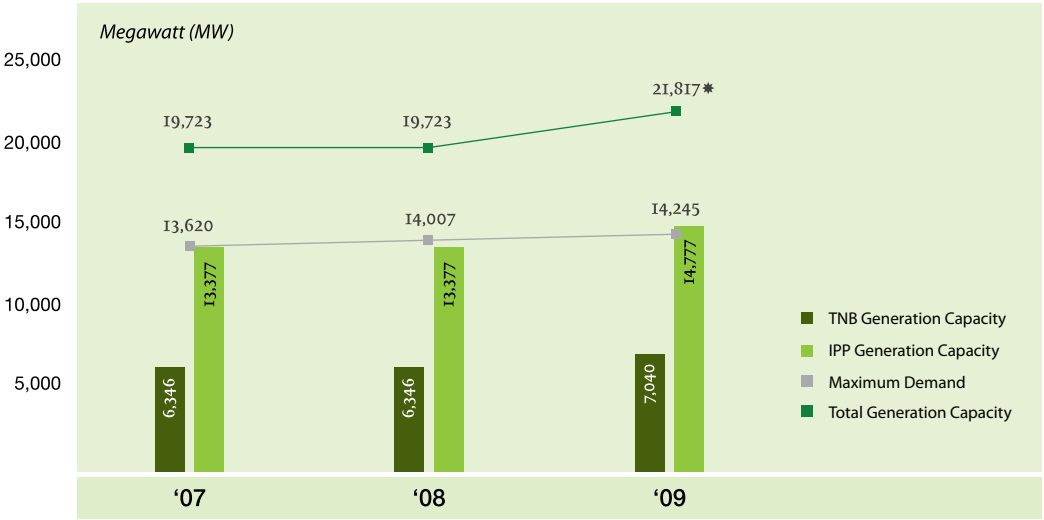
### Capacity Planning in Peninsular Malaysia

In order to ensure that there will be sufficient electrical supply in tandem to the progressive growth in demand till 2020, a planning on capacity increase have been initiated by the Electricity Supply Development Planning Working Committed, chaired by the Commission. In succession, any decisions made by the Committee were brought forth to the attention of the Electricity and Tariffs Supply Planning Implementation Committee (JPPPET), chaired by the YB Minister of Green Technology and Water for approval. Based on the meeting conducted by JPPPET in 2009, amongst the decisions made and issues deliberated in relation to the power generation capacity planning in Peninsular Malaysia are as follows:-

- The slow growth rate in electrical demand will resulted in the reserve margin to remain above the optimum level, which is at 25% till 2015. An estimated additional 6,800 MW is required within 2010 till 2020 to cater for the electricity demand that is projected to increase to 19,389 MW in 2020.

- The increase in the said power generation capacity can be achieved by opting to construct new power generation stations, extending the Power Purchase Agreement (PPA) of the existing Independent Power Producers (IPP) and importing energy from Sarawak. The options available on power generation stations incudes the Ulu Jelai (327 MW) and Hulu Terengganu (250 MW) Hydro Electric Projects that are expected to be completed according to schedule in 2015.

Graph 1: Maximum Demand and Installed Generation Capacity in Peninsular Malaysia in 2009




Note :

* 1) Commenced Unit 1 (U1) and Unit 2 (U2) coal-fired plant with 700 MW capacity at Station Jimah Energy Ventures Sdn. Bhd. in January and July 2009.

2) Commenced gas steam turbine gas with 694 MW capacity integrated cycle at Block 2 at Tuanku Ja'afar Power Station (PD2) in January 2009.

Source : TNB

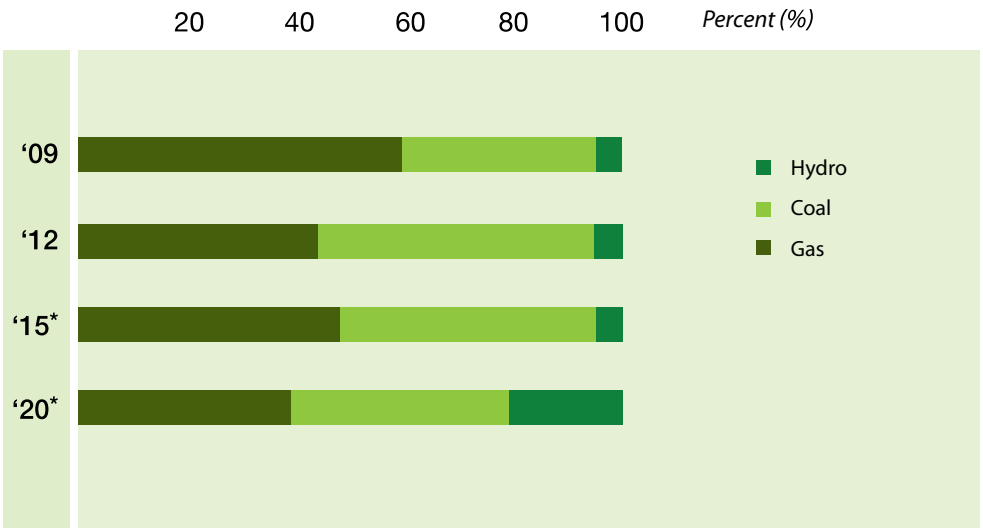
- Considering that the reserves of natural gas is progressively depleting, the Government decided for PETRONAS to source for additional supply of natural gas from abroad to cater for the country's domestic requirement. PETRONAS will be developing a Liquefied Natural Gas (LNG) terminal facility in Peninsular Malaysia to support future importation of LNG. Concurrently, the Government is considering the possibility of gradually reducing the subsidy on gas price towards the implementation of market pricing for natural gas in 2015 in view that the imported source are based on market price.

- The Nuclear Power Development Steering Committee (JPPKN) will bear the responsibility to plan and coordinate the nuclear energy development program that will Chaired by KeTTHA Secretary-General. In order to ensure that the public in general will accept this energy option; education, awareness and publicity on the application of safe nuclear technology has to be initiated effectively.

- Extending the concession period for a number of first generation IPP power stations can be made as one of the option in the planning for additional power generating capacity post 2015. Among the first generation IPP power stations involved are YTL Power Paka, YTL Power Pasir Gudang, Genting Sanyen Kuala Langat, Segari Energy Ventures, Port Dickson Poer and Powertek Telok Gong.

Moreover, a Feasibility Study on the grid cross-connection project between Peninsular Malaysia and Sumatera has been initiated by TNB and is expected to be implemented in 2015. TNB also held a discussion with the Asia Development Bank (ADB) in order to finance the project. This is done in line to the objective of realising the ASEAN Power Grid (APG) and the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) program in which the Sumatera grid project will become the main agenda within the potential energy projects that will be connecting the abovementioned countries.

Graph 2: Projection of Generation Mix in Peninsular Malaysia for the year 2009 until 2020




Note:
Natural gas source obtained locally and from imported LNG.

Through the Government effort to introduce the Feed-in Tariff (FIT) Mechanism in 2020, it is expected that the accumulated combined generation of renewable energy (RE) is projected to show an increase in Malaysia and Sabah from 2009 to 2020 as tabled below:

Table 1: RE Generation Projection

| Year | RE Capacity in Peninsular Malaysia (MW) | RE Power Generation in Peninsular Malaysia (MWh) | RE Capacity in Sabah (MW) | RE Power Generation in Sabah (MWh) | Total Capacity (MW) | Total RE Power Generation (GWh) |
|---|---|---|---|---|---|---|
| 2012 | 274 | 1,498,758 | 91 | 514,262 | 365 | 2,013 |
| 2015 | 758 | 4,109,043 | 227 | 1,275,617 | 985 | 5,385 |
| 2020 | 1596 | 8,497,535 | 484 | 2,746,265 | 2080 | 11,244 |

Table 2: Power Generation Projects for Peninsular Malaysia

| Power Generation Projects | Capacity | Type | Targeted Year |
|---|---|---|---|
| Hydro Electric Project, Ulu Jelai, Pahang | 372 MW | Hydro | 2015 |
| Hydro Electric Project, Hulu Terengganu, Terengganu | 250 MW | Hydro | 2015 |
| Hydro Electric Project, Bakun, Sarawak * | 1,600 MW | Hydro | 2015 & 2017 |

Note: * Imported electricity supply

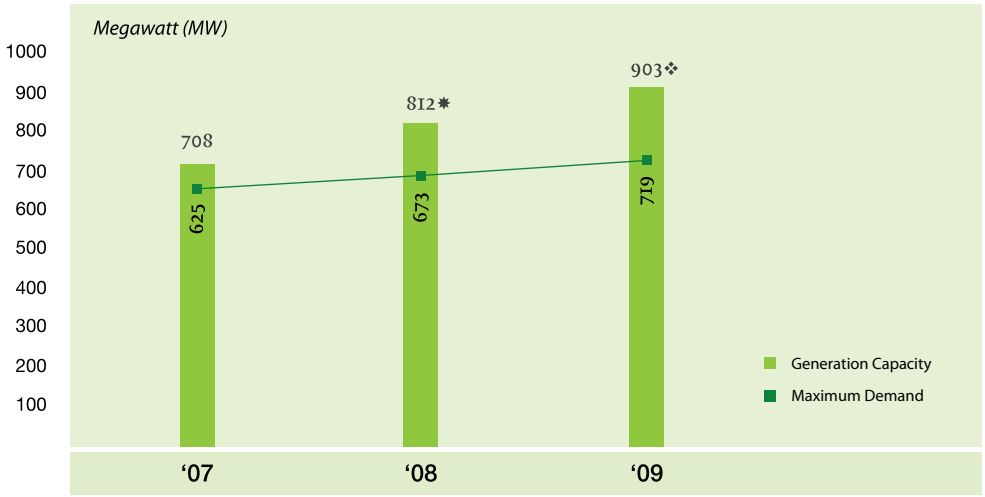
### Supply Situation in Sabah

In Sabah, the adequacy of power supply generating capacity is at a critical level. The installed power generation capacity for the entire state of Sabah stands at 1,035 MW with 45% from the total capacity contributed by Sabah Electricity Sdn. Bhd. (SESB) power plants and the remaining 55% supplied by independent power producers. However, based on current performance the readily available power generation capacity for the entire state of Sabah electricity supply system stands at only 751 MW. With the maximum system requirement reaching up to 719 MW in December 2009, the average operational margin for the state of Sabah is only at 4.3%. In average, the rate of disruptions for these diesel powered generation stations reaches up to 18% - 25%.

Increase in capacity provided by RE based power generation stations will assist to alleviate pressure on supply. A total capacity of 25.6 MW from RE has commenced operations in Sabah, encompassing the Kina Biopower Sdn. Bhd. (10 MW) Project in Sandakan in January 2009, Seguntor Bioenergy Sdn. Bhd. (10 MW) Project also in Sandakan in March 2009, SESB Generation Stations in Kinabatangan and Beluran, Sandakan (3.6 MW) and Mini Hydro Projects (2 MW) by Syarikat Esajadi Power Sdn. Bhd. at Kadamaian River in Kota Belud in July 2009.

Part of the initiatives undertaken by the Government in order to balance out the electricity requirement in Sabah is done by adding on another 60 MW power generating capacity utilising diesel powered generator sets that are connected to the Kota Kinabalu grid system (20 MW), Sandakan (20 MW) and Tawau (20 MW). This process would provide an overall increase in capacity throughout 2009 at 85.6 MW.

Graph 3: Maximum Demand and Installed Power Generation Capacity in Sabah for 2007 to 2009




Notes :

✷ 1) Commenced 35 MW steam turbine for Block 1 integrated cycle at Ranhill Powertron Resources Sdn. Bhd. in April 2008.

2) Commenced 34 MW steam turbine for Phase 2 integrated cycle at Sepangar Bay, Sabah by Sepangar Bay Power Corporation Sdn. Bhd. in August 2008.

❖ 1) Commenced Kina Biopower Sdn. Bhd's. project with 10 MW capacity 10 MW at Sandakan, Sabah in January 2009.

2) Commenced Seguntor Bioenergy Sdn. Bhd.'s project with 10 MW capacity 10 MW at Sandakan, Sabah in March 2009.

3) Commenced Sungai Kadamaian project with 2 MW capacity by Syarikat Esajadi Power Sdn. Bhd. at Kota Belud, Sabah in July 2009.

## Capacity Planning in Sabah

Insufficient power generation capacity and the electricity supply system stability in Sabah remain as the main issues in 2009. In resolving these issues in Sabah several key strategies have been activated. The immediate initiatives undertaken by SESB includes the following:-

- Power generators on rental were installed producing a total of 60 MW capacity with 20 MW being supplied to the West Coast and 40 MW supplied to the East Coast.
- Refurbishment work on existing power stations that would be able to produce a total of 110 MW which commences on June 2009.

Apart from the above mentioned initiatives, the development of several new power generation stations have been identified and planned as follows:-

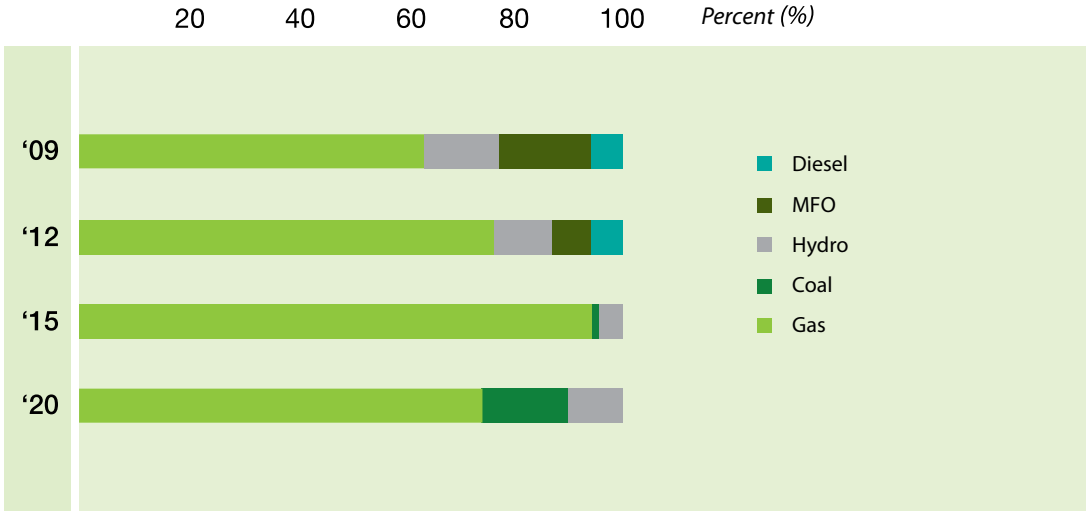
Table 3: Power Generation Projects in Sabah

| Power Generation Development Projects | Capacity (MW) | Year Targeted for Completion |
|---|---|---|
| Ranhill Powertron II* Integrated Cycles | 190 | 2010 |
| SPR Energy Integrated Cycles | 100 | 2012 |
| Kimanis Integrated Cycles | 300 | 2013 |
| Lahad Datu Coal | 300 | 2015 |
| Liwagu Hydro | 150 | 2017 |
| Ulu Padas Hydro | 150 | 2018 |

Note: * Expected to commence operation in stages in which the first phase will be producing 65 MW open cycle capacity in February 2010 followed by a full capacity output of 190 MW generated via integrated cycle.

Most of the power generation projects are located in the West Coast of Sabah. Therefore, in order to fulfil demand and increase the supply capacity to the East Coast the East-West Cross-Connection Grid will be used to channel the supply. Considering that the high dependency of electrical supply from the West Coast could pose a high risk of supply disruption, the construction of a power generation station in the East Coast is critical and very much required to balance out the power generation capacity throughout Sabah. In order to have a variation of power generation capability, the Government is also studying and considering the application of alternative energy sources such as solar, hydro, biomass and geothermal.

Graph 4: The Projected Combined Power Generation Capacity in Sabah from 2009 till 2020.




The issue of critically insufficient supply of electricity in Sabah would require continuous monitoring on the power generation projects approved by the Government. Recently, the Ranhill Powertron II MW project suffered delays from its initial schedule in November 2009 to February 2010. While for the 300 MW coal based power plant in East Coast, the latest project site that has been is now in Felda Sahabat 16, Lahad Datu. Although, the project site that has been changed several times, there are still parties that stage protests on its development at the new location.

Besides that, the Commission conducted an extensive Feasibillity Study on the Liwagu hydro electric project. Results obtained from the study indicates, it was found that the Liwagu Hydro electric project should be of preference compared to the Ulu Padas project, due to its strategic location which would facilitate the channelling of an even larger supply of electricity via the East–West Cross-Connection Grid and simultaneously boost the system's stability.

### Development on Small Renewable Energy Projects (SREP)

The achievement attained from the SREP program is encouraging. There are 7 SREP projects that have been accredited and have commence operation in 2009 producing a total power capacity of 43.5 MW which are connected to the grid. Four of these are biomass-based projects with a 35.5 MW capacity and three mini-hydro projects generating a power capacity of 8 MW.

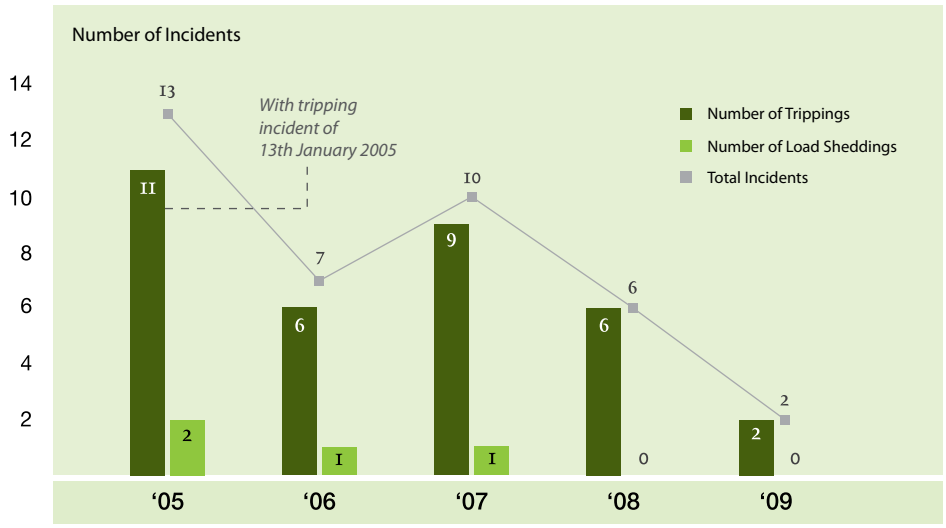
The total SREP projects in operations by end 2009 stands at 9 projects with a grid connection capacity of 55.5 MW. Throughout 2009, a total of 10 new projects with a power generation capacity of 92 MW has been approved by Sarawak Renewable Energy Corridor (SCORE).

## TRANSMISSION

### Transmission System Performance in Peninsular Malaysia

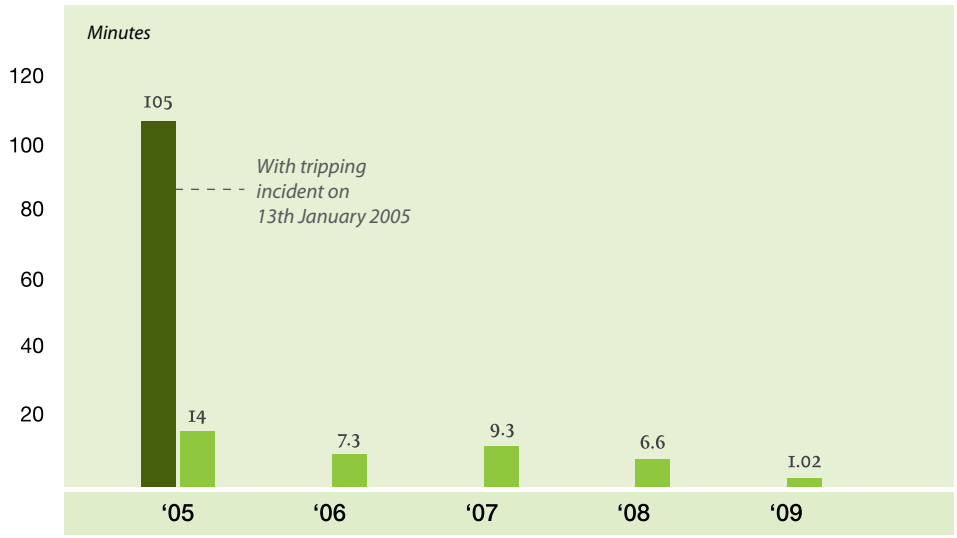
In general, the entire transmission system performance in Peninsular Malaysia showed an improvement from previous year's achievement. In 2009, the number of tripping incidents that occurred on the transmission system which recorded a load loss exceeding 50 MW has shown dramatic reduction to only two incidents, compared to six incidents in 2008.

Graph 5: Number of Transmission System Losses Exceeding 50 MW in 2005 to 2009




In 2009, TNB's Delivery Point Unreliability Index (De-PUI)-System Minutes in Peninsular Malaysia demonstrated great performance with significant reduction of 84.5% to 1.02 minutes compared to the 6.6 minutes mark in 2008.

Graph 6: TNB's Delivery Point Unreliability Index (DePUI)-System Minutes in Peninsular Malaysia



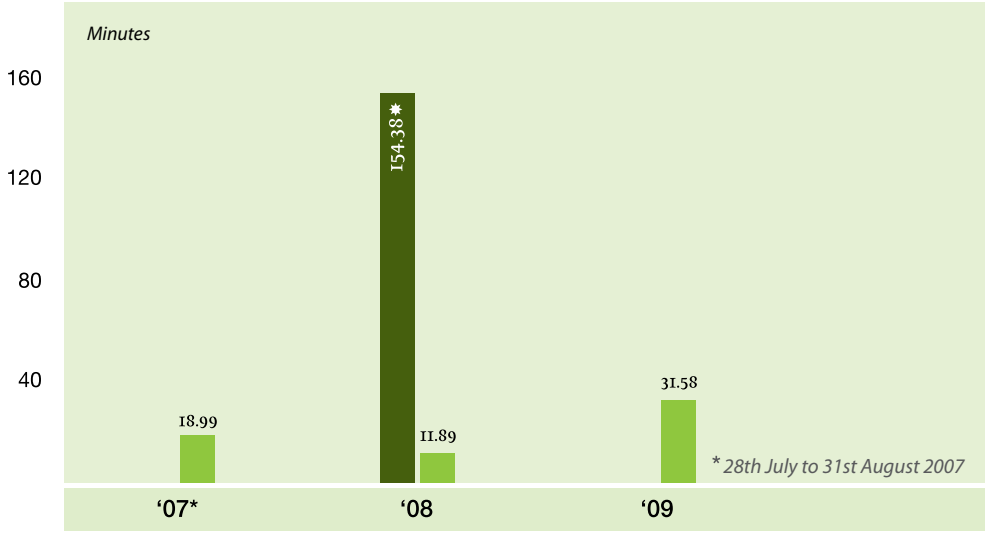
## Transmission System Performance in Sabah

The 2009 transmission system performance shows an increase compared to the previous year. This is evident through the number of tripping incidents for the Sabah's grid system that recorded a load loss exceeding 50 MW attained from 32 incidents in 2008 have now shown significant decline to only seven incidents, which amounts to 78.1% reduction.

However, the supply capacity remains insufficient to fulfil demand as there are still shortages in the power generating capacity and low reliability rate due to the fact that the existing power generation stations are timeworn and records a high rate of supply interruption. This situation causes constant disruption in the electrical supply operational system which is experiencing load shedding incidents from time to time although several new power generation stations are already operational in 2009.

The System Minutes for Sabah's grid system also showed a marked reduction in 2009 with a total of 79.5% to 31.58 minutes as compared with 154.38 minutes in 2008.

Graph 7: Delivery Point Unrealibility Index (DePUI) – System Minutes for the Grid System in Sabah




Notes :

* Includes three major incidents that caused a significant difference, namely:
  1) Electrical supply in the East Coast was completely disrupted due to tripping at both lines on the 275kV Kolopis-Segaliud with a total load loss of 124 MW on 30th September 2007;
  2) VT damage at Karamunsing with a total load loss of 308 MW on 6th November 2007; and
  3) Collapse of the 132 kV tower at the Kayu Madang line within the campus of Universiti Malaysia Sabah due to theft of metal equipment/fittings on the tower that resulted in a load loss of 459.3 MW on 21 April 2008.

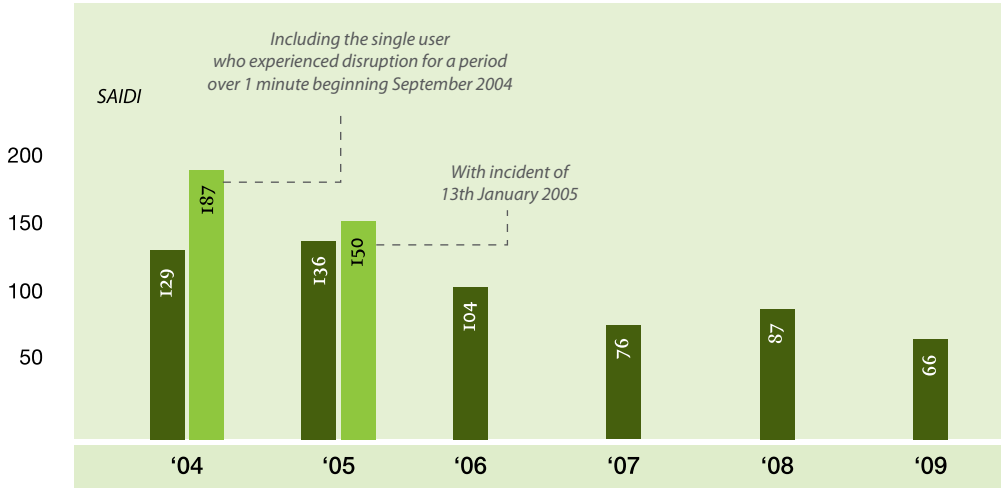
Source: SESB

## DISTRIBUTION

### Distribution System Performance in Peninsular Malaysia

TNB's electricity supply performance on average improved with the reduction of the System Average Interruption Duration Index (SAIDI) totalling 24% to 66 minute/customer/year compared against 87 minute/customer/year recorded in 2008. As a measure to further reduce SAIDI in Peninsular Malaysia, TNB gave focused on several preventive activities onto the medium voltage installation system which is the highest contributor to SAIDI.

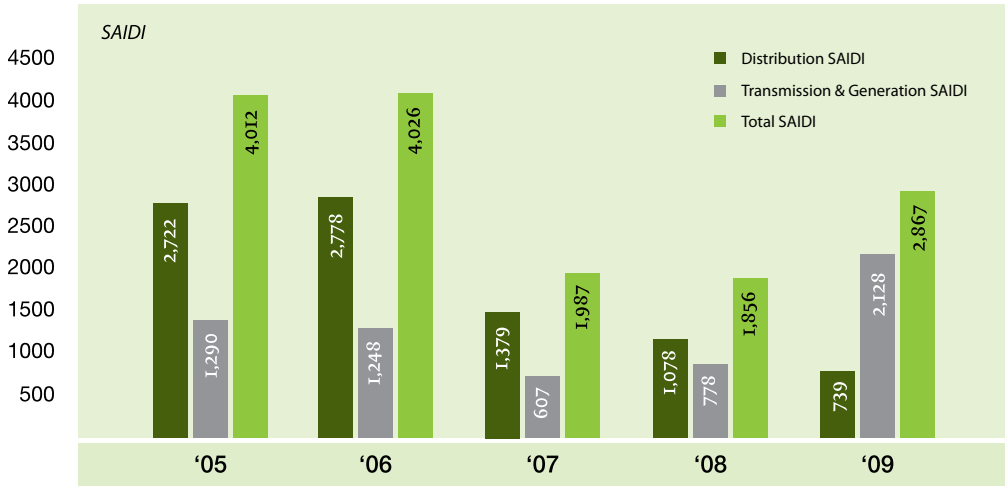
Graph 8: SAIDI (Minute/Customer/Year) in Peninsular Malaysia from 2005 to October 2009




### Distribution System Performance in Sabah

The performance of electricity supply in Sabah is deteriorating with SAIDI showing a significant increase compared to previous years. Up to December 2009, the total SAIDI recorded peaked to 2,867 minute/customer/year, in which 2,128 minutes are caused by the power generation system and delivery failure, while the remaining 739 minutes are caused by failure in the distribution system. Insufficient generation capacity following low reliability rates on power plants contributed to the increase in SAIDI.

Graph 9: SAIDI (Minute/Customer/Year) for Sabah from 2005 to 2009

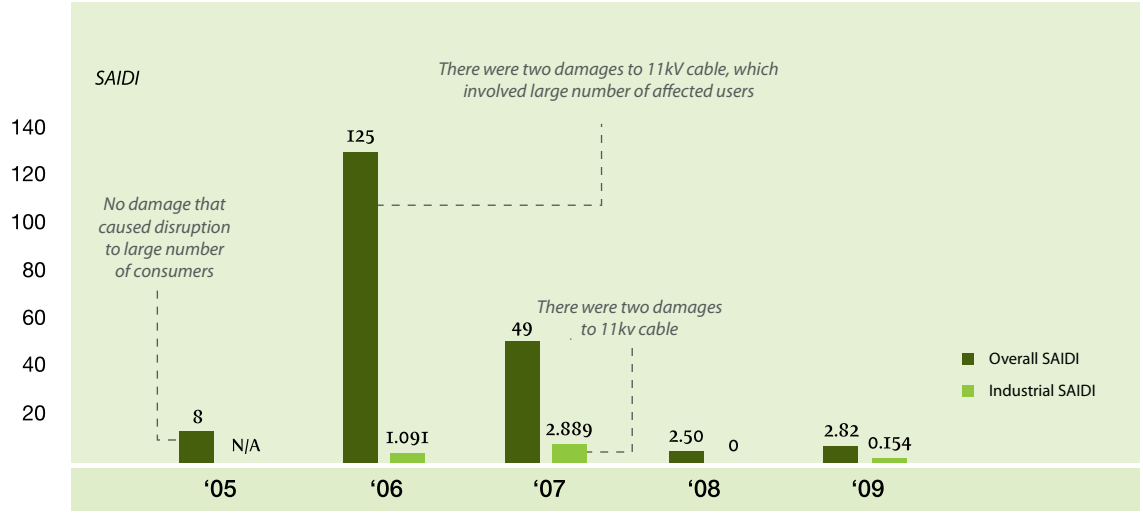


### Distribution System Performance in Kulim Hi-Tech Park

The overall SAIDI recorded in 2009 does not indicate any difference from the SAIDI recorded in 2008, in which it still remain at 3 minute/customer/year.

However, the SAIDI for industries (high voltage user) stands at 0.154 minute/customer/year caused by a faulty 33 kV cable in July 2009.

Graph 10: SAIDI (Minute/Customer/Year) Overall and Industrial (for High Voltage Users only) at the Kulim Hi-Tech Park in 2005 to 2009



## GAS SUPPLY THROUGH PIPELINES

### Quantity of Gas Supplied through Gas Utility Licensees

The quantity of natural gas and liquefied petroleum gas (LPG) supplied by Gas Utility Licensees, which are Gas Malaysia Sdn. Bhd. (GMSB) and Sabah Energy Corporation Sdn. Bhd. (SEC) declined by 3.95% to 107,576,874 mmBtu in 2009 compared to 112,001,759 mmBtu in 2008.

As of year-ending 2009, demand for natural gas from the non-energy sector supplied by GMSB in Peninsular Malaysia was at 107,313,116 mmBtu and SEC's supply to Sabah was at 52,335 mmBtu. The total LPG supplied by GMSB increased by 10% to 211,423 mmBtu in 2009 compared to 191,158 mmBtu in 2008.

Table 4: Consumption of Gas Supplied by Gas Utility Licensees for 2008 and 2009

| | Total Gas Consumption (mmBtu) | | Difference % |
|---|---|---|---|
| Type | 2009 | 2008 | |
| Natural Gas (GMSB) | 107,313,116 | 111,625,214 | (3.86) |
| Liquefied Petroleum Gas (LPG) | 211,423 | 191,158 | 10.60 |
| Natural Gas (SEC) | 52,335 | 185,387 | (71.77) |
| | **107,576,874** | **112,001,759** | **(3.95)** |

The industrial sector appears to be the main gas consumer utilising 106,412,120 mmBtu equivalent to 99.11% of the overall natural gas consumption, whereas the commercial sector utilises 934,766 mmBtu (0.87%) and the domestic sector utilises 18,565 mmBtu (0.02%).

Table 5: Consumption of Gas According to Sectors for 2008 and 2009

| Gas Utility License | Gas Consumption (mmBtu) | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Industrial | | Commercial | | Domestic | | | |
| | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 |
| GMSB (Natural Gas) | 106,359,785 | 110,606,270 | 934,766 | 1,001,105 | 18,565 | 17,839 | **107,313,116** | 111,625,214 |
| SEC (Natural Gas) | 52,335 | 185,388 | - | - | - | - | **52,335** | 185,388 |
| Total Natural Gas Consumption | 106,412,120 | 110,791,658 | 934,766 | 1,001,105 | 18,565 | 17,839 | **107,365,451** | 111,810,602 |
| GMSB (LPG) | 445 | 505 | 153,218 | 134,143 | 57,760 | 56,510 | **211,423** | 191,158 |
| Total Natural Gas and LPG Consumption | 106,412,565 | 110,792,163 | 1,087,984 | 1,135,248 | 76,325 | 74,349 | **107,576,874** | 112,001,760 |

Source: Gas Malaysia Sdn. Bhd. (GMSB) and Sabah Energy Corporation (SEC)

The number of natural gas and LPG consumers in the industrial, commercial and residential sectors who received supplies from their respective gas utility licenses are as per the following table:

Table 6: Number of Consumers of Gas Systems Supplied Via Gas Pipelines for 2009 and 2008

| Gas Utility Licenses | Number of Consumers | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Industrial | | Commercial | | Domestic | | | |
| | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 |
| GMSB (Natural Gas) | 640 | 630 | 456 | 464 | 7,960 | 7,032 | **9,056** | 8,126 |
| GMSB (LPG) | - | - | 850 | 778 | 22,661 | 23,321 | **23,511** | 24,099 |
| SEC (Natural Gas) | 11 | 13 | - | | - | | **11** | 13 |
| **Total** | **651** | | **1,306** | | **30,621** | | **32,578** | **32,238** |

Source: GMSB and SEC

## Gas Supply Continuity and Safety

Table 7 depict the continuity and safety performance indicators for piped gas supply activities undertaken by Gas Utility Licensees in Peninsular Malaysia in 2009.

In general, the gas supply continuity and safety performance showed a decline against previous year. In order to overcome this issue, Gas Utility Licensees took measures to increase inspection and maintenance works on both the natural gas and LPG pipeline supply system. In addition, the Gas Utility Licensees took extra effort to identify and implement preventive measures that would be able to improve the gas supply and safety performance and efficiency.

Table 7: GMSB Performance Indicators for 2008 and 2009

| Performance Indicators | Unit | Index for 2009 | | Index for 2008 | |
|---|---|---|---|---|---|
| | | Natural Gas | LPG | Natural Gas | LPG |
| SAIDI = Total Minutes Per Year / Average Total No. of User | Minute/Customer | **0.2915** | **1.1054** | 0.1323 | 0.0186 |
| SAIFI = Total No. of User Interruptions Per Year / Average Total No. of Users | Interruption/Customer | **0.0117** | **0.0368** | 0.0015 | 0.0005 |
| CAIDI = Total User Minutes / Total No. of User Interruptions | Minute/Interruptions | **24.8508** | **30** | 90.0833 | 38.1667 |
| Leakages along Gas Pipelines for every 1000 km$^2$ | Total Leakages/ 1000 km | **0** | | 0 | |
| Leakages at Gas Stations and Consumer Premises for every 1000 Consumers | Total Leakages/ 1000 customers | **0.0453 (Industry)** **0.0043 (Residential)** | | 0.0268 (Industry) 0.0056 (Residential) | |

## SAFETY

The Commission is committed to continuously protect the public interest through the provisions of law and industrial regulations. As a regulatory body, the Commission is constantly proactive in ensuring that the public and consumers are protected against any danger that might arise from the supply of gas and electricity via pipeline.

To ensure that none of the stipulated energy supply laws are violated, the Commission conducts regulatory enforcement, investigates electricity and gas accident cases and reports of misconduct pertaining to electricity and gas supply law violations, and proceeds to initiate prosecution.

Throughout 2009, the Commission gave focus on effort to resolve investigation on electricity and gas incidents, in addition to identifying issues faced by the various Departments and Regional Offices and conduct a restructuring exercise that would strengthen and enhanced their investigation process.

Fraudulent use of electricity is a challenging issue and the number of suspected fraudulent cases are quite high. Several cases have been identified, investigated and brought forth for prosecution in court. However, due to resource limitation, the Commission encourages license holder to apply an alternative approach under the Section 38 of the Electricity Supply Act 1990, by making claims on revenue losses in court through civil act.

The Commission also increased its monitoring activities involving electrical equipment and installations. This would enable them to handle complaints and reports made on issues related to the availability of electrical appliances without approval nor labelling and to resolve issues related to electricity supply. In the other hand, issues of electrical accidents revolves around the fact of the competent person's failure in discharging their duties, equipment installations that were not maintained systematically, wiring and maintenance works that did not follow procedures, trespassing and unauthorised activities happening within the vicinity of the supply lines.

To further enhance awareness on safety, the Commission intensified its activities on awareness creation campaign by holding dialogues with identified target groups, improve its customer-friendly initiatives, increase working relationship with Government agencies and associations that have a stake within the electricity industry and so forth.

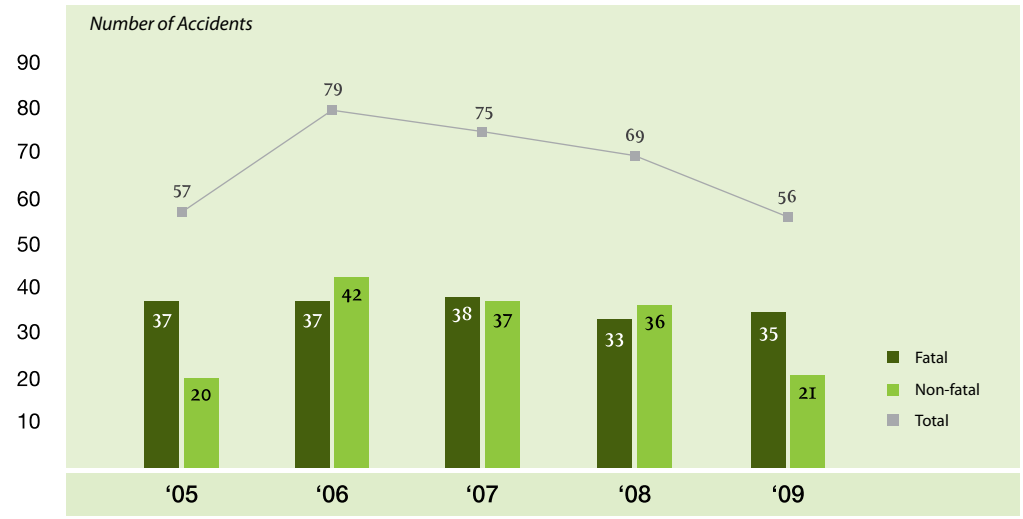
Enforcement action on unlicensed generator in Ranau, Sabah.

Unregistered installation monitoring in Kuala Kubu Bharu, Selangor.

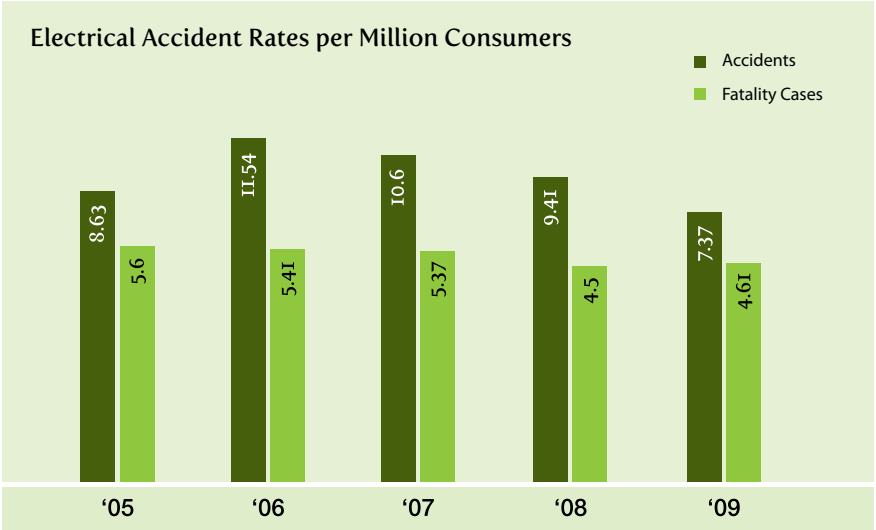
## Electrical Accidents

In 2009, the total number of electrical accidents dropped to 56 cases compared with 69 cases in 2008, and 75 cases in 2007. However, the number of fatal accidents increased to 35 cases compared with 33 cases in 2008.

Graph 11: Number of Reported Electrical Accident Cases from 2005 to 2009




Graph 12: Electrical Accident Rate per Million Consumer




Electrical accident rate per million electrical consumer in Peninsular Malaysia decreased from 9.41 in 2008 to 7.37 in 2009. However, the rates for fatal electrical accidents per million consumer increased to 4.61 from 4.5 in 2008.

Fire investigation at furniture showroom in Jalan Sungai Besi, Kuala Lumpur.

Investigation on an accident case reported in a factory in Johor.

## Accident Locations

An annual analysis conducted by the Commission shows that every year the highest number of accident cases recorded, occurred within the vicinity of installations owned by utility provider. The spot within the utility installation that these accidents would commonly occur are in area such as the utility distribution stations, low and high voltage overhead lines and underground cables. However as

Table 8: Electrical Accident Locations

| | 2006 | 2007 | 2008 | 2009 | Total |
|---|---|---|---|---|---|
| Utility Installations | 51 | 39 | 41 | 30 | **162** |
| Factories | 5 | 10 | 5 | 7 | **27** |
| Commercial (Construction Sites, Farms) | 7 | 7 | 7 | 6 | **27** |
| Government-owned Premises (Schools, Higher Educational Institutions, Government Premises) | 7 | 5 | 5 | 2 | **19** |
| Residential | 9 | 14 | 11 | 9 | **43** |
| Others | | | | 2 | **2** |
| **Total** | **79** | **75** | **69** | **56** | **279** |

Electrical equipment monitoring activity at one of the hypermarket in Seri Kembangan.

mentioned, compared with 2008, the number of cases in 2009 have declined.

### Causes of Electrical Accidents

Improper maintenance is the main cause of electrical accidents involving cases of malfunctioning circuit breaker, switch board that are not properly maintained or electrical wiring that are left uninspected. Failure to comply with safe working procedures also contributes to the case statistics. As such, the Commission constantly gave emphasis on enforcement activities in order to create consumer's awareness communicated through various campaigns, seminars and electronic media.

Table 9: Causes of Electrical Accidents

| | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|
| Improper installation / maintenance | 26 | 34 | 25 | **27** |
| Violation of safe working procedures | 22 | 23 | 21 | **12** |
| Trespassing into an electrical installation | 10 | 7 | 11 | **6** |
| Public activity near an electrical installation | 7 | 5 | 6 | **5** |
| Wiring system misapplication | 3 | 1 | 1 | **2** |
| Defects in electrical equipment / appliances | 3 | 1 | 1 | **0** |
| Other causes | 8 | 4 | 4 | **4** |
| **Total** | **79** | **75** | **69** | **56** |

### Piped Gas Accidents

On 14th December 2009, a gas explosion occurred at Jusco Hypermarket, Taman Bachang, Melaka resulting in 2 fatalities and 19 people injured. Investigation reveals that the cause of accident are due to LPG leak at the end of the supply line that was not gas-tight, and the valve being in an opened position throughout the gas-in work, done by the contractor. Following investigation, the competent person certification for two workers have been suspended and the company registration of the 2 contractors involved were also revoked.

Investigation on the gas explosion accident in Jusco Hypermarket, Taman Bachang, Melaka on 14th December 2009.

## QUALITY OF SUPPLY SERVICES

### Customer Complaints – Electricity

The Commission receives a total of 382 complaints on electrical supply encompassing its quality and service standard. From the total number of complaints, 197 complaints are related to the supply service standard while the remaining are on the supply quality standard. Up to December 2009, the Commission manage to resolve a total of 359 complaints which is equivalent to 94.0%.

2009 recorded an increase in complaints of up to 6.7% against 2008. Complaints on matters related to electrical bills, metering issues, supply disconnection and reconnection recorded the highest number of complaints received at 58 cases. Complaints on matters related to billings showed a surged in the number of cases, due to implementation of tariffs increase on 1st March 2009 that sees the creation of 2 blocks of tariff for domestic consumer, which is one tariff rate for consumption of less than 400 units and another tariff rate for consumption above 400 units.

Several measures have been and will be implemented in order to resolve the increasing number of complaints received. Through our discussion with TNB, they have agreed to provide a feedback on each and any complaints received within 14 days. Through this working collaboration with TNB, we were able to resolve each complaints effectively within a short timeframe and in 2009, over 90% of complaints related to electrical billing has been resolved.

Table 10: Statistics of Electricity Supply Performance Complaints Received

| Complaint Category | Total | Resolved | | Unresolved | |
|---|---|---|---|---|---|
| | | Total | % | Total | % |
| **Electricity supply services** | | | | | |
| Electricity supply interruption | **20** | 18 | 90% | 2 | 10% |
| Application and connection of electricity supply | **13** | 11 | 85% | 2 | 15% |
| Tariff and charges | **11** | 11 | 100% | 0 | 0% |
| Billing, metering disconnection and reconnection of supply | **58** | 54 | 93% | 4 | 7% |
| Safety of installation | **36** | 30 | 83% | 6 | 17% |
| Damaged transmission line or damage to TNB installations by third parties | **22** | 20 | 91% | 2 | 9% |
| Public lighting, other matters on supply and consumer services | **37** | 32 | 86% | 5 | 14% |
| **Total** | **197** | **176** | **89%** | **21** | **11%** |
| **Supply Quality** | | | | | |
| Over voltage | **183** | 181 | 99% | 2 | 1% |
| Power quality (dips, surges etc) | **2** | 2 | 100% | 0 | 0% |
| **Total** | **185** | **183** | **99%** | **2** | **1%** |
| **Overall Total** | **382** | **359** | **94%** | **23** | **6%** |

## Customer Complaints - Gas

The Gas Utility Licensees receives a total of 320 complaints throughout 2009, which shows a drop of 6.16% compared to the 341 complaints received in 2008. It is noted that 75% of the complaints came from domestic consumers.

Table 11: Number of Consumer Complaints to Gas Utility Licensees

| Complaint Category | Industrial | | Commercial | | Domestic | | Others | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 |
| **Supply Disruption** | | | | | | | | | | |
| Natural Gas | 4 | 4 | 4 | 18 | 26 | 19 | - | - | **34** | 41 |
| LPG | - | - | 17 | 20 | 98 | 84 | 1 | - | **116** | 104 |
| **Total** | **4** | **4** | **21** | **38** | **124** | **103** | **1** | **-** | **150** | **145** |
| **Leakages** | | | | | | | | | | |
| Natural Gas | 30 | 18 | 2 | 4 | 14 | 13 | 1 | - | **47** | 35 |
| LPG | - | - | 21 | 14 | 102 | 147 | - | - | **123** | 161 |
| **Total** | **30** | **18** | **23** | **18** | **116** | **160** | **1** | **-** | **170** | **196** |
| **Overall Total** | **34** | **22** | **44** | **56** | **240** | **263** | **2** | **-** | **320** | **341** |

Source: GMSB and SEC

Table 11 shows the number of complaints made to the gas utility licensees according to categories. A total of 150 complaints or 46.88% are related to gas supply disruptions. Whereas complaints on gas leakages stands at 170 complaints or 53.12%. A total of 124 or 82.67% of complaints on supply disruptions involves domestic consumer in proportion with the segment having the highest number of consumers at 30,621 household.

The occurrences of supply disruptions within the consumer's premises are mainly due to valves being accidently closed, faulty meters or pressure regulators. A total of 116 complaints received on gas leakage comes from domestic consumers and amongst the causes identified are loose connection of screw-type pipes, leakages at meter connections and pressure regulators.

All the leakages reported are minor leakage that occurred mainly within the consumer's premises. Overall, the licensees were able to detect these leakages and made repairs soonest possible. Discussions were also held between the Commission and licensees to identify long term measures and action needed to overcome the source of these leakages.

## SUPPLY ACTIVITY EFFICIENCY

### Thermal Efficiency

Combined-cycle Gas Turbine (CCGT) power stations records the highest Annual Thermal Efficiency (ATE) with an average of 43.73%. The list of both the power stations and their ATE in comparison to their performance the previous year are as stated in Table 12.

Table 12: Efficiency Performance of Generator Stations

| Types of Stations | 2009 (%) | 2008 (%) |
|---|---|---|
| Combined-cycle gas turbine (CCGT) | **42.5** | 43.5 |
| Open-cycle gas turbine (OCGT) | **21.7** | 25.9 |
| Coal | **33.9** | 30.8 |
| Diesel | **39.8** | 39.2 |

Making comparison amongst all the 14 CCGT power stations, the Pahlawan Power Generation Station (720MW) recorded the highest ATE at 48.9%. Whereas a comparison made on the seven open-cycle turbine stations recorded that the Port Dickson Power Generation Station achieved the highest ATE at 27.91%. Amongst five coal-fired power generation stations, the Jimah Power Generation Station (1,400 MW) recorded the highest ATE with 35.88%.

Combined-cycle gas turbine power generation stations showed a drop in its thermal efficiency due to the station's being timeworn and degradation process. On the other hand there was an increase in efficiency for coal-fired power generation stations with the participation of new power generation stations such as the Tanjung Bin Power Generation Station and Jimah Power Generation Station.

### Rate of Unscheduled Disruptions

Table 13: Rate of Unscheduled Disruptions at Generator Stations for 2009 and 2008.

| Types of Stations | 2009 (%) | 2008 (%) |
|---|---|---|
| Combined-cycle gas turbine (CCGT) | **1.59** | 1.22 |
| Open-cycle gas turbine (OCGT) | **1.79** | 1.10 |
| Coal | **11.90** | 7.49 |
| Hydro Stations | **0.66** | 2.36 |

As a whole, the average rate of unscheduled disruptions of power generation stations never crossed the level stipulated in the PPA except for coal-fired power generator stations that recorded 11.9%; exceeding the stipulated PPA rate by 6%. The rise in the unscheduled disruption time in coal-fired generator stations was caused by several incidents such as at the Kapar Power Generation Station's cold storage yard that caught fire.

### System Loss

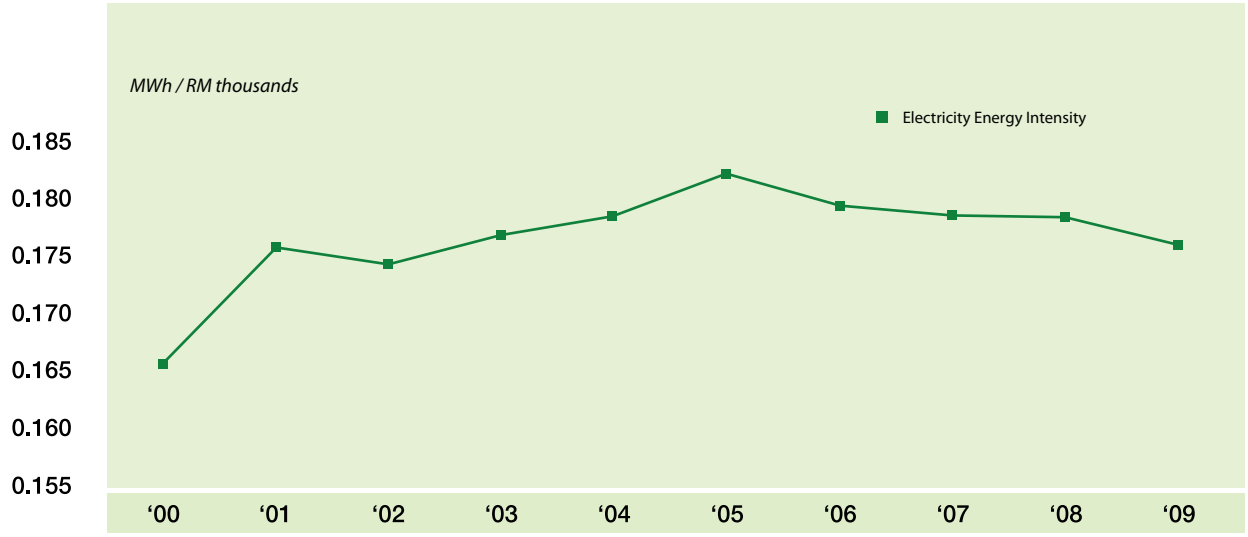
The system loss in Peninsular Malaysia does not show much difference. Various efforts are being made extensively by TNB to ensure minimal loss especially those involving non-technical losses. In 2009, the losses recorded for the delivery and distribution system is at 9.67%, showing a slight increase from the previous year at 9.5%.

## Electricity Energy Intensity

The electricity energy intensity can be measured by the amount of electricity energy consumed to produce 1 unit of GDP; a high electricity energy intensity denotes a lower electricity energy efficiency rate in the country.

Electricity energy intensity marked a 6% rise in 2001 compared to the previous year. From 2001 to 2005 the rise in intensity are seen as more levelled with minimal escalation from 0.175 MWh/RM thousand in 2001 to 0.182 MWh/RM thousand in 2005.

Graph 13: Electricity Energy Intensity Per GDP MWh at Prevailing Price 2000 (RM thousands)



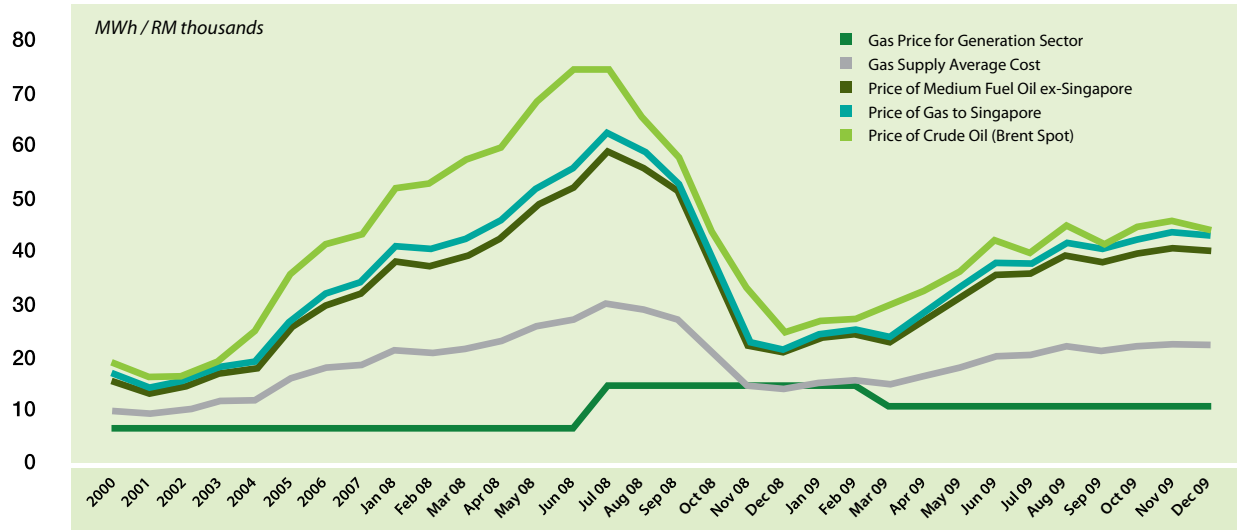

Beginning 2005, electricity energy intensity showed a decline although the GDP and size of population increased. This was probably due to the awareness programs that were conducted from time to time by the public and private sectors. In general, the Government took steps towards promoting energy efficiency such as fiscal incentives for energy efficient equipment, conducting energy efficiency campaigns and programs that aim to promote awareness and introduce regulations on energy efficiency to the public. With this, we hope the public will attain sufficient awareness and knowledge that would enable them to utilise energy more efficiently.

## Restructuring of the Electricity Tariff and Natural Gas Subsidy

The price of natural gas was revised in early 2009 following the fall in global market crude oil price. The revision was implemented to ensure that the price of natural gas stipulated reflects the current market price in tandem with the Government's policy to reduce the subsidy on natural gas to the energy and non-energy sectors. The Government has decided that:

(a) The price of natural gas for the electricity sector be reduced from RM14.31/mmBtu to RM10.70/mm/Btu commencing 1st Mac 2009;
(b) The price of natural gas for consumption of less than 2 mmscfd gas be reduced from RM22.06/mmBtu to RM15.00/mmBtu; and
(c) Natural gas price for consumption exceeding 2 mmscfd supplied by PETRONAS be reduced from RM23.88/mmBtu to RM15.35/mmBtu.

Graph 14: Changes in the Price of Natural Gas in Peninsular Malaysia (RM/mmBtu)

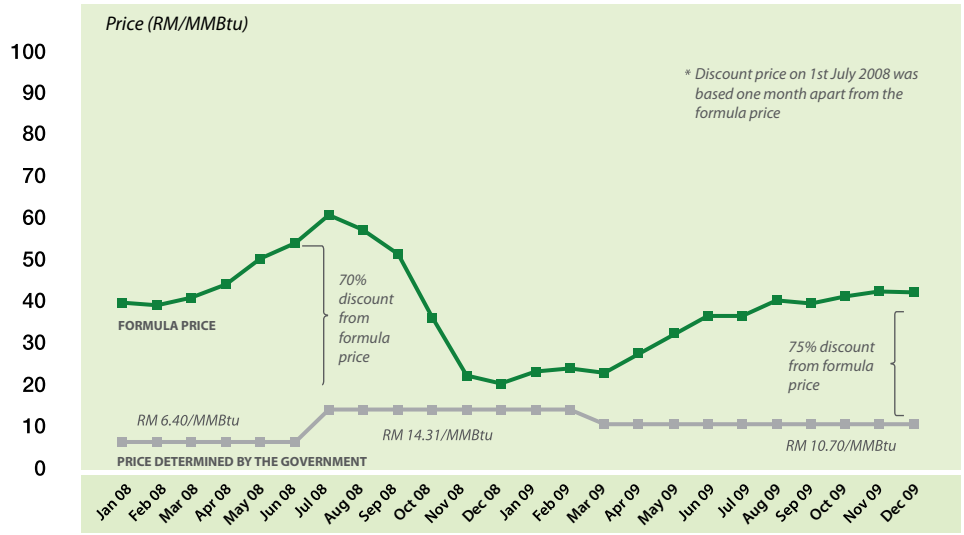



The Government is also agreeable that for each revision made on the price of natural gas, an electricity tariff revision will follow suite taking into consideration the increase and decrease of coal price. Towards this purpose, the Commission conducted its own evaluation on the effect of natural gas price reduction and the fluctuation of coal price on TNB's electricity tariff. Based on the evaluation made, the Commission submitted a proposal to the Government for consideration.

Pursuant to this, the average electricity tariff in Peninsular Malaysia has been adjusted and levelled from 32.50 sen/kWj to 31.31 sen/kWj, a reduction of 3.7% effective 1st Mac 2009. The last time an electricity tariff exercise has been conducted was on July 2008 when the global oil price surge to its highest price at USD144 per barrel. During the said period, the average electricity tariff rose 24% from 26.32 sen/kWh to 32.5 sen/kWh.

Although the average rate of electricity tariff has decreased, in reality, the Government still allocates a large amount of natural gas price subsidy to maintain electricity tariff at a rate that would not pose a burden to the people. The initial formula to determine the price of natural gas are based on market pricing. However, taking into consideration the current market situation that is still sluggish and in protecting the people's interest, our Government decided to continue providing discounts on the price of natural gas. Up to December 2009, the Government allocated a 75% discount on gas price to the power generation sector in order to maintain the average rate of electricity tariff at 31.31 sen/kWj.

Graph 15: Difference in Gas Price (Formula) and Gas Price (Government)

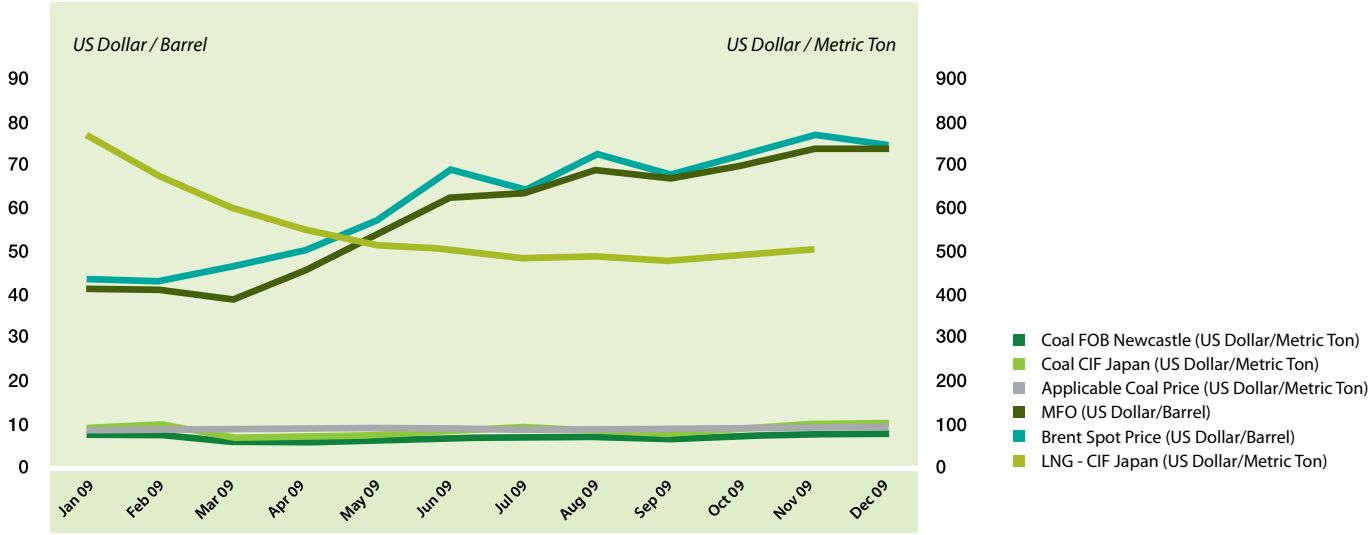



## World Fuel Price Trend – Year 2009

Throughout 2009, the price trend for crude oil according to the international price benchmark known as the ***Brent Spot Price*** indicates a rise in price compared to the fluctuating price in 2008. In January 2009, the price of crude oil was recorded by Brent Spot Price as low as USD40 per barrel. Later on the price surges to USD75 per barrel in December 2009. Consequently, the prices of all other fuel source experienced similar trend.

The price of coal fuel including cost of delivery, importation cost and the Japan Insurance Cost (coal CIF Japan) rose from USD73 per metric ton to USD102 per metric ton. As such, the average cost to supply coal (ACP) to coal-fired generator stations in Peninsular Malaysia hovers between USD83 per metric ton to USD90 per metric ton throughout 2009.

Graph 16: Fuel Price Trends



# Development on Regulatory Activities

### Change Initiatives

The Commission's effort towards industry restructuring were also evident in several proposals being made to the Government via Minister of Energy, Green Technology and Water, KeTTHA and the Economic Planning Unit of the Prime Minister's Department (EPU), in resolving the industry's issues comprehensively. The Commission's proposals called for a change in the aspects of corporate governance, market structure, gas supply distribution, tariff determination process, renegotiation on PPA, separation between the power generation, supply and distribution activities, independence and transparency in power generation scheduling and the establishment of a fund that will stabilise tariffs for consumer.

In addition, Khazanah Nasional Bhd. (Khazanah), in their effort to complement TNB's initiatives to further enhance their efficiency level and role within the electricity supply industry, held discussions with the Commission together with a consultant appointed by Khazanah. The Commission's suggestions were included in Khazanah's final proposal to the Government.

Several initiatives were undertaken by the Commission in order to restructure electricity supply industry, such as:

- Proposal to procure new power generation capacity through competitive bidding. The Commission is of the opinion that the competitive bidding process should be administered by an independent third party, such as the EPU, KeTTHA or the Commission and not by the Single Buyer or TNB. However, the procurement process for the power generation capacity via competitive bidding are not being done as stipulated.

- The move to separate Single Buyers from System Operators with the supervision of a regulatory body is in line with a proposal previously submitted by the Commission. This process is pertinent as it will ensure independence and fairness and provide a level and competitive playing field for all the power generation stations.

- The Commission enforces the separation of account for TNB's power generation, supply and distribution activities by implementing the following directives:
  - A directive to prepare separate accounts for power generation, supply and distribution activities in which the account separation framework has already been prepared by TNB; and
  - A directive for TNB to set separate PPAs for its individual generation stations, where a Service Level Agreement (SLA – equivalent to internal PPA) has been prepared by TNB.

An evaluation made by a Consultant appointed by Khazanah unveil the presence of industry corporate governance misalignment which needs to be rectified. This matter has been stressed in the Commission's Energy Blueprint.

Therefore, taking a gradual step by step methodology is a more realistic approach in line to the proposal made in the "Preliminary Assessment On the Introduction of Competitive Electricity Market" study that was done by Khazanah-appointed Consultants. The Commission proposed that a Special Task Force be established to steer the implementation of the restructuring proposal. By end 2009, the electricity supply industry restructuring proposal is still being deliberated by the Government.

### Redistribution of Gas Supply

PETRONAS as the sole supplier of natural gas in Peninsular Malaysia faced difficulties in fulfilling the increasing demand from the energy and non-energy sectors. The increased in demand for natural gas especially from the industrial sector is due to the fact that natural gas tariff is much lower compared with alternative fuels such as medium fuel oil (MFO), diesel and LPG.

In January 2009, the average Government approved gas price tariff to the energy sector was at RM22.06/mmBtu. In March 2009, the Government revised the average gas price tariff to RM15.00/mmBtu, whereby in comparison the average LPG alternative fuel price was at RM40.87/mmBtu and the average diesel price was at RM47.24/mmBtu as of

January 2009, while the average LPG alternative fuel price was at RM45.65/mmBtu and the average diesel price was at RM60.38/mmBtu in March 2009.

The vast difference between the price of natural gas against LPG and diesel causes a surge in demand for natural gas that exceeds 200 mmscfd. Therefore, upon the Commission's recommendation, the Government has approved the redistribution of 100 mmscfd natural gas from the energy sector to the non-energy sector (industry) to fulfil the industry's requirement. The redistribution will only be enforced until 2011.

Table 14: The natural gas allocation in Peninsular Malaysia is as per the table below:

| Sector | Volume (mmscfd) | |
|---|---|---|
| | Current allocation | 2009-2011 |
| Energy | 1,350 | 1,250 |
| Non-Energy | | |
| i. PETRONAS Industrial Clients | 550 | }950 |
| ii. GMSB (Industrial, Commercial & Domestic) | 300 | |
| iii. Export to Singapore | 150 | 150 |
| **Total** | **2,350** | **2,350** |

### Procurement of Coal for Coal-Fired Power Stations Owned by TNB and Independent Power Producers

The installed capacity for coal-powered generation stations in Peninsular Malaysia has increased to 7,200MW. A total of 13 million metric tonnes of coal worth RM3,241 million has been supplied to four power stations. Consumption of coal is projected to rise to over 20 million tonnes in 2013.

Purchase of coal was done based on the Coal Supply Plan whereby independent coal-fired plants will submit estimates for the quantity of coal required for a five-month period. Risks of fuel supply would be fully borne by TNB, whereas the responsibility of the independent coal-fired plants is to ensure power generating stations are prepared to generate electricity using the coal supplied by TNB Fuel Services Sdn. Bhd. In order to create an effective competition, a proposal has been made to allow power generators to purchase coal-fuel on their own, with a price tag benchmarked to TNB's purchase price.

Through this method, power generator plants especially independent coal-fired plants will share the risk of fuel cost that has thus far being borne only by TNB. It is also seen that the proposal will ensure that independent coal-fired plants have control over coal procurement especially in the aspects of pricing, quality and quantity of the required coal supply. As at end of year 2009, the proposal was still under deliberation by the Minister of Energy, Green Technology and Water seeing that TNB is disagreeable for the change to be implemented.

### Revaluation of Electricity and Gas Tariff in Peninsular Malaysia and Sabah

At the current moment, the consumer tariff rate in Peninsular Malaysia and Sabah are being determined based on the policy stipulated by the Government. The Commission is of the opinion that a thorough study is still required to evaluate the actual costs of electricity supply for all categories of consumers, besides functioning as a guideline for the revaluation of consumer's change in categories according to the ever changing economic environment.

In November 2009, the Commission appointed a Consultant to conduct a revaluation on electricity and

gas tariff in Peninsular Malaysia and Sabah that aims to strengthen the economic regulatory framework, determine the process flow, and provide for a more consistent regulatory timeframe, formation of a more accurate tariff model, apart from input preparation for submission to the Government that will enable a tariff revaluation by early 2010. The result obtained from this review is seen to bring forth changes to the tariff setting process that have thus far been based on the 'modified cost of service regulation' to the 'incentive based regulation'.

### TNB Supply Service Performance Standard

To further enhance TNB's standard of service to the consumer, the new electricity supply service standard has been implemented and enforced. Discussions were held with TNB on 17th Mac 2009 in order to draft and determine the new service standard benchmark applicable in gauging TNB's performance. The service performance standard that were imposed on TNB at the beginning of the 2009 financial year covers key aspects that commonly becomes grousing issues for consumers, hence two types of service standard have been determined which are:

i) Guaranteed Service Level (GSL), in which should TNB's standard of service to consumers falls below the stipulated level, TNB would be required to pay a penalty in the form of rebates to consumers;

ii) Minimum service levels (MSL), which determine the minimum level required to be met by TNB in its service delivery towards consumers.

In allowing time for TNB to gauge its current performance and work towards achieving the stipulated standard and to enable them to adjust its service delivery system according to the specific measuring aspects, the enforcement of penalties with regards to the unmet guaranteed service standard has been put hold for the time being.

### TNB's Management and Engineering Audit

As stipulated within the licensing requirements, TNB's Management and Engineering Audit must be conducted every 4 years. The purpose of the Management and Engineering Audit is to assess TNB's operational efficiency and financial capability to ensure that the tariffs levied on users are based on operational efficiency, at a reasonable rate and within sensible profit margin. Thus far the TNB's Management and Engineering Audit have been self-administered by a Consultant appointed by TNB, changes has been implemented in tandem to the decision made by the YB Minister that the TNB's Management and Engineering Audit be conducted by Consultants appointed and supervised by the Commission.

The PricewaterhouseCoopers Advisory Services Sdn. Bhd. in Australian Power & Water Consortium implemented the TNB's Management and Engineering Audit at the end of April 2009. The Management and Engineering Audit conducted this time around also serves as a main input for the Government in evaluating TNB's operational efficiency to determine whether TNB qualifies for the next increase in tariff's assessment. As of year-ending 2009, implementation of the Management and Engineering Audit was at the final stage and audit findings will be tabled in early 2010.

### National Cyber Security

The Energy Sector has been identified as one of the country's ten critical information infrastructures in the National Cyber Security Policy (NCSP). This sector has to be protected against cyber threats as the energy sector uses the Supervisory Control and Data Acquisition System (SCADA) that is susceptible to cyber-attacks.

As such, a discussion between TNB and the independent power producers were held in order to:-

- identify and understand critical assets, the threats and the vulnerability of the SCADA System/ Distributed Control System (DCS) via a security monitoring system handled by an entity under the Critical National Information Infrastructure (CNII);

- create awareness to SCADA/DCS owners on the vulnerability and the probability of cyber threats that would possibly affect the system; and

- analyse differences between current practices

against the optimum practise based on the MS ISO/EC 27001 Standard.

In line with NCSP's demand, in 2009 a National Cyber Streamlining Committee approved a proposed policy to adopt the MS ISO/EC 2007:2007 – Information Security Management System (ISMS) Standard by CNII within a period of three years.

### Skills Enhancement for Competent Person

The Commission constantly monitors and ensures that the skills of competent person is at par with the level of qualifications obtained in order to ensure a certain level of safety on the usage of electricity and gas supplied via pipe lines. A competent person's aptitude and exposure to the latest technology know-how are key criterions emphasized by the Commission. These are key aspects to ensure that a competent person are trained and equipped with the latest technological know-how, information and new regulations imposed by the Commission from time to time.

The Commission took the initiatives to conduct seminars/dialogues that aims to enhance the competency level of competent person from various institutions and industries, as follows:

- The adoption of the following standards for wiring in buildings:
  - MS IEC 60364:2003 Electrical Installations of Building;
  - MS 1936:2006 Electrical Installations of Building – Guide To MS IEC 60364;
  - MS 1979:2007 Electrical Installations of Building – Code of Practice; and
  - MS IEC 60038 'Nominal Voltage for Low Voltage Supply Systems' as a guideline for wiring installation in buildings.

- Application of the Residential Building Electrical Wiring Guidelines; so that they understand further the need for an optimum and safe wiring system;

- Workshops and competency evaluation examinations conducted within accredited private institutions to ensure that the quality of competent person produced are within the stipulated standard.

- Gas competency development workshops.

The Commission view issues concerning electrical accidents seriously. In general, safety administration and maintenance responsibility are in the hands of owners, management and users of the installation. The Commission has enhanced monitoring activities via Regional Offices so that effective prevention and corrective actions are done to avoid any occurances of similar accidents.

The Commission has also increased its monitoring activities on electrical equipment and installation. This is done in order to address complaints received, that focuses on issues related to electrical equipment without labelling nor approval and issues related to the supply of electricity.

To raise safety awareness, the Commission increased its campaigns and dialogues to identified target groups, enhanced its customer-friendly awareness initiatives and enhanced cooperation with government agencies and associations with interest in the electricity industry.

### Development of Alternative Energy Source

The Small Renewable Energy Programme (SREP) that was launched on 11th May 2001 was one of the Government's efforts to encourage and increase Renewable Energy usage in electricity generation. The Commission function as a Secretariat or One-Stop Centre that bears the responsibility to implement and promote the SREP development initiatives that would facilitate participation from industry players into the Program. The Commission in collaboration with the Pusat Tenaga Malaysia (PTM) and the Malaysian Industrial Development Authority (MIDA) made an effort to reorganised and streamlined the incentive application process for RE and Energy Efficiency (EE) related projects.

In addition, the Commission has also been appointed as the Chairman for Malaysia Building Integrated Photovoltaic (MBIPV) National Steering Committee that functions to monitor the development of specific projects.

The Commission also shoulder the responsibility to monitor and support the implementation of a joint project, the International Cooperative Demonstration Project on Stabilised and Advanced Grid-Connection Photovoltaic Systems based on the Memorandum of Understanding that was signed between the Commission and the New Energy and Industrial Technology Development Organisation (NEDO), Japan in October 2007. The project was scheduled for completion by year-ending 2009.

Monitoring efforts on SREP projects, especially on-going projects, are done periodically. Besides that, a series of discussions with RE-interested parties were held so as to encourage the nation's RE development, including discussions with financial institutions who showed interest in financing relevant projects.

Part of the challenges faced in making the project a success, is the price per unit of electricity supplied by the SREP mini-hydro project, where the current tariff rate of 17 sen/kWj is at the lower end for the project developer. KeTTHA is in the process of structuring an electricity sales tariff mechanism based on RE sources where a premium tariff rate can be enjoyed by RE project developers. This effort is expected to overcome problems faced by the SREP mini-hydro project developers.

Besides that, issues related to Bumiputra equity ownership and foreign ownership in SREP projects were also raised in hope that it would entice foreign parties to participate in this SREP programme. A revision study on the equity issue is currently on-going together with KeTTHA.

The Commission also played a role in the evaluation and submission of proposal on the MBIPV project payment via the Suria 1000 Program that has been launched in 2007. Under the Suria 1000 Programme, subsidies will be given to interested members of the public who are keen to install the BIPV system in their houses and buildings as an alternative source to generate electricity. The program aims to provide an installation of a solar system that is able to generate electrical capacity of up to 1,200 kWp and is connected to the grid. Up to December 2009, a total of 81 projects have been approved with a total capacity of 885 kWp out of which 40 of projects with a total capacity of 283 kWp have been approved and accredited.

The Commission also performed an active role in the activation of initiatives connected to the Nuclear Power Development Plan in which a Nuclear Power Development Steering Committee has been established to carry out the following duties:

a) Plan and streamlined the nuclear energy development program in Malaysia specifically in Peninsular Malaysia taking into account the electricity supply planning that has been outlined by JPPPET;

b) Coordinate the preparation of the Nuclear Power Infrastructure Development Plan that would enable the implementation of a nuclear energy development program in Malaysia specifically in Peninsular Malaysia post 2020;

c) Formation of a working Committees that would serve to execute activities outlined under the Nuclear Power Infrastructure Developement Plan such as:
   - Nuclear Power Development Programme Working Committee chaired by Nuclear Malaysia;
   - Nuclear Power Development Project Working Committee chaired by Tenaga Nasional Berhad;
   - Nuclear Power Legal Regulatory Development Working Committee jointly chaired by Atomic Energy Licensing Board (AELB) and the Energy Commission;

d) Monitor and regulate the preparation activities being implemented by the relevant Committees.

Thus far the Nuclear Power Legal Regulatory Development Working Committee co-chaired by both the Commission and AELB have successfully conducted two session of meetings in 2009. The Committee also managed to produce the first draft of documents pertaining to the Nuclear Regulatory Policies and is in the midst of

discussions to further enhance the quality of the content stated within the document.

Besides that, drafts of the Terms of Reference documents for the appointment of consultants to expedite studies on the country's existing legal documentation pertaining to electricity generation, atomic energy, occupational safety and health, environment, national security, radiology accident readiness and nuclear material use control are also under discussion.

The Government has also, via KeTTHA, made proposals to have a Memorandum of Understanding with countries such as France, South Korea, Japan and China for the purpose of capacity building, specifically in the preparation of policies, legal and regulatory framework, programmes for awareness and education as well as technical expertise. The draft of the Memorandum of Understanding has been structured and is currently being finalised by the Attorney General's Chambers for approval.

## CONSUMER AWARENESS PROGRAM

The electricity and gas safety awareness programme continues to be the Commission's priority throughout 2009, with focus given to related target groups.

A total of 157 seminars, dialogues and briefings were held across the country throughout 2009. The programmes were held to spread and instill awareness among target groups. The Commission also gathered feedback and suggestions regarding policies, regulations, standards, practices and safety issues via the conducted programmes.

Amongst parties of interest involved in the Commission's seminars, dialogues and briefing programmes were:

- main utilities;
- industries / commercial;
- public / educational institutions / schools;
- government agencies / local authorities
- entertainment parks / construction sites;
- electrical equipment vendors; and
- associations such as contractors, consultant engineers and others.

Among the aspects that were stressed via these awareness enhancement programs were laws and regulations that have been promulgated. These include competent persons' responsibilities, latest standards, approved equipment as well as risks and preventive measures that should be applied to avoid electricity and gas accidents.

Concurrently, the Commission has also increased its public awareness programs using the electronic media to educate the public on electrical safety through the production of an electrical safety video. Production of the five-minute video aimed to disseminate information to users on simple steps that they could practise in order to prevent any electrical risks within their residential or commercial building and also in public places.

# Regulatory Statistics

## Licensing of Electricity Supply Activities

As of December 2009 the total number of licenses issued for the electricity supply activities stands at 1,947 licenses, that are categorised as follows:

Table 15: Licensing of Electricity Supply Activities

| Public Licenses | 2009 | 2008 |
|---|---|---|
| Main Utilities | - | - |
| Independent Power Producers | 1 | - |
| Renewable Energy Producers | | |
| - Projects already in operation | 3 | 2 |
| - Projects under construction | 1 | 3 |
| Electricity Distributors | 42 | 30 |
| Main Co-Generators | 1 | - |
| **Private Licenses** | **2009** | **2008** |
| Less than 5 MW | 1,444 | 1,555 |
| Exceeding 5 MW | 1 | - |

## New License Applications

The Commission issued 41 public distribution licenses, one public IPP License and four public SREP licenses in comparison with 29 public distribution licenses and three SREP public licenses in 2008.

Table 16: List of Public Distribution Licenses Issued in 2009

| No. | License Holders | Capacity (MW) | No. | License Holders | Capacity (MW) |
|---|---|---|---|---|---|
| | AEON Co. (M) Bhd. | | 7 | Lapangan Terbang Antarabangsa Langkawi | 2.293 |
| 1 | AEON AU2 Shopping Centre (Setiawangsa) | 3.9 | 8 | Amtrustee Berhad | 10.8 |
| 2 | AEON Bandaraya Melaka Shopping Centre | 22.5 | 9 | Abi Construction Sdn. Bhd. | 3.83 |
| | GCH Retail (M) Sdn. Bhd. | | 10 | Makamewah Sdn. Bhd. | 13 |
| 3 | Giant Hypermarket Southern City | 2 | 11 | Mydin Mohamed Holding Berhad (MITC Melaka) | 4.3 |
| 4 | Giant Hypermarket Tawau | 3 | 12 | Pembinaan Titis Jaya Sdn. Bhd. | 0.55 |
| | Malaysia Airports Sdn Bhd. | | 13 | Couture Homes Sdn. Bhd. | 8.67 |
| 5 | Lapangan Terbang Sultan Ahmad Shah | 0.334 | | Tesco Stores (Malaysia) Sdn. Bhd. | |
| 6 | Lapangan Terbang Antarabangsa Pulau Pinang | 4 | 14 | Tesco Seri Alam | 3.4 |

| No. | License Holders | Capacity (MW) | No. | License Holders | Capacity (MW) |
|---|---|---|---|---|---|
| 15 | Tesco Kelang | 3.4 | 28 | Magic Coast Sdn. Bhd. | 13 |
| 16 | Tesco Puchong | 3.4 | 29 | Floral E-Joy Sdn. Bhd. | 2 |
| 17 | Tesco Ipoh | 3.4 | 30 | Legend Advance Sdn. Bhd. | 0.9 |
| 18 | Tesco Kajang | 3.4 | 31 | Msl Properties Sdn. Bhd. | 8.9 |
| 19 | Tesco Banting | 1.3 | 32 | Salak Park Sdn. Bhd. | 2.3 |
| 20 | Tesco Extra Ipoh | 2.763 | 33 | Tenaga Nusantara Sdn. Bhd. | |
| 21 | Tesco Extra Sungai Dua | 1.7 | 34 | Technology Park Malaysia Corporation Sdn. Bhd. | 4.65 |
| 22 | Tesco Extra Shah Alam | 2.975 | 35 | Lion Mutiara Parade Sdn. Bhd. | 6.077 |
| 23 | Tesco Extra Cheras | 2.975 | 36 | Mydin Mohamed Holding Berhad (Petaling Jaya) | 5.622 |
| 24 | Tesco Extra Seremban | 2.125 | 37 | Kumpulan Wang Simpanan Pekerja | 2.443 |
| | Syarikat-Syarikat Lain | | 38 | Crest Worldwide Resources Sdn. Bhd. | 7 |
| 25 | Permodalan Nasional Berhad | 6 | 39 | IJM Biofuel Sdn. Bhd. | 4.5 |
| 26 | Ivory Gleneary Sdn. Bhd. | 15.8 | 40 | Westports Malaysia Sdn. Bhd. | 83 |
| 27 | Bronze Towers Sdn. Bhd. | 2.5 | 41 | MRCB Selborn Corporation Sdn. Bhd. | 11 |

Table 17: Public SREP Licenses Issued in 2009

| License Holders | Capacity (MW) |
|---|---|
| AMDB Perting Hydro Sdn. Bhd. | 4.2 |
| I.S. Energy Sdn. Bhd. | 2.8 |
| Renewable Power Sdn. Bhd. | 2.2 |
| Bell Eco Power Sdn. Bhd. | 2.0 |

Other than that, there were four license renewal applications which were approved as follows:

Table 18: List of Public SREP Licenses Renewed in 2009

| License Holders | Capacity (MW) |
|---|---|
| Kuantan Port Consortium Sdn. Bhd. | 3.488 |
| Shell Refining Company *(Federation Of Malaya)* | 35.0 |
| See Sen Chemical Bhd. | 6.0 |
| Gula Padang Terap Sdn. Bhd. | 10.29 |

The amnesty process on unlicensed installations had been continued in 2009 through regular check up on premises that conduct electricity supply activities from installations to or for other parties. Throughout 2009, monitoring and enforcement actions were carried out towards ensuring compliance of legal requirements on the following premises which were reported to have conducted unlicensed distribution and supply of electricity:

i. Felda Engineering Services Sdn. Bhd.
   a) FELDA Sahabat
   b) FELDA Umas
   c) FELDA Kalabakan
ii. Titis Jaya Sdn. Bhd.
iii. PTB Research Institute Sdn. Bhd.
iv. Plus Expressway Berhad

### Gas Utility Licensee

GMSB is the Gas Utility licensee that is responsible for the operation and maintenance of natural gas and LPG piped gas activities in Peninsular Malaysia, while SEC is the licensee responsible for piped natural gas supply in Sabah and the Federal Territory of Labuan.

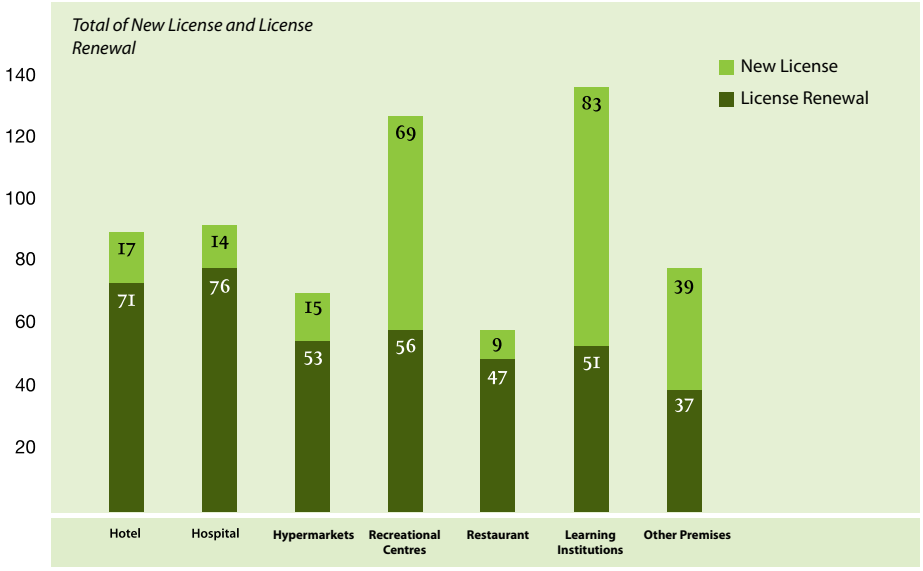
### Private Gas License

Private Gas Licenses are issued to parties that supply and utilise gas via pipelines at their own premises or the property or premises of an owner or resident. Private Gas Licenses have been divided into seven categories, which are :

i. hotels,
ii. hospitals,
iii. supermarkets,
iv. educational institutions,
v. recreational centres / clubs,
vi. restaurants, and
vii. other premises.

A total of 637 private gas licenses were issued in 2009, of which 246 were new licenses while 391 were renewed licenses. Of the 246 new licenses issued, 17 (7%) comprised of hotels, 14 (6%) hospitals, 15 (6%) supermarkets, 9 (3%) recreational centres / clubs, 83 (34%) restaurants, 69 (28%) educational institutions and 39 (16%) other premises. As of year-ending 2009, a total of 2,167 premises were accorded with the Private Gas License.

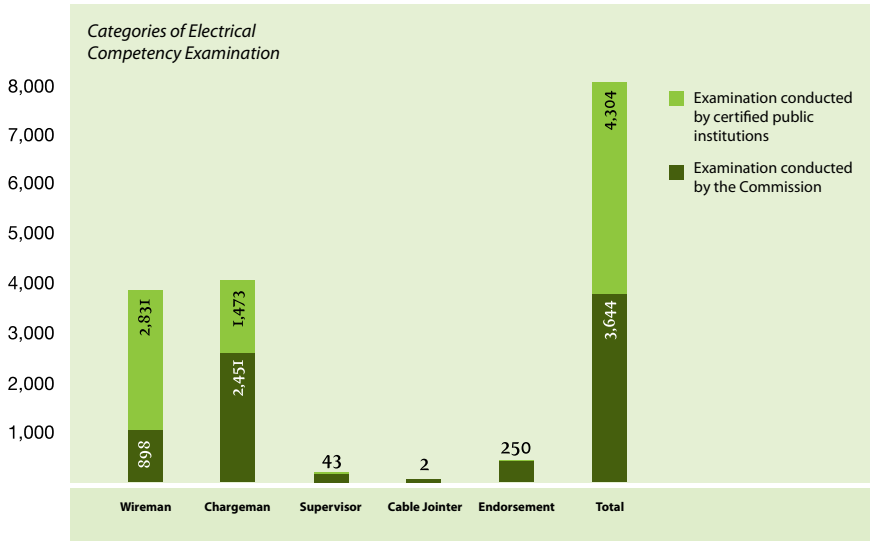
Graph 17: Breakdown on Type of Premises with Gas Installations that were Issued with Private (New/Renewal) Gas Licenses in 2009




## Electrical Competency Certification

For the year 2009, a total of 7,948 candidates sat for various categories of electrical competency examinations, of which a total of 5,432 candidates pass the various categories of examination conducted. Apart from theory-based competency examinations, the Commission also conducted practical examinations for candidates that are to certified as wiremen and chargemen of low and high voltage machineries.

Graph 18: Categories of Electrical Competency Examinations for the Year 2009



A total of 5,499 competency certification has been issued in 2009. The number records a 2.8% increase compared to 5,349 certification issued in 2008. The increase in number is in tandem to the Commission's aspiration to further increase the number of competent person as our country still lack sufficient number of competent person. Of the stated total, 4,103 certifications have been issued through accredited public institutions and the remaining by the Commission.

Table 19: Competency Certification for Year 2009 compared to the Total for 2008

| | Certification Categories 2009 | | | | | | | | | 2008 |
|---|---|---|---|---|---|---|---|---|---|---|
| | PW | END | PJE | G/S | PK | PE | JP | JK | Total | Total |
| Headquarters | 0 | 0 | 176 | 0 | 0 | 15 | 6 | 22 | **219** | 132 |
| Regional Offices | 250 | 250 | 612 | 63 | 2 | 0 | 0 | 0 | **1,177** | 1372 |
| Accredited Institutions | 2,696 | 0 | 1,403 | 4 | 0 | 0 | 0 | 0 | **4,103** | 3845 |
| TOTAL | 2,946 | 250 | 2,191 | 67 | 2 | 15 | 6 | 22 | 5,499 | 5,349 |

### Registration of Electrical Competent Person

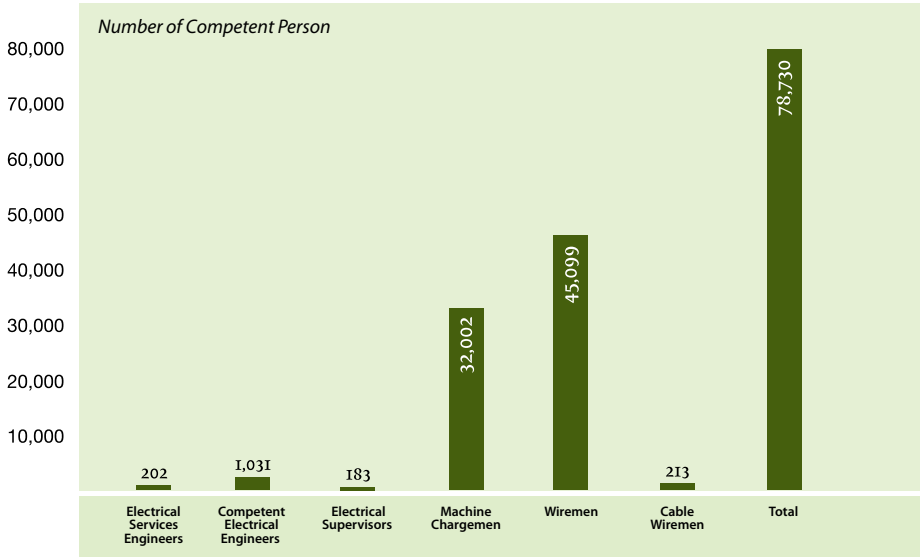
In 2009, a total of 14,618 competent person have registered enabling them to carry out electrical works.

The total number of competency accreditation issued to-date stands at 78,730. The statistic below shows the number of competency accreditation that have been recorded by the Commission:-

Table 20: Competency Certification

| Category | Total |
|---|---|
| Electrical Services Engineers | 202 |
| Competent Electrical Engineers | 1,031 |
| Electrical Supervisors | 183 |
| Chargemen | 32,002 |
| Wiremen | 45,099 |
| Cable Jointer | 213 |
| **Total** | **78,730** |

Graph 19: Electrical Competency Certification Categories




## Competency Certification and Registration of Gas Competent Person

As of 2009, the total number of gas competency certification issued stands at 699 comprising of gas engineers, gas engineering supervisors and gas fitters. A total of 304 competent person are registered with the Commission in 2009.

Table 21: Number of Registered Gas Competent Person for the year 2009

| Type of Registration | Renewal | New Registration | Total |
|---|---|---|---|
| Gas Engineers | 35 | 0 | 35 |
| Gas Engineering Supervisors | 86 | 9 | 95 |
| **Gas Fitters** | | | |
| Class I | 99 | 13 | 112 |
| Class II | 39 | 3 | 42 |
| Class III | 10 | 10 | 20 |
| Total | 269 | 35 | 304 |

## Gas Competency Examination

Candidate who did not fulfilled the stipulated exemption criterion need to sit for the written examination. Henceforth, candidate that pass the written exam will be called for an interview that would evaluate their eligibility to be awarded with the Competent Certification. A written examination session has been conducted in November 2009.

Candidates who qualify for interviews are those who have passed the written examinations or are exempted from the written examinations or who have graduated from specific courses related to the field of gas pipelines conducted by accredited public institutions.

In 2009, 4 interview sessions were conducted in which 24 candidates attended the interviews.

## Accredition of Competency Training Institutions

As of 2009, a total of 102 public institutions have been accredited to conduct competency courses and examinations. Table 22 list the public institutions that were awarded with the said accreditation.

Table 22: Accredited Public Institutions to Conduct Competency Courses and Examinations

| Institution | Total Accredited | Course | |
|---|---|---|---|
| | | Full Time | Part Time |
| ILP / ADTEC (JTM) | **15** | 38 | 33 |
| IKM / KKTM (MARA) | **12** | 36 | 13 |
| PGM (GIATMARA) | **50** | 71 | 18 |
| IKBN / IKBTN (KBS) | **7** | 28 | 25 |
| ABM (CIDB) | **5** | 15 | 16 |
| ILSAS (TNB) | **1** | 8 | 9 |
| Others | **12** | 17 | 12 |
| **TOTAL** | **102** | **213** | **126** |

For the year 2009, a total of 52 new public institutions (including accredited institutions that received approval to conduct new courses) were permitted / accredited to conduct competency courses and examinations. The said institutions are as per Table 23.

Table 23: New Public Institutions Permitted / Accredited to Conduct Competency Courses and Examinations

| No. | Institution | Accreditation 2009 | Course Category | Course Type |
|---|---|---|---|---|
| 1. | Institut Teknologi Petroleum PETRONAS (INSTEP), Batu Rakit | 12 Jun | A0 | Full Time |
| 2. | Institut Latihan Perindustrian Kuala Terengganu | 12 Jun | PW4 | Full Time/Part Time |
| 3. | Institut Latihan Perindustrian Kuala Terengganu | 12 Jun | TAVR & JVRP | Part Time |
| 4. | Akademi Binaan Malaysia, Wilayah Tengah, Kuala Lumpur | 12 Jun | A0 | Full Time/Part Time |
| 5. | Pusat GIATMARA Sandakan, Sabah | 12 Jun | PW2 | Full Time |
| 6. | Pusat GIATMARA Sungai Besar, Selangor | 12 Jun | PW2 | Full Time/Part Time |
| 7. | Pusat GIATMARA Labuan, Labuan | 12 Jun | PW2 | Full Time/Part Time |
| 8. | Pusat GIATMARA Kota Belud, Sabah | 12 Jun | PW2 | Full Time/Part Time |
| 9. | Pusat GIATMARA Tanjung Agas, Johor | 12 Jun | A0 | Full Time/Part Time |
| 10. | Kolej Yayasan Melaka, Melaka | 12 Jun | A0 | Full Time/Part Time |
| 11. | Institut Kemahiran Tinggi Belia Negara, Sepang, Selangor | 12 Jun | A0 | Part Time |
| 12. | ILSAS, TNB, Bangi, Selangor | 12 Jun | TAVR & JVRP | Part Time |

| No. | Institution | Accreditation 2009 | Course Category | Course Type |
|---|---|---|---|---|
| 13. | ILSAS, TNB, Bangi, Selangor | 12 Jun | A1 & A4 | Part Time |
| 14. | ILSAS, TNB, Bangi, Selangor | 12 Jun | BO, B1 & B4 | Part Time |
| 15. | Pusat GIATMARA Sungai Siput, Perak | 12 Jun | PW2 | Part Time |
| 16. | Pusat GIATMARA Kinabatangan, Sabah | 12 Jun | PW2 | Full Time |
| 17. | Pusat GIATMARA Tawau, Sabah | 12 Jun | PW2 | Full Time |
| 18. | Pusat GIATMARA Kuala Kangsar, Perak | 12 Jun | PW2 | Part Time |
| 19. | Pusat GIATMARA Tasik Gelugor, Pulau Pinang | 12 Jun | A1 | Full Time/Part Time |
| 20. | Pusat GIATMARA Tasik Gelugor, Pulau Pinang | 12 Jun | PW4 | Full Time |
| 21. | IKBN Alor Gajah, Melaka | 12 Jun | A4-1 | Full Time |
| 22. | IKBN Alor Gajah, Melaka | 12 Jun | A4 | Full Time/Part Time |
| 23. | Institut Latihan Sultan Ahmad Shah (ILSAS), Bangi, Selangor | 27 Jul | A0 | Part Time |
| 24. | Pusat GIATMARA Rantau Panjang, Kelantan | 24 Dec | PW2 | Full Time |
| 25. | Pusat GIATMARA Romping, Pahang | 24 Dec | PW2 | Full Time/Part Time |
| 26. | Pusat GIATMARA Tampin, Negeri Sembilan | 24 Dec | PW2 | Full Time/Part Time |
| 27. | Pusat GIATMARA Pekan, Pahang | 24 Dec | PW2 | Full Time/Part Time |
| 28. | Pusat GIATMARA Pokok Sena, Kedah | 24 Dec | PW4 | Full Time/Part Time |
| 29. | Pusat GIATMARA Tambun, Perak | 24 Dec | PW2 | Full Time/Part Time |
| 30. | Pusat GIATMARA Sungai Petani, Kedah | 24 Dec | PW2 | Full Time |
| 31. | Pusat GIATMARA Ipoh Timur, Perak | 24 Dec | PW2 | Full Time |
| 32. | Institut Kemahiran Tinggi PERDA (PERDA–TECH) | 24 Dec | PW4 | Full Time/Part Time |
| 33. | ILP Arumugam Pillai, Pulau Pinang. | 24 Dec | PW2 | Full Time |
| 34. | ILP Arumugam Pillai, Pulau Pinang. | 24 Dec | PW4 | Full Time/Part Time |
| 35. | Akademi Binaan Malaysia, Wilayah Utara, Sintok, Kedah | 24 Dec | PW2 | Full Time/Part Time |
| 36. | Akademi Binaan Malaysia, Wilayah Utara, Sintok, Kedah | 24 Dec | PW4 | Full Time/Part Time |
| 37. | Akademi Binaan Malaysia, Wilayah Utara, Sintok, Kedah | 24 Dec | AO | Full Time |
| 38. | Akademi Binaan Malaysia, Wilayah Utara, Sintok, Kedah | 24 Dec | A1 | Full Time |
| 39. | Pusat GIATMARA Kota Bharu, Kelantan | 24 Dec | PW2 | Full Time |
| 40. | Pusat GIATMARA Taiping, Perak | 24 Dec | PW2 | Full Time |
| 41. | Pusat GIATMARA Masjid Tanah, Melaka | 24 Dec | PW2 | Full Time |

| No. | Institution | Accreditation 2009 | Course Category | Course Type |
|---|---|---|---|---|
| 42. | Pusat GIATMARA Jeli, Kelantan | 24 Dec | PW2 | Full Time/Part Time |
| 43. | Pusat GIATMARA Tanah Merah, Kelantan | 24 Dec | PW2 | Full Time |
| 44. | Pusat GIATMARA Pengkalan Chepa, Kelantan | 24 Dec | PW2 | Full Time |
| 45. | Institut Kemahiran Belia Negara, Bukit Mertajam, Pulau Pinang | 24 Dec | A1 | Full Time |
| 46. | Pusat GIATMARA Jelebu, Negeri Sembilan | 24 Dec | PW2 | Full Time |
| 47. | Pusat GIATMARA Kapar, Selangor | 24 Dec | PW2 | Full Time/Part Time |
| 48. | Pusat GIATMARA Teluk Intan, Perak | 24 Dec | PW2 | Full Time |
| 49. | Institut Kemahiran Lumut (IKM), Lumut, Perak | 24 Dec | A4 | Full Time |
| 50. | IKBN Alor Gajah, Melaka | 24 Dec | TAVR & JVRP | Part Time |
| 51. | Institut Kemahiran MARA, Johor Bharu, Sungai Petani, Pekan, Kuala Lumpur | 24 Dec | PW2 | Part Time |
| 52. | Institut Kemahiran MARA, Johor Bharu, Sungai Petani, Pekan, Kuala Lumpur, Kota Kinabalu dan Sik | 24 Dec | A0 | Part Time |
| 53. | Institut Kemahiran MARA, Johor Bharu, Johor | 24 Dec | A4 | Part Time |

Note:

| | | | |
|---|---|---|---|
| **High Voltage System (11kV or 33kV)** | | | |
| B4 | : High Voltage System | B1 | : High Voltage System (Without High Voltage Power Station |
| B0 | : High Voltage System (Without High Voltage Aerial Line and High Voltage Power Station) | B0-1 | : High Voltage System (Without High Voltage Aerial Line and High Voltage Power Station; and Without Low Voltage Synchronizing of Generators) |
| B0-2 | : High Voltage System (Without High Voltage Aerial Line and High Voltage Power Station; and Without Low Voltage Aerial Line and Low Voltage Synchronizing of Generators) | B0 TNB | : TNB / SESB Staff |
| **Low Voltage System (Below 1000V)** | | | |
| A4 | : Low Voltage System | A4-1 | : Low Voltage System (Without Synchronizing of Generators) |
| A4-2 | : Low Voltage System (Without Aerial line and Synchronizing of Generators) | A1 | : Low Voltage System (Without Power Station) |
| A0 | : Low Voltage System (Without Aerial line and Power Station)) | | |
| **Electrical Wiring** | | | |
| PW1 | : Single Phase | PW2 | : Endorsement |
| PW3 | : Thru Phase | PW4 | : Four phase |

For gas competency training, to-date a total of six institutions have been accredited to conduct gas competency courses.

### Registration of Electrical Contractor

In ensuring electrical works are carried out safely and in compliance with the stipulated regulations, only contractors registered with the Commission are permitted to conduct electrical works.

The number of registered contractors in 2009 totalled up to 4,289 compared with 3,868 for the year 2008.

Table 24: Registered Electrical Contractors for year 2008 and 2009.

| Type of Contractor | Number | |
|---|---|---|
| | 2009 | 2008 |
| Electrical Services Contractor | **120** | 138 |
| Electrical Contractor (Class A, B, C, D) | **3,803** | 3,462 |
| Electrical Switchboard Contractor | **5** | 7 |
| Switchboard Manufacturer (high & low voltage) | **165** | 138 |
| Renovation Contractor | **188** | 118 |
| Private Wiring Unit | **8** | 5 |
| **Total** | **4,289** | **3,868** |

### Registration of Gas Contractor

In 2009, a total of 10 new contractor firms for gas reticulation work have been registered. One of which was a Class A contractor, five Class B contractors and four Class C contractors. In 2009 there were 117 registered contractors.

Table 25: Registered Gas Contractors for 2009

| Type of Registration for Gas Contractor | Renewal (2009) | New Registration (2009) | Total |
|---|---|---|---|
| Class A | 43 | 1 | **44** |
| Class B | 40 | 5 | **45** |
| Class C | 22 | 4 | **26** |
| Class D | 2 | 0 | **2** |
| **Total** | **107** | **10** | **117** |

### Approval on Electrical Equipment

Approval certification are being issued for applications related to manufacturing, imports, controlled apparatus, certification renewal, exhibition and the issuance of Customs release letter increased to 7,508 compared to 6,130 in 2008, as shown in Table 26.

Table 26: Number of Approved Applications for year 2008 and 2009

| Year | Import Certification | Manufacturing Certification | Exhibition Certification | Customs Release Papers | Notification Papers of Non Controlled Items | Renewal | Total |
|---|---|---|---|---|---|---|---|
| **2008** | 1,913 | 689 | 37 | 913 | 321 | 2,263 | **6,130** |
| **2009** | 3,046 | 972 | 58 | 527 | 367 | 2,538 | **7,508** |

It is mandatory for importers and manufacturers to label electrical equipment with SIRIM labeling, as stipulated under Regulation 98 of the Rules and Regulations for Electricity 1994. Importers are required to undergo consignment testing to acquire SIRIM labeling. The label will be awarded once the importer pass the consignment test.

### Approval on Gas Equipment

In 2009, no approvals were issued to manufacturers of fittings, appliances or equipment for gas, whereas 14 approvals were issued to importers of gas equipment .

However, the Commission approved 83 types of gas fittings, gas appliances or gas equipment in 2009. Piped gas system components that were given approval were pipes and polyethylene fittings, meters, ball valves, pressure regulators and gas leakage detector equipment.

### Installations Registration and Approval

The total number of electrical installations in Peninsular Malaysia and Sabah that has been registered as having an installation registration certification for year ending 2009 stands at 8,319.

Table 27: Registration of Electrical Installations

| State | Number |
|---|---|
| Johor | 1,424 |
| Kedah | 335 |
| Kelantan | 175 |
| Melaka | 277 |
| Negeri Sembilan | 311 |
| Pahang | 445 |
| Perak | 703 |
| Perlis | 33 |
| Pulau Pinang | 711 |
| Sabah | 1,153 |
| Selangor | 1,418 |
| Terengganu | 238 |
| Federal Territories (Kuala Lumpur & Putrajaya) | 1,096 |
| **Total** | **8,319** |

### Approval for Installation of Gas Pipeline System

The total number of approval issued for the installation of LPG gas pipeline system based on the application received in 2009 stands at 636 approval. For the natural gas system, a total of 103 approval has been issued for the said installation. The approval issued encompasses the approval to install the metering and calibration stations and each approval is divided into 3 separate Classes either I, II and III depending on the installation's maximum operating pressure.

Table 28: Approval for Installation According to Installation Class for year 2009

| Type of Installation | Class | | | Total | |
|---|---|---|---|---|---|
| | I | II | III | 2009 | 2008 |
| Natural Gas | 36 | 7 | 60 | **103** | 182 |
| LPG | 2 | 26 | 608 | **636** | 658 |

### Approval for Maintenance of Gas Pipeline System

A total of 584 approvals for maintenance were issued based on applications received in 2009 compared with 759 in 2008. Total approvals for LPG systems in 2009 were 464 whereas approval for natural gas amounted to 120.

The approvals issued encompassed approval for maintenance of metering stations and regulating stations and each approval is divided into Class I, II and III, depending upon the maximum installation operations pressure.

Table 29: Approval for Maintenance of Gas Pipeline System for year 2009 and 2008

| Type of Installation | Class | | | Total | |
|---|---|---|---|---|---|
| | I | II | III | 2009 | 2008 |
| Natural Gas | 32 | 10 | 78 | **120** | 187 |
| LPG | 1 | 19 | 444 | **464** | 580 |
| **Total** | | | | **584** | **767** |

### Energy Efficiency

In accordance with the Rules and Regulations of Efficient Energy Management 2008 which were gazetted on 15 December 2008, 22 applicants have been registered as electrical energy managers.

The Commission continuously ensures that the implementation and enforcement of the regulations are conducted seamlessly by:

- Conducting several special information sessions through briefings and dialogues with stakeholders. Several of the sessions were jointly conducted with the Federation of Malaysian Manufacturers (FMM). In 2009, 22 sessions of discussion were held in order to;
- Issue notification to the respective installations with regards to regulations compliance;
- Disseminate and update information on new regulations via the Commission's website; and
- Preparation of guidelines to be administered when enforcing the regulations.

### Energy Efficient Standards and Labelling

Following the certification of energy efficiency performance for refrigerators in 2005, the Commission has set, approved and introduced certification for electrical equipment such as insulating item, motors, refrigerators, lighting, ballasts, televisions, air-conditioners and domestic fans.

### Energy Efficient Performance Rating for Refrigerators

In 2009, the Commission developed and introduced STAR rating for three type of electrical equipment, namely fan, television and air-conditioner based on its respective energy efficiency performance. As such, applicants that have been approved and are eligible to receive the STAR rating for their respective electrical appliances and the number of models approved are as follows:

Table 30: Electrical Equipment with STAR Rating

| Electrical Equipment | Model Quantity |
|---|---|
| Refrigerators | 25 |
| Televisions | 170 |
| Fans | 200 |
| Air-conditioners | 110 |

The Commission is also a member in the National Committee on Investment in Services Sub-Sectors and functions as a technical evaluator to MIDA for energy efficiency and renewable energy incentives.

### Energy Efficiency Incentives and Renewable Energy Products

A total of 52 applications seeking to attain incentives related to energy efficient projects, equipment and energy efficient equipment and material as well as solar and photovoltaic products have been approved.

Table 31: Incentive Applications Related to Energy Efficient Projects, Equipment and Energy Efficient equipment and material Including Solar and Photovoltaic (PV) Products

| Type of Application | New Applications | Approved Projects | Total of Approved Projects | In the Process | Rejected | Under Consideration |
|---|---|---|---|---|---|---|
| Energy Efficient Projects | 11 | 8 | - | 5 | 6 | 1 |
| Energy Efficient Equipment & Item | 23 | - | 610 | - | - | - |
| Solar & PV Products | 18 | - | 200 | - | - | - |
| **Total** | **52** | **8** | **810** | **5** | **6** | **1** |

SREP Programme Achievement

For 2009, the achievements of the SREP Programme have been fairly encouraging as per the following:

Table 32: SREP Programme Achievements for 2009

| No | Type of Energy Source | | Approved Applications | Generation Capacity (MW) | Capacity Connected to Grid (MW) |
|---|---|---|---|---|---|
| 1 | Biomass | Palm Fronds | **6** | 81.5 | 70 |
| | | Timber Waste | **-** | - | - |
| | | Rice Husk | **1** | 12 | 10 |
| | | Solid Waste | **-** | - | - |
| 2 | Biogas | | **-** | - | - |
| 3 | Landfill Gases | | **1** | 2 | 1 |
| 4 | Mini Hydro | | **2** | 11.5 | 11 |
| 5 | Wind & Solar | | **-** | - | - |
| **TOTAL** | | | **10** | **107** | **92** |

# Organisational Expansion

## Restructuring of Departmental Functions

A minor reshuffle involving changes to the Commission's organisational structure was implemented in July 2009, in which six Departments were maintained. The minor reshuffle involved several Departmental units in the Commission that underwent a revamp as follows:

- Creation of the Electricity Tariff Unit under the Electricity Supply Regulation Department,
- Creation of the new Energy Information Unit to replace the Industrial Development Unit, under the Department of Economic Regulation and Industrial Development,
- Creation of a new unit which manages the Commission's external communications under the Corporate Services Department,
- Abolishment of the Industrial Development Unit and Tariffs Unit under the Department of Economic Regulation and Industrial Development, with the department's name changed to the Energy Management Department,

The restructuring of the functions in the aforesaid departments is to increase the effectiveness of the Commission's roles in these aspects:

- Economic regulation for the electricity and piped gas supply industry,
- Raising overall efficiency pertaining to energy planning and promotion,
- Consolidation of the energy database,
- Strengthening relationship between the Commission and related parties,
- Raising functional effectiveness in the promotion of efficient energy utilisation.

### Increase in Workforce

As of year-end 2009, there were 241 positions comprising 142 Executives and 99 Support Staff (Non-Executive), located at the headquarters and nine regional offices in Peninsular Malaysia and Sabah.

In 2009, 47 new staff were appointed to the positions of Executive and Support Staff. They were based at headquarter and the regional offices. These appointments involved new staff from Peninsular Malaysia as well as Sabah and Sarawak in a move towards enhancing integration and to fulfill the 1Malaysia aspiration.

### Training and Competency Development

In 2009, 5% of the total staff expenditure went towards training and competency enhancement programs comprising of 70 training sessions. The training programs attended by the Commission's workforce in 2009 are divided into the following categories:

- Behavioural competency – 13 programs
- Legislation and regulatory process competency – 7 programs
- Regulatory practice competency – 6 programs
- Technical competency – 44 programs

In 2009, the Commission took action to update its financial model that has been developed to provide analysis on the performance of independent power producers. Consequently, a financial model application training has been conducted from 24th to 30th April 2009, that aims to:

- Revise the IPP's Financial Simulation Model application which was prepared by a consultant, Acil Tasman Sdn. Bhd. in 2006;
- Increase the Commission officers' competency in financial analysis to provide input in the implementation of the PPA re-negotiation and to benchmark the performance of power producers in Peninsular Malaysia; and

- Reduce dependence on consultation services in the future.

In the aspect of planning and system operations, the purchase of a 'Power System Simulator' and the training conducted on its application will help to fulfil our capacity when analysing additional transmission line projects and system constrains and monitoring of the grid system's planning and operational activities. Basic and advanced training provided by industry experts were attended by the relevant officers from the Commission in order to improve internal expertise and capabilities.

In the aspect of economic regulation, the implementation of a Study in Electricity and Gas Tariffs in Peninsular Malaysia and Sabah that has been initiated in November 2009 provides an appropriate avenue for interaction with appointed Consultants and gave exposure to best practices in economic monitoring procedures. Four officers of the Commission were placed fulltime to study the project.

Apart from that, towards enhancing electricity supply capability planning, the Commission deployed its officers to attend relevant courses which included MAED, WASP IV, FINPLAN, Power Factory Software and Financial Modelling. Most of the course series were conducted by the Malaysian Nuclear Agency that aspire to develop new technologies, of which nuclear energy is one of the new fuel options to be applied in Peninsular Malaysia in the future.

Apart from economic regulatory related training and courses, the Commission's workforce also engages in aspects of technical training and courses. This is in line with the Commission's vision to equipped its personnel with current knowledge and expertise relevant to their duties as part of our effort to enhance their competency level enabling them to execute their daily task effectively. Among the trainings and courses that were conducted specifically for the Commission's staff were:

- Electrical Testing Equipment Course on 7th - 8th April; 14th - 15th April; 21st - 22nd April 2009;

- Domestic and Industrial Electrical Installation Systems Course on 27th - 31st July; 10th - 14th August and 13th & 14th October; 20th & 21st October 2009;

- OLRC briefing and training on 21st October 2009;

- 11/33KV Distribution Power System Protection on 28th – 29th December 2009 and 11th – 13th January 2010.

### Implementation of a Study on the Performance Management System

The Commission also conducted a study on the Performance Management System in order to evaluate the performance of its personnel based on Key Performance Indicator and competency level. The Performance Management System is conducted based on a Balanced Scorecard concept that utilises the online system to record personnel's performance on an annual basis. For the said purpose, an Organisational Scorecard has been developed and the KPI's identified and ready for the next course of action.

### Sponsorship of Chair on Energy Economics – Kursi

The Commission took the initiatives to establish *Kursi Ekonomi Tenaga (Kursi)* or Chair of Energy Economics that aims to enhance the nation's level of expertise and research in the field of energy and economics.

Based on a survey conducted on programs offering made available by local universities, there is no indication of any specific courses offered in the field of energy economics thus-far, although the demand and requirement for the development of skilled personnel in the field of energy economics is very much needed.

The Commission contributed RM500,000 for the establishment of Kursi in UNITEN as part of the initiative to develop research and analysis capability related to activities

in the field of energy economics within our country. Kursi is placed under the Energy Business and Technology Center (ETBC) in UNITEN.

Dr. Rajendra K. Pachauri, Director General of The energy Resources Institute (TERI), India has been appointed as Kursi's Chairman. He is the Chairman for Intergovernmental Panel on Climate Change that has been conferred with the Nobel Prize in 2007 and is a prominent international figure in the field of energy, economy and environmental science.

### Development of Energy Information Database

A database was created and uploaded onto the Commission's website, which is available for public utilisation and as reference material for various parties. Among the data available are related to Time Series Energy Data According to Energy Source Type, the Time Series Macro Economics Data, Time Series Pricing for Energy Sources and Gas Supply Data. Apart from functioning as reference material, the data collected serves to provide fundamental knowledge in the creation of a more precise energy analysis. This effort was done towards establishing the Commission as a centre of reference for energy information.

The Commission was also actively involved in the preparation of EPU's New Energy Policy Study by submitting related input and analyses. The Commission also collaborated with other Government agencies to scrutinise specific draft of documents such as the National Energy Balance by PTM.

### Internal Audit Implementation

In enhancing internal control, implementation of auditing activities has been initiated in 2009. Throughout 2009, all the Commission's Regional Offices' financial management records were audited. Based on three audit reports that were presented during the Audit Committee meeting, the Regional Offices were required to fully comply with the stipulated financial procedures. There is still room for improvement for operations to be streamlined with financial procedure requirement and good corporate governance standard.

### Development of Information and Communication Technology

To facilitate the operational flow of service, development works and system implementation have been conducted throughout 2009. Part of the system that has been completed or are still under development includes:

- Online Registration of Contractors (OLRC)
  Contractor Registration can be done online, in which currently this application has been fully implemented by the Melaka and Negeri Sembilan Regional Office. In 2010, the implementation and extension of the system will be done by the Commission's other Regional Offices.

- *e-Permit and e-Kelengkapan*
  The e-Kelengkapan system development and its integration with e-Permit is currently being actively done. The project is expected to be completed in mid-2010.

- Integration of the Commission's System with BLESS, SAGA, TNB e-application
  Currently integration works are actively under way. For SAGA, the system integration has been completed.

Apart from that, several improvement activities were done to enhance work processes such as implementing Document Management Systems (DOCUShare) as well as the webportal upgrade. The Commission also implemented ICT infrastructure and network systems upgrading programmes to increase speed, network system capabilities and the addition of internet protocol addresses. These initiatives also encompassed repair and maintenance works as well as centralised computer inventory.

# Calendar Of Activities

**3 FEBRUARY**
Joint Programme with the Ministry of Energy, Water and Communications (MEWC) to discuss the Draft Electricity Bill 2009 at the Residence Hotel, Bangi, Selangor.

**16 FEBRUARY**
Seminar and Dialogue on Enhancing Competency with Industry's Competent Persons in Kepala Batas, Penang.

**16-19 FEBRUARY**
Competency Examination – Electrical (Practical & Oral) – Categories B0 to B4.

**24 FEBRUARY**
Sarawak Inspectors visit to the Commission.

**27 FEBRUARY**
Seminar and Dialogue on Enhancing Competency with Institutions' Competent Persons at the Kuala Langat Community College, Selangor.

**2-6 MARCH**
Competency Examination – Electrical (Practical & Oral) – Categories B0 to B4.

**10-12 MARCH**
Competency Examination – Electrical (Practical & Oral) - Categories B0 to B4.

**17-18 MARCH**
Written Examination (Theory) for Wireman and Chargeman.

**10 FEBRUARY**
February 2009 Monthly Assembly.

**23-27 FEBRUARY**
Electrical (Practical & Oral) Competency Examination – Categories B0 to B4.

**24 MARCH**
Electrical Safety Briefing at SIRIM, Shah Alam, Selangor.

**26 MARCH**
Energy Managers Seminar conducted by the Commission and the Federation of Malaysian Manufacturers (FMM).

**14 APRIL**
Monthly Assembly for April 2009.

**22 APRIL**
Visit from TNB Service Workers Associations Union to the Commission.

**22 APRIL**
Commission and SIRIM Dialogue with MEADA.

**27-28 APRIL**
Regional Workshop on Transposition of the ASEAN Harmonised Electrical and Electronics Equipment Regulatory Regime (AHEEERR), Laos.

**27 APRIL-1 MAY**
Wireman and Chargeman Written (Theory) Examination Answer Papers Marking Workshop (Session II).

**29-30 APRIL**
7th JSC EEE Meeting in PRD Laos.

**7 MAY**
Electrical Safety Briefing at the Standards and Utlisation Seminar organised by KPDNHEP in Penang.

**20-24 APRIL**
Wireman and Chargeman Written (Theory) Examination Answer Papers Marking Workshop (Session I).

**23 APRIL**
Visit of YB Dato' Sri Peter Chin Fah Kui, Minister of Energy, Green Technology and Water and YB Puan Noriah binti Kasnon, Deputy Minister of Energy, Green Technology and Water to the Commission.

**2 MAY**
Labour Day 2009 unified assembly 2009 at Stadium Putra, Kompleks Sukan Negara, Bukit Jalil, Kuala Lumpur.

**19 MAY**
Energy Commission Meeting - No. 3/2009 in Putrajaya.

**19 MAY**
Visit to the Commission's Diamond Building site in Precinct 2, Putrajaya by Commission Members.

**20 MAY**
Electrical Safety Briefing at the Standards and Utilisation Seminar organised by KPDNHEP in Kedah.

**20 MAY**
Information Session for Professional and Industry Organisations / Associations by the Commission.

**21 MAY**
Electrical Safety Briefing during the Standards and Utilisation Seminar organised by KPDNHEP in Perlis.

**28-29 MAY**
13th APEC JAC EE Meeting in Singapore.

**3 JUNE**
Standards and Utilisation Seminar organised by KPDNKK at Batu Buruk Resort, Terengganu.

**17 JUNE**
Dialogue with TNB Negeri Sembilan and Malacca at TNB Negeri Sembilan Headquarters in Seremban.

**22JUNE**
Electrical Safety Briefing to Sarawak Head of Inspectors in Kuching, Sarawak.

**25 JUNE**
Electrical Safety Briefing at the Standards and Utilisation Seminar organised by KPDN HEP in Kuantan, Pahang.

**2 JULY**
Standards and Utilisation Seminar organised by KPDNKK at the Perak Darul Ridzuan Building, Perak.


**14 JULY**
Commission Members' Visit to the Sultan Ismail Power Station, Paka , Terengganu.

**14 JULY**
Commission Members' Visit to the PETRONAS Gas Berhad's Centralised Utilities Facilities (CUF) Complex, in Paka, Terengganu.

**16 JULY**
ASEAN ELENEX 2009 Launching Ceremony by YB Dato' Sri Peter Chin Fah Kui, Minister of Energy, Green Technology and Water at Kuala Lumpur Convention Centre.

## 6 JULY
The Commission was invited for a talk-show "Di Luar Lingkungan Bersama Syed Munawar" on the topic "Energy Crisis : What is Malaysia's Preparation?" represented by Ir. Ahmad Fauzi Bin Hasan, Chief Operating Officer.

## 7 JULY
Visit by Macquire Capital Securities to the Commission.

## 7 JULY
Electrical Safety Briefing organised by KPDNHEP at the Standards and Utilisation Seminar in Johor.

## 15-18 JULY
ASEAN ELENEX 2009 Exhibition at the Kuala Lumpur Convention Centre.

## 16 JULY
Launching of the Online Registration of Contractors (OLRC) System for the Negeri Sembilan and Melaka Regional Office and at the Melaka International Trade Centre (MITC), Ayer Keroh, Melaka

## 17 JULY
Meeting Session between YB Dato' Sri Peter Chin Fah Kui, Minister of Energy, Green Technology and Water with Agencies and Staff held at KeTTHA.

## 20-24 JULY
Competency Examination – Electrical (Practical & Oral) – Categories B0 to B4.

## 22 JULY
Information Session for Competent Engineers Registered with the Commission by Demand Side Management.

**7 AUGUST**
Dialogue Session with TNB Generation.

**10 AUGUST**
Electrical Safety Briefing to the Bumiputera Electrical Contractors Association (PERKEB) of Kelantan.

**10 AUGUST**
Utilities-Owned Law Compliant Electrical Installation Safety Programme, TNB Office, Kota Bharu, Kelantan.

**10-14 AUGUST**
Competency Examination – Electrical (Practical & Oral) – Categories B0 to B4.

**11 AUGUST**
IPRE Launching Ceremony at UNITEN.

**11-14 AUGUST**
Special Meeting and APRIS II Workshop in Manila, the Philippines.

**13-14 AUGUST**
Competency Examination – Electrical – Electrical Supervisors.

**14 AUGUST**
Competency Examination – Electrical - Electrical Services Engineers and Competent Electrical Engineers.

**28 JULY**
Visit to the Commission by Malaysian Technical Cooperation Programme (MTCP) – Professional Services Development Corporation Sdn. Bhd. (PSDC) for a briefing to the MTCP-PSDC foreign delegates Group C: Independent Power Producers.


**11 AUGUST**
Commissions Sponsorship to UNITEN with the establishment of Chair of Energy Economics and the appointment of Dr. Rajendra K. Pachauri as the inagural Chair holder.

**16 AUGUST**
FMM's Energy Manager's Course Briefing Session.

**20 AUGUST**
Monthly Assembly for August 2009.

**20-22 AUGUST**
Competency Examination – Electrical – Electrical Services Engineers and Competent Electrical Engineers.

**24-28 AUGUST**
Competency Examination – Electrical (Practical & Oral) – Categories B0 to B4.

**30 AUGUST**
Competency Examination – Electrical – Electrical Supervisors.

**31 AUGUST**
Competency Examination – Electrical – Electrical Services Engineers and Competent Electrical Engineers.

**1 SEPTEMBER**
Appointment of the Energy Commission's new Members:

1. Datuk Pg. Hassanel Bin Datuk Pg. Haji Mohd Tahir
2. Datuk (Dr.) Abdul Rahim Bin Haji Hashim
3. Dato' Ir. Aishah Binti Dato' Haji Abdul Rauf
4. Ir. Dr. Philip Tan Chee Lin

**1-4 SEPTEMBER**
Competency Examination – Electrical (Practical & Oral) – Categories B0 to B4.


**17-20 AUGUST**
Visit to California Fuel Cell Partnership and Energy Organisations at Sacramento and San Francisco, California.


**17-20 AUGUST**
Visit to California Fuel Cell Partnership and Energy Organisations at Sacramento and San Francisco, California.

**19 AUGUST**
Energy Consultative Panel Metting No. 1/2009 in Sime Darby Convention Centre.

30 SEPTEMBER
KeTTHA and its Agencies' Aidilfitri Celebration Event.

30 SEPTEMBER
KeTTHA and its Agencies' Aidilfitri Celebration Event.

8 OCTOBER
October 2009 Monthly Assembly and the Commission's Hari Raya event.

**8-11 SEPTEMBER**
Competency Examination – Electrical (Practical & Oral) – Categories B0 to B4.

**14-16 SEPTEMBER**
Competency Examination - Electrical (Practical & Oral) – Categories B0 to B4.

**11 OCTOBER**
Standards and Utilisation Seminar organised by KPDNKK in Labuan.

**12 OCTOBER**
Briefing and Dialogue with the Northern Region's Manufacturers and Importers of Electrical Equipment in Kepala Batas, Penang.

**13 OCTOBER**
Standards and Utilisation Seminar organised by KPDNKK in Kota Kinabalu.

**14 OCTOBER**
Competency Enhancement Seminar and Dialogue with the Industry's Competent Persons, in Johor Bahru, Johor.

**15 OCTOBER**
Competency Enhancement Seminar and Dialogue with Institutions' Competent Persons at the Kuala Langat Community College, Selangor.

**15 OCTOBER**
Electrical Safety Briefing to Institutions and Competent Persons, Consultants and installation owners in Kota Kinabalu, Sabah.

22 OCTOBER
Briefing on the Online Registration of Contractors (OLRC) to the Commission's Regional Offices staff involved in contractor registration applications.


26-27 OCTOBER
Working visit to Energy Market Authority during Commission's Management visit to Energy Organization in Singapore.

**19 OCTOBER**
Briefing and Dialogue with Central Region's Manufacturers and Importers of Electrical Equipment in Shah Alam, Selangor.

**20 OCTOBER**
Briefing and Dialogue with the Southern Region's Manufacturers and Importers of Electrical Equipment in Muar, Johor.

**21 OCTOBER**
Briefing Programme by the Commission on the Utilities-Owned Electrical Installation Safety Legal Requirements together with Sabah Electricity Sdn. Bhd. (SESB).

**29 OCTOBER**
Electrical Safety Briefing to Institutions and Competent Persons, Consultants and installation owners in Sandakan, Sabah.

**29 OCTOBER**
Competency Enhancement Seminar and Dialogue with the Industry's Competent Persons in Kota Kinabalu, Sabah.

**30 OCTOBER**
Competency Enhancement Seminar and Dialogue with Institutions' Competent Persons in Kota Kinabalu, Sabah.

**30 OCTOBER**
Electrical Safety Briefing to Institutions and Competent Persons, Consultants and installation owners in Semporna, Sabah.

### 4 NOVEMBER
Electrical Safety Briefing to Institutions and competent persons, consultants and installation owners in Semporna, Sabah.

### 10 NOVEMBER
Competency Enhancement Seminar and Dialogue with the Industry's Competent Persons in Sandakan, Sabah.

### 11 NOVEMBER
Competency Enhancement Seminar and Dialogue with Institutions' Competent Persons in Semporna, Sabah.

### 18 NOVEMBER
Briefing to industry players on Business Licensing Electronic Support System (BLESS).

### 25 NOVEMBER
Meeting and Dialogue between the Commission, TNB and the Tanah Merah District Council, Kelantan.

### 1 DECEMBER
Electrical Safety Briefing at the Standards and Utilisation Seminar organised by KPDNHEP in Shah Alam, Selangor.

### 3 DECEMBER
Electrical Safety Briefing at the Standards and Utilisation Seminar organised by KPDNHEP in Kuala Lumpur.


**10-12 NOVEMBER**
8th Joint Sectoral Committee for Electrical & Elektronic Equipment Meeting at the Renaissance Hotel, Kuala Lumpur.

**21-22 NOVEMBER**
Energy Efficiency Carnival at the Putra World Trade Centre (PWTC).

**26 NOVEMBER**
Launching of the International Greentech and Eco-Products Exhibition and Conference Malaysia (IGEM) at the Kuala Lumpur Convention Centre.

**3 DECEMBER**
Electrical Appliance Wiring Safety Campaign in conjunction with Consumer Programme with the Penghulu and Melaka State's Community Leaders.

**7 DECEMBER**
Electrical Safety Briefing at the Standards and Utilisation Seminar organised by KPDNHEP in Kota Bharu, Kelantan.

**10 DECEMBER**
Competency Enhancement Seminar and Dialogue with Institutions' Competent Persons in Kuala Terengganu, Terengganu.

**14 DECEMBER**
Electrical Safety Briefing at the Fire and Rescue Services Department, in Perai, Penang.

**14-16 DECEMBER**
Competency Examination – Electrical (Practical & Oral) – Categories B0 to B4.

**17 DECEMBER**
The Commission's Demand Side Management briefing at the Golden Chersonese Media Hall at Maju Junction, Kuala Lumpur.

**17 DECEMBER**
Competency Enhancement Seminar and Dialogue with the Industry's Competent Persons in Sintok, Kedah.

**21-22 DECEMBER**
Competency Examination – Electrical (Practical & Oral) – Categories B0 to B4.

**8 DECEMBER**
Appreciation Ceremony to appreciate four Commission members that finishes their tenure.

**8 DECEMBER**
Services Appreciation Ceremony in memory of Allahyarham Dato' Ir. Pian bin Sukro.

# Annual Financial Statements

Financial Statements for the Year
Ended 31 December 2009

# Balance sheet

as at 31 December 2009

| | Notes | 2009 RM | 2008 RM |
|---|---|---|---|
| **Property, Fittings and Equipment** | 3 | **80,220,577** | 26,934,512 |
| **Investments** | | **91,000** | 91,000 |
| **Current Assets** | | | |
| Other receivables | 4 | **281,339** | 190,504 |
| Cash and cash equivalents | 5 | **154,406,599** | 178,166,879 |
| | | **154,687,938** | 178,357,383 |
| **Current Liabilities** | | | |
| Other payables | | **5,450,511** | 2,814,990 |
| Tax payables | | **1,079,220** | 2,109,812 |
| | | **6,529,731** | 4,924,802 |
| **Net Current Assets** | | **148,158,207** | 173,432,581 |
| | | **228,469,784** | 200,458,093 |
| **Financed by:-** | | | |
| **Accumulated Funds** | 6 | **228,469,784** | 200,458,093 |

# Statement Of Income and Expenditure

for the year ended 31 December 2009

| | Notes | 2009 RM | 2008 RM |
|---|---|---|---|
| **Income** | | | |
| Fees and charges | | **60,400,640** | 54,963,023 |
| Interest income | | **3,874,161** | 5,430,985 |
| Other incomes | | **37,536** | 9,150 |
| | | **64,312,337** | 60,403,158 |
| **Less: Expenditure** | | | |
| Staff costs | 8 | **16,864,825** | 15,226,517 |
| Administrative costs | | **12,886,844** | 10,113,973 |
| Depreciation | 3 | **477,582** | 625,298 |
| Other operating expenses | | **4,964,341** | 6,829,790 |
| | | **35,193,592** | 32,795,578 |
| **Surplus Before Taxation** | | **29,118,745** | 27,607,580 |
| Taxation | 7 | **(1,107,054)** | (1,551,523) |
| **Surplus For The Year** | | **28,011,691** | 26,056,057 |

The Energy Commission has no profit and loss beside surplus of net income for the current financial year.

The notes from pages 89 to 95 form part of the financial statements.

# Statement Of Cash Flows

for the year ended 31 December 2009

| | 2009 RM | 2008 RM |
|---|---|---|
| **Cashflows From Operational Activities** | | |
| Surplus before taxation | **29,118,745** | 27,607,580 |
| Adjustment for: | | |
| Interest income | **(3,874,161)** | (5,430,985) |
| Depreciation | **477,582** | 625,298 |
| Gain on disposal of assets property, fittings and equipment | **(29,500)** | - |
| Operational surplus before change in working capital | **25,692,666** | 22,801,893 |
| Change in working capital: | | |
| Other receivables | **(90,835)** | (1,800) |
| Other payables | **2,635,521** | 1,698,915 |
| Cash generated from operating activities | **28,237,352** | 24,499,008 |
| Income tax paid | **(2,137,646)** | (676,981) |
| **Nett Cash Generated From Operating Activities** | **26,099,706** | 23,822,027 |
| Cashflow From Investment Activities | | |
| Purchase of property, fittings and equipment | **(53,763,647)** | (13,718,510) |
| Gain from disposal of property, fittings and equipment | **29,500** | - |
| Interest received | **3,874,161** | 5,430,985 |
| **Nett Cash Used In Investing Activities** | **(49,859,986)** | (8,287,525) |
| **Net increase/(decrease) in cash and cash equivalents** | **(23,760,280)** | 15,534,502 |
| **Cash and cash equivalents at beginning of year** | **178,166,879** | 162,632,377 |
| **Cash And Cash Equivalents At End Of Year** | **154,406,599** | 178,166,879 |
| **Cash and cash equivalents consist of:** | | |
| Cash and bank balances | **6,027,371** | 11,305,897 |
| Deposits with licensed banks | **148,379,228** | 166,860,982 |
| | **154,406,599** | 178,166,879 |

The notes from pages 89 to 95 form part of the financial statements.

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