EXCELLENCE RELIABILITY SENSE OF FAIRNESS AND FAIRPLAY

Suruhanjaya Tenaga

BuletinST

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From The Desk of CEO

Welcome to the inaugural issue of **BULETIN ST.**

BULETIN ST is intended to enable staff and clients of Suruhanjaya Tenaga (ST) to keep abreast with current developments and events in ST and the country's energy sector.

It is another communication channel of ST through which programmes, policies, practices and ideas, hopefully of interest and beneficial to stakeholders of ST, can be disseminated. In this respect, BULETIN ST is to complement the information sharing platforms of our website www.st.gov.my and our annual publications.

As the regulator of the energy industry, we hope Buletin ST will foster better understanding and collaboration among our staff, government officers, industry players and consumers towards achieving our goal of becoming more effective and efficient in our roles.

This inaugural issue contains articles on some of the major initiatives and programmes that ST has embarked on since last year to improve transparency, reliability, efficiency, safety and supply security in the energy sector. Hopefully, the articles will enhance awareness of the latest energy regulatory policies and good practices as well as facilitate their implementation among us.

We hope you find BULETIN ST useful and enlightening.

Thank you.

Datuk Ir. Ahmad Fauzi Bin Hasan
Chief Executive Officer, Energy Commission

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During the first quarter of 2012, Suruhanjaya Tenaga (ST) organised the National Energy Security Conference (NESC), intended to be a platform for key stakeholders in the country's energy sector to discuss challenges and potential solutions pertaining to the nation's energy security issues.

We have also launched the Malaysia Energy Information Hub (MEIH), a portal undertaken and managed by ST, with the primary objective of establishing a comprehensive national energy database to support the dissemination and distribution of energy statistics in Malaysia to local and international stakeholders and the general public.

Those initiatives well describe ST's pivotal contribution to the nation. Sharing of information, knowledge and views between key government and industry stakeholders are integral aspects in highlighting major industry challenges and prospects, as well as broad priorities and strategies related to the nation's energy sector. Most importantly, they have to be conducted constantly and effectively.

With these objectives in mind, ST welcomes new ideas and innovations, in addition to information and expertise exchange currently taking place with various organizations around the world, to assist us in our endeavours of realizing the fully-developed nation status by 2020.

TAN SRI DATUK DR. AHMAD TAJUDDIN BIN ALI
Chairman, Energy Commission

Congratulatory Message

Congratulations to Y. Bhg. Tan Sri Datuk Dr. Ahmad Tajuddin Ali, for the contract extension as Chairman of the Energy Commission beginning 1 April 2012 to 31 March 2014. Also, congratulations for the re-appointment of Datuk Ir. Ahmad Fauzi Hasan as Chief Executive Officer of the Energy Commission beginning 1 April 2012 to 31 March 2014, upon his contract expiry on 31 March 2012. May the Commission continue to strive well and succeed under their dynamic stewardship and leadership.

TRANSPARENCY & EFFICIENCY
IN MALAYSIA'S POWER SECTOR

Suruhanjaya Tenaga (ST) has carved further milestones in Malaysia's energy industry by introducing the International Competitive Bidding for the construction of new Combined Cycle Gas Turbine (CCGT) of 1000-1400MW in Prai as well as calling for selective bidding exercise among first generation Independent Power Producers (IPPs) and Tenaga Nasional Berhad's (TNB) ageing plants.

These are necessary steps undertaken by ST to cater for the increasing national demand expected by 2017. It is also in line with the government's efforts to further enhance transparency and efficiency in its deliverables.

The ongoing International Competitive Bidding will result in a new capacity to be installed in Prai using the latest gas turbines of significantly higher efficiency to optimize the use of gas and more environmentally friendly.

Upon completion, the newly developed gas turbines could surpass the 60% efficiency in combined cycle mode, marking another first for the country.

Thereafter, bidding for part of said capacity amongst existing first generation IPPs power plants and TNB old plants for refurbishment or re-powering will be implemented. The international competitive bidding for the new plant has been well received by interested parties both locally and internationally. The revised entry criteria imposed by the government has encouraged new players to participate, on the condition that they comply with all the submission requirements outlined in the Request For Qualification (RFQ) documents.

For the first time, the government is allowing foreign ownership of up to 49% in the project company.

As at 20 February 2012, ST received 18 submissions for pre-qualification process. All submissions are subjected to stringent evaluation before bidders are shortlisted.

Reduced Costs, Better Capacity

Similarly, the first generation IPPs are also expected to submit their bids during the same abovementioned period.

The pre-condition for the incumbent generators to participate in this bidding exercise is an undertaking by the first generation IPPs to reduce their rates in the existing Power Producers Agreement (PPA) over the remaining period (or at least 4 years) of the contract. Successful bidder will be awarded with a new PPA for an additional 10 years, to be signed with TNB upon expiry of the existing one.

Invitations for the IPPs and TNB to purchase the Request For Proposal (RFP) documents have been issued and the closing date is by end July 2012. The government is then expected to announce the successful IPPs by September 2012 followed by the successful bidder for Prai project.

How The Process Came About

Evolution of Malaysia's power supply structure has undergone a series of change over the last 15 years to better address the energy challenges faced by the sector. Formation of Malaysian Electricity Supply Industry (MESI) is geared towards an open and competitive electricity trading market via the wholesale market model in 1992, particularly with the introduction of IPPs.

In 2006, the Comprehensive National Energy Policy/ New Structure of MESI was tabled by the government to further enhance the overall performance of the electricity industry.

With the existence of Independent Power Producers (IPPs) in the market, the power sector has been transformed from a fully integrated monopoly to 'multiple generation, single buyer' model.

In 2016, the first generation IPPs Power Purchase Agreement (PPA) will expire and Suruhanjaya Tenaga (ST) believes the time is ripe to embark on a capacity building exercise to address the expected shortfall in post 2016, where a total of 4500mw power capacity is required in catering the increasing demand of Malaysia's progress.

This coincides with the demand of Combined Cycle Gas Turbine (CCGT) of 1000-1400mw to complement the existing Sultan Ismail power station owned by Tenaga Nasional Berhad (TNB), built in 1986. The latter is still considered the largest combined cycle plant in the Asian region, with an overall fuel efficiency of approximately 40% compared to conventional fuel-based power plants of the same capacity.

National Energy Security Conference 2012: CLOSING THE ENERGY SUPPLY-DEMAND GAP

Recognizing the challenges and potential prospects of energy and fuel supply/demand of the country, Suruhanjaya Tenaga (ST) organized the first National Energy Security Conference (NESC) on 28 February 2012, attended by key players in the local energy sector.

The one-day conference with the theme, *'Closing the Energy Supply – Demand Gap'* has brought together government leaders and experts from the industry as well as 14 speakers from reputable organizations in Malaysia.

Mr. Nobuo Tanaka, former Executive Director of the International Energy Agency and Global Associate for Energy Security and Sustainability, Institute of Energy Economics Japan, delivered the keynote address titled *'Global Energy Outlook-Energy Security for the 21st century'.*

In addition to matters pertaining to the development of Malaysia's energy sector, the panel discussed challenges and potential solutions which will greatly assist the government in addressing the nation's energy security issues.

In his speech, Dato' Seri Peter Chin Fah Kui, Minister of Energy, Green Technology and Water reiterated that with the energy security becoming a major issue to countries all over the world, it is not surprising that many countries have started to explore other alternative fuels for power generation. In this aspect, Malaysia is fortunate to have been endowed with oil and gas resources to support our national economic development.

The total gas consumption in the Peninsula has risen by 13 percent over the last decade and the bulk comes from the non-power sector that has been driven by the heavily subsidized gas pricing. This has strained Malaysia's supply infrastructure causing frequent supply disruptions.

"In addressing this gas supply shortfall issue, government has decided that as a near to mid-term solution, LNG regasification terminals will be constructed by PETRONAS in Melaka in 2012 and in Johor in 2015. Open access arrangement will be put in place to enable more industry players to bring gas into the country through these import terminals" he said.

Malaysia's final energy demand is projected to grow at 3.4 percent per year, reaching 92.9 million tonnes of oil equivalent in 2030, which is more than two times the 2010 level. This leads to the next big question for Malaysia for how best to allocate scarce energy resources between the competing users.

Hence, Malaysia is facing major energy challenges as we are quickly moving towards becoming a country that has to rely on imports to meet our domestic energy needs. Our energy security is a critical issue to be addressed urgently in order to sustain our rapid economic growth through 2020 and beyond.

Moving forward, a National Energy Efficiency Policy and Master Plan will be submitted for the Cabinet's approval soon. And to ensure successful implementation of the Master Plan, the government is in the process of formulating the Energy Efficiency and Conservation Act and the Minimum Energy Performance Standards regulation.

SURUHANJAYA TENAGA **collaborates with CEC, USA in enhancing Energy Regulation**

In its efforts to better address the energy challenges of Malaysia's Economic Transformation Programme, Suruhanjaya Tenaga (ST) has signed a Memorandum of Understanding (MoU) with the California Energy Resources Conservation and Development Commission (CEC), USA on 17 May 2012.

ST was represented by its CEO, Datuk Ir. Ahmad Fauzi Hasan while Commissioner Karen Douglas signed on behalf of CEC.

The MoU will provide a framework for cooperation and capacity building in such areas as energy efficiency and demand-side management, integrated resource planning, electricity sector governance, market development, and regulatory policies for renewable energy.

The Chairman of ST, Tan Sri Datuk Dr. Ahmad Tajuddin Ali, who witnessed the signing said; "The areas of cooperation that are covered by the MOU include information sharing, exchange of experts and capacity building programmes on regulatory best practices to deal with emerging energy supply issues".

"With a world-class regulatory organization like CEC as our partner, we will be able to strengthen our capabilities in critical areas such as energy analysis, planning and efficiency regulation" he added.

CEC is California's primary energy policy and planning agency. Created in 1974 and headquartered in Sacramento, the CEC is responsible for activities that include forecasting future energy needs, promoting energy efficiency through appliance and building standards, and supporting renewable energy technologies. The Commission is a division of the California Natural Resources Agency.

Also present to witness the ceremony was CEC Executive Director, Rob Oglesby.

> "The areas of cooperation that are covered by the MOU include information sharing, exchange of experts and capacity building programmes on regulatory best practices to deal with emerging energy supply issues". Tan Sri Datuk Dr. Ahmad Tajuddin Ali

Malaysia Energy Information Hub **(MEIH)**

Malaysia Energy Information Hub (MEIH) is a portal undertaken and managed by Suruhanjaya Tenaga (ST) and in time, will be a comprehensive national energy database with the primary objective to support the dissemination and distribution of energy statistics in Malaysia to local and international stakeholders and the general public.

MEIH also aims to help strengthen the Commission's role in responding to enquiries and requests from the public and private sectors regarding the country's energy data. The Hub collects data and information relevant to energy planning and energy pricing which are then deposited in the energy database system for easy reference.

It also performs analysis for energy supply mix, efficiency of electricity generation, refining efficiency, overall energy transformation efficiency and energy intensity which could contribute to further policy making purposes to strengthen the Commission's position in regulating the energy sector.

Other functions and benefits of MEIH include:

- To establish a comprehensive national energy database to provide timely energy statistics and support for National Energy Planning
- To help ST achieve its organisational objectives and to assist ST in building the necessary capabilities as to become a "one-stop energy statistics center" responding to enquiries and requests from the public and private sectors regarding the country's energy data
- To develop, maintain and update a computerised information system including an energy databank
- To establish a mechanism which ensures all data and information relevant to energy planning and energy indicators are deposited in the energy database system
- To co-ordinate, compile and assist in the publication of energy statistics and to undertake appropriate studies on its own or in collaboration with other energy centers
- To develop in-house capabilities/expertise in energy forecast and modeling system for the short and long-term energy outlook
- To undertake energy end-use forecasting, energy demand/supply planning and development and feasibility studies to assist both public and private sector organisations in formulating effective energy strategies and project implementation.

For further information, kindly visit

meih.st.gov.my

STANDARD PRESTASI PERKHIDMATAN:

JAMINAN ST UNTUK KUALITI PERKHIDMATAN UTILITI

Mengambil kira perkembangan semasa, di samping memastikan penambahbaikkan yang konsisten dalam kualiti servis Tenaga Nasional Berhad (TNB) kepada pengguna, Suruhanjaya Tenaga (ST) telah menggubal Standard Prestasi Perkhidmatan Bekalan Elektrik TNB yang mula berkuatkuasa sejak 1 Januari 2012. Ianya terbahagi kepada:

Guaranteed Service Levels (GSL)

Ini merupakan tahap prestasi yang ditetapkan oleh ST bagi memastikan kualiti bekalan elektrik oleh TNB, di mana bagi kegagalan mematuhinya, penalti dalam bentuk rebat akan diberi kepada pengguna. Ianya terbahagi kepada:

(a) GSL1 – jumlah gangguan tidak dirancang yang dialami pengguna.
(b) GSL2 – masa yang diambil untuk pemulihan semula bekalan elektrik
(c) GSL3 – masa yang diambil untuk menjalankan penyambungan perkhidmatan yang memerlukan pemasangan kabel voltan rendah setelah premis terbabit bersedia untuk menerima pemasangan tersebut, dan bergantung kepada kelulusan pihak-pihak yang berkenaan
(d) GSL4 – masa yang diambil untuk menyalurkan bekalan elektrik yang baru kepada pengguna voltan rendah individu domestik setelah membayar deposit (tarikh penyambungan bekalan haruslah

dipersetujui bersama di antara pengguna dan TNB dengan syarat adanya akses)

(e) GSL5 – pemotongan bekalan bergantung kepada peraturan dan prosedur pemotongan.

Minimum Service Levels (MSL)

MSL merupakan tahap prestasi minimum yang ditetapkan bagi mengukur kecekapan TNB dalam memberikan perkhidmatan kepada pengguna. Ia merupakan tahap pengukuran kepada kecekapan TNB untuk membekalkan elektrik di bawah Akta Bekalan Elektrik 1990. Tiga aspek perkhidmatan yang telah diberi penekanan dalam MSL adalah :

i. **Keberterusan bekalan** – tempoh notis untuk gangguan berjadual untuk bekalan elektrik juga untuk masa yang diambil untuk memaklumkan kepada pelanggan yang melaporkan mengenai terputusnya bekalan elektrik.
ii. **Kualiti bekalan** – tempoh dan masa yang diambil untuk menyiasat dan memperbaiki sebarang kerosakan voltage.
iii. **Pemberian bekalan** - masa yang diambil untuk menyediakan bekalan dan masa yang diambil untuk menjawab kepada pengguna
iv. **Perhubungan pengguna** – Masa yang diambil untuk menjawab aduan.
v. **Meter** – Masa yang diambil setelah mendapat aduan daripada pengguna untuk menyemak meter TNB.

Penguatkuasaan penalti bagi GSL1 dan GSL2 akan dimulakan setelah sistem *Corporate Geospatial Information System (CGIS)* yang sedang dibangunkan oleh TNB siap pada tahun 2015 bagi Lembah Klang dan pada tahun 2020 untuk seluruh negara.

CGIS adalah pangkalan data Medium Voltage (MV) dan Low Voltage (LV) lengkap yang dapat menyediakan maklumat bagi memudahkan TNB untuk menyiasat jumlah kerosakan dan pengguna yang terlibat dengan gangguan bekalan elektrik.

Penguatkuasaan penalti GSL ini telah dimulakan dengan GSL3, GSL4 dan GSL5 pada 1 Januari 2012, di mana ianya tidak memerlukan apa-apa perubahan besar atau tambahan kepada sistem sedia ada.

Penguatkuasaan Standard Prestasi Perkhidmatan Bekalan Elektrik TNB ini diharap akan dapat meningkatkan perkhidmatan TNB dan menjamin kepentingan pengguna di samping meningkatkan prestasi perkhidmatan pembekalan elektrik di Semenanjung.

PEMASANGAN PAGAR ELEKTRIK
MENGIKUT PROSEDUR YANG DITETAPKAN OLEH SURUHANJAYA TENAGA

Pemasangan pagar elektrik lazimnya bertujuan untuk menghalang sesuatu kawasan persendirian, kawasan pertanian dan perladangan, kawasan di bawah kawalan keselamatan seperti kem tentera, premis-premis milik utiliti tenaga, utiliti air dan juga premis-premis lain daripada dicerobohi oleh manusia atau haiwan. Selain daripada itu pagar elektrik juga dipasang di pusat-pusat tahanan sebagai langkah tambahan bagi mengelakkan tahanan melarikan diri.

Pada tahun 2008, Suruhanjaya Tenaga (ST) telah mengeluarkan arahan melalui surat pekeliling bilangan 3/2008 bertajuk "Peraturan Pemasangan Pagar Elektrik". Arahan pekeliling ini adalah untuk menguatkuasakan kaedah pemasangan pagar elektrik mengikut standard MS IEC 60335-2-76:2007. Pekeliling ini mengandungi peraturan-peraturan dan prosedur-prosedur yang perlu dipatuhi untuk mendapatkan kelulusan untuk pemasangan pagar elektrik.

Selaras dengan kehendak Akta Bekalan Elektrik 1990 dan Peraturan-Peraturan Elektrik 1994, setiap pepasangan hendaklah dikawal selia dan diselenggara oleh pemilik atau pengurusannya supaya sentiasa berada dalam keadaan berfungsi dan selamat.

Pemantauan Pemasangan

Berdasarkan statistik sehingga Mei 2012, sebanyak 72 kelulusan pemasangan pagar elektrik telah dikeluarkan, seperti berikut:

Kelulusan Pemasangan Pagar Elektrik	
Pejabat Kawasan	**Bilangan**
Negeri Selangor, WP K.Lumpur & Putrajaya	53
Negeri Perak	2
Negeri Pulau Pinang, Kedah & Perlis	2
Negeri Sembilan & Melaka	2
Negeri Johor	3
Negeri Pahang	1
Negeri Kelantan & Terengganu	8
Pantai Barat Sabah (Kota Kinabalu)	0
Pantai Timur Sabah (Sandakan)	1
Jumlah	**72**

Bagi memastikan pepasangan pagar keselamatan dibuat selaras dengan pekeliling yang dikeluarkan, ST komited memberi penjelasan dan membuat pemantauan teknikal berkaitan keselamatan pagar elektrik. Lawatan serta mesyuarat pepasangan pagar elektrik sama ada secara dalaman atau dengan agensi-agensi luar seperti Kementerian Dalam Negeri juga kerap diadakan.

Permohonan pemasangan pagar keselamatan boleh dibuat melalui pejabat kawasan ST yang berdekatan.

Kelulusan Pemasangan

Sebagai garis panduan, pemilik premis atau pengusaha hendaklah mematuhi panduan **Pemasangan Pagar Elektrik Mengikut Prosedur Yang Ditetapkan Oleh Suruhanjaya Tenaga.** Pemasangan pagar elektrik yang telah siap perlu diselia dan diuji oleh orang kompeten yang bertanggungjawab. Untuk tujuan itu Borang G (Penyeliaan dan Penyiapan) dan Borang H (Pengujian) seperti kehendak Peraturan 14, Peraturan-Peraturan Elektrik 1994 perlu diisi oleh orang kompeten yang bertanggung jawab untuk dikemukakan kepada ST.

Lawatan pemeriksaan oleh pegawai ST ke premis pemasangan akan dibuat setelah kerja-kerja pemasangan siap. Lawatan tersebut disertai bersama kontraktor elektrik, Penyelia Elektrik/Jurutera Elektrik Kompeten yang dipertanggungjawabkan dan pemunya/wakil pepasangan perlu hadir semasa pemeriksaan.

Setelah ST berpuas hati ke atas pematuhan pemasangan pagar elektrik tersebut, satu surat kelulusan bertulis akan dikeluarkan kepada pemunya. Setelah memperolehi surat kelulusan dari pejabat ST, pemunya boleh memulakan pengoperasian pagar elektrik tersebut.

Pemunya pepasangan pagar elektrik juga hendaklah melantik orang kompeten sekurang-kurangnya Penyelia Elektrik untuk memeriksa pepasangan mereka sekurang-kurangnya sekali setiap 2 tahun bagi memastikan ianya sentiasa dalam keadaan selamat. Laporan pemeriksaan ke atasnya perlu dihantar ke Suruhanjaya Tenaga.

Kelulusan Pemasangan pagar elektrik perlu memenuhi kriteria berikut:-

a. Perlu mendapatkan sijil dan laporan ujian bagi *energizer* yang digunakan dalam sistem pemasangan dari makmal-makmal di bawah *IEC CB Scheme* atau setara yang diiktiraf oleh Suruhanjaya Tenaga.

b. Spesifikasi hendaklah mengikut klausa 22.108 dan 22.109, standard MS 60335-2-76.

c. Struktur *physical barrier* tambahan perlu dipasang di luar premis. Jika masalah keluasan tanah yang tidak mencukupi, disarankan pemasangan *physical barrier* (jenis *chain link fence*) diganti dengan *solid physical barrier* mengikut kehendak klausa CC.2, Annex CC, MS IEC 60335-2-76.

d. Bagi mengelakkan seseorang dari tersentuh secara tidak sengaja pada *pulsed conductors* dalam sistem pemasangan pagar elektrik, *physical barrier* tambahan dari sebelah dalam premis hendaklah dipasang di sepanjang struktur pagar elektrik tersebut. Pemasangan ini adalah mematuhi kehendak klausa CC.1, Annex CC, MS IEC 60335-2-76

e. Perlu ada jarak pemisah *(physical barrier)* tidak kurang 2.5m antara 2 pagar elektrik tanpa salut yang dibekalkan oleh *energizer* yang berasingan.

f. Perlu sediakan lampu dalam panel *energizer* untuk tujuan senggaraan.

g. Perlu ada alat pengukur tenaga terhad *(limited energy)* bagi pagar elektrik dalam unit Joule. Pemunya hendaklah diberi taklimat mengenai penggunaan alat pengukur tersebut bagi kerja-kerja senggaraan.

h. Perlu diadakan *earth chamber* bagi alat perlindungan kilat untuk tujuan pemeriksaan dan senggaraan.

Penerbitan Buku Panduan

Suruhanjaya Tenaga telah menerbitkan buku panduan **Pemasangan Pagar Elektrik Mengikut Prosedur Yang Ditetapkan Oleh Suruhanjaya Tenaga** sebagai satu panduan kepada pemilik premis, pengusaha dan syarikat pemasangan pagar keselamatan. Ianya boleh diperolehi dari ibu pejabat dan pejabat-pejabat kawasan ST atau dimuat turun melalui laman sesawang www.st.gov.my.

Buku Panduan Pemasangan Pagar Elektrik Mengikut Prosedur Yang Ditetapkan Oleh Suruhanjaya Tenaga

AKTIVITI PENGUATKUASAAN ST MELINDUNGI KEPENTINGAN PENGGUNA DAN PEMBEKAL ELEKTRIK

Untuk melindungi kepentingan pengguna dan pembekal elektrik, tindakan penguatkuasaan yang dibuat oleh ST merangkumi rampasan, pengkompaunan dan pendakwaan kepada mana-mana orang, premis, pengarah-pengarah serta syarikat yang didapati gagal mematuhi peruntukan Akta Bekalan Elektrik 1990 dan Akta Bekalan Gas 1993.

Keberkesanan aktiviti penguatkuasaan Suruhanjaya Tenaga (ST) dapat dilihat di mana lebih 24,000 kes dilaporkan berkenaan dengan pengusikan meter yang meliputi pengguna kuasa besar, rumah kediaman dan premis komersil telah dapat dibenteras. Daripada kes-kes ini, hasil kerugian pihak utiliti dianggarkan sebanyak RM200 juta. Kerugian hasil akibat daripada penggunaan elektrik dengan curang telah memberi impak kepada pihak utiliti dalam usahanya untuk mempertingkatkan infrastruktur yang bertujuan untuk meningkatkan kualiti bekalan yang dapat memberi faedah kepada pengguna tanpa sebarang gangguan.

Bagi kesalahan mengambil tenaga atau mengguna tenaga dengan curang, mengikut Seksyen 37 Sub(3) di bawah Akta Bekalan Elektrik 1990, pesalah boleh didenda sehingga RM100,000.00 jika disabitkan kesalahan dan penjara selama tempoh tidak melebihi tiga tahun atau kedua-duanya.

Fokus Penguatkuasaan Dan Penyiasatan

Bagi memperbaiki pencapaian Penguatkuasaan dan Penyiasatan ST, beberapa aspek penguatkuasaan dan penyiasatan yang diutamakan termasuklah:

a) Kemalangan Elektrik

i) meningkatkan kesedaran keselamatan di kalangan semua pihak yang terlibat di dalam industri elektrik.

ii) memendekkan jangkamasa melengkapkan kertas siasatan kemalangan elektrik dan meningkatkan kualiti kertas siasatan.

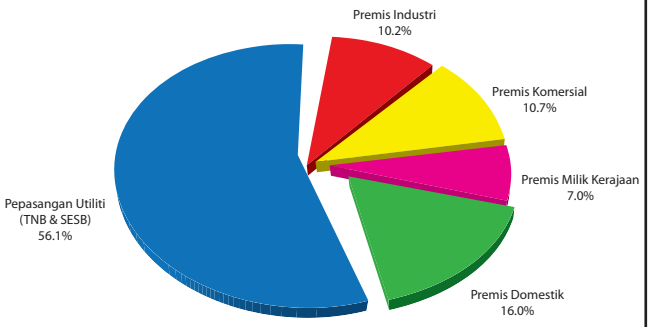
iii) menguatkuasakan secara lebih tegas kes-kes kompaun sebagai langkah pencegahan dan kesedaran.

iv) menguatkuasakan secara lebih efektif cadangan penggantungan perakuan kekompetenan sekiranya pemegangnya didapati melanggar peruntukan perundangan, agar dapat mencegah kesalahan secara serius oleh orang kompeten.

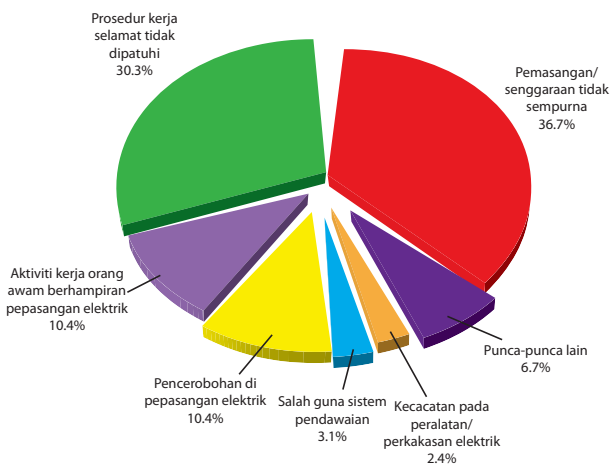
b) Kelengkapan Elektrik

i) meningkatkan pemantauan dan mengeluarkan notis ke atas premis-premis pengilang, pengimpot dan penjual kelengkapan elektrik yang gagal mendapatkan kelulusan atau melabelkan kelengkapan elektrik.

Lokasi Berlaku Kemalangan Elektrik (2002 - 2011)



Punca Kemalangan Elektrik 2002-2011



ii) menguatkuasakan secara lebih tegas kes-kes kompaun sebagai langkah pencegahan dan kesedaran.

iii) menguatkuasakan secara lebih efektif cadangan supaya perakuan kelulusan dibatalkan sekiranya pemegangnya didapati melanggar peruntukan perundangan.

c) Pepasangan Elektrik

i) meningkatkan pemantauan dan mengeluarkan notis supaya pemilik atau pengurusan pepasangan mendaftar atau memperbaharui perakuan pepasangan serta mendapatkan lesen awam untuk aktiviti membekalkan elektrik.

ii) menguatkuasakan secara lebih tegas kes-kes kompaun atau pendakwaan sebagai langkah pencegahan dan kesedaran.

d) Penggunaan Elektrik Secara Curang

i) meningkatkan aktiviti penguatkuasaan ke atas kes-kes penggunaan elektrik dengan curang dan mengambil tindakan mahkamah dengan lebih berkesan.

ii) bekerjasama dengan pemegang lesen dengan lebih rapat dalam melaksanakan tindakan di bawah Seksyen 38 Akta Bekalan Elektrik 1990 dan mengambil tindakan mahkamah oleh pemegang lesen bagi mendapatkan kembali kerugian hasil dari kes-kes penggunaan elektrik secara curang.

e) Kawalan Kekompetenan

i) meningkatkan kesedaran kepada pemilik dan pengurusan pepasangan untuk menyediakan orang kompeten semasa mengendalikan kerja-kerja di pepasangan.

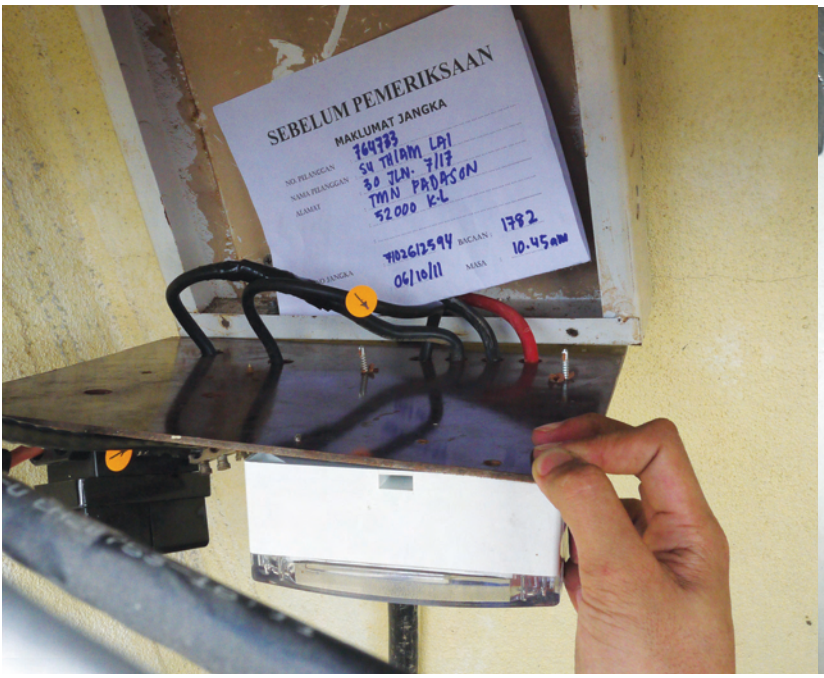
ii) menguatkuasakan secara lebih efektif cadangan supaya perakuan kekompetenan digantung sekiranya pemegangnya didapati melanggar peruntukan perundangan.

Misi Suruhanjaya Tenaga dalam skop penguatkuasaan adalah untuk mengurangkan kesalahan-kesalahan yang mengganggu pembekalan elektrik dan membahayakan pengguna dan memupuk budaya untuk memastikan kelengkapan elektrik yang dibeli mempunyai logo ST-SIRIM.

Suruhanjaya Tenaga mengalu-alukan kerjasama orang ramai untuk memaklumkan sebarang aktiviti yang mencurigakan berkaitan isu-isu yang dikenal pasti sebagai kecurian elektrik dan penjualan kelengkapan elektrik yang tidak selamat bagi mengelakkan implikasi-implikasi yang telah disebutkan. ST juga memandang serius kesalahan-kesalahan tersebut demi keselamatan pengguna.

ST juga turut memantau isu-isu meter elektrik dan menangani kes-kes aduan daripada pengguna mengenai kenaikan bil bulanan, yang kenaikan bil adalah berpunca daripada program pertukaran meter oleh TNB dan kes-kes pengusikan meter.

Beberapa tindakan segera dan jitu untuk mengatasi masalah berikut telah diambil, iaitu dengan memantau pihak utiliti dalam program penukaran meter, membuat *random site testing,* menjalankan ujian kejituan meter ke atas aduan yang diterima dan menjalankan siasatan dengan membuat lawatan tapak ke premis pengadu untuk menyelesaikan aduan terbabit.



LED : LIGHTING THE FUTURE

Light-emitting diodes (LED) are solid-state devices that convert electrical energy directly into light of a single color. LED do not waste energy in the form of non-light producing because they employ 'cold' light generation technology, in which most of the energy is delivered in the visible spectrum. It could offer long service life and high energy efficiency, although at this juncture, initial costs are higher than those of fluorescent and incandescent light.

LED offer a variety of advantages compared to conventional lighting, such as:

Long-lasting
LED light can last up to 50,000 hours or 10 times as long as compact fluorescents, and far longer than the conventional incandescent.

Durability
LED are filament-free, solid and robust. Thus, they are not easily damaged under the same circumstances where regular incandescent bulbs would.

Environmentally Friendly
No mercury. More environmental friendly.

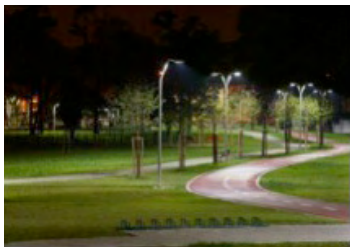
Cold Temperature Operation
Cold temperature is one of the challenges of fluorescent lights. On the other hand, LED light output and efficiency increase as operating temperature drops, making LED a natural choice for refrigerators, freezer cases and cold storage facilities.

More efficient
LED light produces more light per watt compared to incandescent light, a feature that would be useful in battery powered devices. In addition, LED light can emit an intended color without the use of color filters employed by traditional lighting methods.

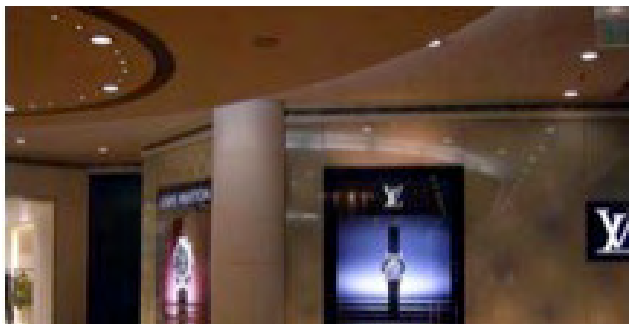
Light Output	LEDs	CFLs	Incandescents
Lumens	Watts		
450	4 - 5	8 - 12	40
300 - 900	6 - 8	13 - 18	60
1100 - 1300	9 -13	18 - 22	75 - 100
1600 -1800	16 - 20	23 - 30	100
2600 - 2800	25 - 28	30 - 35	150

Equivalent wattages and light output of Incandescent, CFL and LED Lights

LED lights are fast becoming the light source of choice for many general lighting applications, such as architectural lighting, down lights, freezer case lighting and retail display lighting.







General Lighting Terms Used

- **Illumination**
  The distribution of light on a horizontal surface.
- **Lumen**
  A measurement of light emitted by a lamp
- **Efficacy**
  The ratio of light produced to energy consumed. It is measured as the number of lumens produced divided by the rate of electricity consumption (lumens per watt)
- **Color Rendering Index (CRI)**
  The Color Rendering Index (CRI) is a 1–100 scale that measures a light source's ability to render colors the same way sunlight does

RECOGNITION
For Energy Industry Players

Seven organizations have been honoured with Energy Industry Awards for three categories during an auspicious ceremony held on 11 October 2011, in conjunction with Suruhanjaya Tenaga's (ST) 10th year anniversary celebration.

The awards serve as recognition for individuals, companies and institutions that have achieved excellence in energy-related activities which have contributed to the development of the country's energy industry.

It is also to promote and encourage best practices and initiatives for the industry's development.

Institut Kemahiran Latihan MARA Lumut, TNB Integrated Learning Solution (ILSAS) and Gas Technology Centre, Universiti Teknologi Mara (UTM) bagged the Training Institution Excellence Awards.

Contractor Excellence Awards were given to Misi Setia Oil & Gas Sdn Bhd, Sulong Engineering Sdn Bhd and P.J. Indah Sdn Bhd for their innovations and immaculate services. Silverstone Berhad walked away as the sole winner of Energy Efficiency Management Excellence Award.

Tan Sri Dato' Sri (Dr.) Leo Moggie was the recipient of the Outstanding Personality Award for his leadership, dedication and massive contribution to the nation's energy industry.

In his message, Dato' Sri Peter Chin Fah Kui, Minister of Energy, Green Technology and Water expressed hope that the Energy Industry Awards will be an encouragement for industry players to strive for excellence in their works.

Earlier during the day, ST hosted the inaugural International Energy Regulatory Forum with the theme *'Effective Regulation for a Sustainable Energy Industry'*. The key objective was to provide a platform for energy regulators and other stakeholders to interact and share experiences and ideas to promote best practices in the energy sector.

The forum was attended by 150 participants while 11 distinguished speakers from ASEAN energy regulators and ASIA region presented papers related to the industry structure and reform, fuel security and energy resources.

MALAM PENGHARGAAN
Suruhanjaya Tenaga 2012

> **"Untuk berubah ke arah kecemerlangan, terlebih dahulu, pemikiran dan perbuatan kita juga haruslah berubah. Sekiranya kita terlalu leka dan selesa dengan tahap yang ada sekarang, ST pada tahun 2021 kelak tidak akan banyak berbeza dengan ST pada tahun 2011. Sekiranya ini berlaku, maka kita haruslah menyalahkan diri sendiri kerana gagal berubah"**
>
> *(Tan Sri Dr Ahmad Tajuddin Ali,* ***Pengerusi ST****)*

Sebagai menghargai khidmat dan dedikasi kakitangan di samping menjana transformasi dalam Suruhanjaya Tenaga (ST) dari aspek kualiti kerja dan servis pelanggan, ST telah mengenal pasti seramai 30 penerima Anugerah Khidmat Cemerlang untuk tahun 2011.

Barisan kakitangan tersebut telah menunjukkan komitmen tinggi dan memberikan sumbangan yang berkualiti dalam melaksanakan tugasan harian mereka di ST.

Mereka kemudiannya diraikan pada Malam Penghargaan Suruhanjaya Tenaga yang telah diadakan pada 17 Februari 2012, yang mana turut dihadiri oleh Menteri dan Timbalan Menteri Tenaga, Teknologi Hijau dan Air.

Empat kakitangan yang akan bersara atau tamat perkhidmatan juga telah diraikan pada malam tersebut, terdiri dari Mariah Idris, Junaidah Mohd Noor, Ramli Hashim dan Mohd Halim Mohd Amin.

Dalam ucapan-ucapan ringkas mereka, masing-masing telah mengimbau kembali kenangan dan pengajaran-pengajaran berharga sewaktu bekerja di ST. Namun apa yang pasti, setiap mereka menyatakan syukur yang tidak terhingga kerana berpeluang menabur bakti dan kudrat demi memajukan ST sehingga ke tahap sekarang.

Legasi yang ditinggalkan akan diteruskan sejajar dengan perubahan dan kehendak masa.

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Suruhanjaya Tenaga

MEMASTIKAN KEBERTERUSAN TENAGA NEGARA




Ke arah pengawalseliaan yang lebih berkesan

Suruhanjaya Tenaga berazam untuk mengimbangi keperluan pengguna dan pembekal tenaga bagi memastikan pembekalan yang selamat dan berdaya harap pada harga yang berpatutan, melindungi kepentingan awam dan menggalakkan pembangunan ekonomi dan pasaran yang kompetitif dalam persekitaran yang lestari.

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