

JABATAN PENGURUSAN TENAGA DAN  
PEMBANGUNAN INDUSTRI

UNIT PENGURUSAN TENAGA

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**EFFICIENT MANAGEMENT OF ELECTRICAL ENERGY  
REGULATIONS 2008  
ENERGY MANAGER'S ROLES  
AND  
FUNCTIONS**

# PRESENTATION OUTLINE

1. Introduction
2. Functions.
3. Duties, Responsibilities & Initiatives to promote and regulate Energy Efficiency.
4. Efficient Management of Electrical Energy (EMEER) 2008
5. Conditions For The Registration Of ESCOs With The Energy Commission For Energy Performance Contracting (EPC) Works In Government Buildings - Guidelines For Registration
6. Improving Electrical Equipment Energy Efficiency Through Energy Rating / Labeling And Rebate Schemes
7. Capacity Building of Industry Players

# 1. INTRODUCTION

## ENERGY COMMISSION ACT 2001

- To promote efficiency, economy and safety in the generation, production, transmission, distribution supply and use of electricity
- To promote the use of renewable energy and the conservation of non-renewable energy

## ELECTRICITY SUPPLY ACT 1990

- To promote the efficient use of electricity Efficient Use of Electricity
- To determine the standards, specifications, practices and measures for the efficient use of electricity.
- Installation to meet requirements in respect of the efficient use of electricity.
- Equipment to meet requirements in respect of the efficient use of electricity



# Legal And Regulatory Framework

## Acts of Parliament

1. **Energy Commission Act 2001**
2. **Electricity Supply Act, 1990**

## Regulations – Power of the Minister to make regulations

3. **Electricity Regulations, 1994**
4. **Licensee Supply Regulations, 1990**
5. **Electricity Supply (Exemption) Notification 1994**
6. **Efficient Management Of Electrical Energy Regulations 2008**

## Licences – Issued by Energy Commission and approved by Minister

7. **Licences issued to generators, distributors and suppliers**

## Licence Conditions

## Industry Codes and guidelines – Issued By Energy Commission

9. **Grid Code, Distribution Code, Guidelines provide guidance for industry**

## Agreements – Between Industry Players

10. **Power Purchase Agreements**
11. **Fuel Supply Agreements**

- Demand Side Management Unit is one of the unit in Energy Management & Industry Development Department.
- The Unit was establish to promote and regulate the energy efficiency (electrical) in Malaysia.

## 2. FUNCTION

- The function of the Demand Side Management unit is to reduce electricity use through activities or programs that promote and regulate the electrical energy efficiency or conservation. These efforts are:
  - Promote energy efficiency programs and enforcement of regulation (EMEER 2008).
  - Promote and regulate (via MEPS) the purchase of energy-efficient ENERGY STAR® products
  - Encourage the transition from incandescent lighting to more efficient compact fluorescent lighting
  - Promote energy awareness and education
  - Promote high efficiency building practices.

## 3. DUTIES AND RESPONSIBILITIES

1. Improving energy management practices among large consumers through the implementation and enforcement of the Efficient Management of Electrical Energy Regulations (EMEER) 2008.
2. Approval of the energy efficiency electrical equipment through Product Energy Efficiency Rating & Labeling.



4. Performing Technical Evaluation for Energy Efficient Product (Application for energy efficiency product Sales Tax Exemption incentive).
5. Performing Technical Evaluations for EE&C-Project (Application for the Investment Tax Allowance incentive).
6. Monitoring and enforcement of the implementation and enforcement of the 24 Degree policy in government buildings.
7. Monitoring of the usage of energy in government buildings.

8. Implementation and Enforcement of Minimum Energy Performance Standards (MEPS) for 5 Domestic Electrical Products (Air Conditioner, Refrigerator, Television, Domestic Fan and Lamps).
9. Promoting good practices through efficient energy pricing and public awareness programmes.
10. Registration of Energy Service Company.
11. Capacity Building Of Industry Players.

## Other Tasks:

1. Data collection and analysis of EMEER 2008.
2. Government Pilot Project of LED installation in selected government buildings (i.e Ministry Building, Hospitals, University and Schools).
3. Development of Malaysian Standards.

## 4. EFFICIENT MANAGEMENT OF ELECTRICAL ENERGY REGULATIONS 2008

- Efficient Management of Electrical Energy Regulations 2008 has been gazetted on 15th December 2008.
- Key Provisions:
  - Applied to big energy users
  - Notification and appointment of Electrical Energy Manager
  - Electrical Energy Management Policy
  - Energy audit Recommendations for electrical energy management
  - Monitoring and keeping of records
  - Periodical reporting

# REGULATION 3: APPLICATION

## Consumer

- Any installation which receives electrical energy from a licensee or supply authority with a total electricity consumption equal to or exceeding 3,000,000 kWh as measured at one metering point or more over any period of six consecutive months; or

## Generator

- Any installation used, worked or operated by a private installation licensee with a total net electrical energy generation equal to or exceeding 3,000,000 kWh over any period of six consecutive months;

## REGULATION 5 : OBLIGATION TO SUBMIT INFORMATION

A licensee or supply authority who supplies electrical energy

- Existing installation shall submit to the Commission information or documents regarding the names and particulars of consumers whose total electrical energy consumption over any period not exceeding six consecutive months equals to or exceeds 3,000,000 kWh, **not later than one month** after the expiry of the period of six consecutive months **from the effective date**.
- New installations shall submit to the Commission information or documents regarding the names and particulars of consumers whose total electrical energy consumption over any period not exceeding six consecutive months equals to or exceeds 3,000,000 kWh, **not later than one month** after the expiry of the period of six consecutive months **from the date the electrical energy supply is connected to the installation by the licensee or supply authority**.



## REGULATION 5 : OBLIGATION TO SUBMIT INFORMATION

A private installation licensee

- **Existing installations**

shall submit to the Commission information or documents regarding the total net electrical energy generation over any period not exceeding six consecutive months that equals to or exceeds 3,000,000 kWh, not later than one month after the expiry of the period of six consecutive months **from the effective date**.

- **New installations**

shall submit to the Commission information or documents regarding the total net electrical energy generation over any period not exceeding six consecutive months that equals to or exceeds 3,000,000 kWh, **not later than one month** after the expiry of the period of six consecutive months **from the date the installation starts to generate electrical energy**.

## REGULATION 5 : OBLIGATION TO SUBMIT INFORMATION

- Licensee, supply authority or private installation licensee shall ensure that the information or documents provided are **true, accurate and complete**
  - Any licensee, supply authority or private installation licensee who –
    - fails to submit such information;  
or
    - fails to disclose or omits to give any relevant information or document, or provides information or documents that he or it knows or has reason to believe is false or misleading
- commits an offence under these Regulations.**

## REGULATION 6 : NOTIFICATION

6. (1) The Commission may, at any time by written notice, direct:

- a) to appoint or designate a registered electrical energy manager to carry out the functions and duties under regulation 16 at the installation.
- b) to submit a written confirmation of such appointment or designation (name, particulars, date of expiry of registration).
- c) to submit information regarding the statement of policy, objectives and accounts & documents pertaining to efficient electrical energy management.
- d) to submit the report in FORM A of the second schedule
- e) to submit reports (that have been duly signed)

## REGULATION 7 : OBLIGATION OF PRIVATE INSTALLATION OR CONSUMER

- Time period to submit information: -
  - (a) and (b) not later than **three months** from the date of the written notice ;
  - (c), (d) and e and the declaration by the electrical energy manager (under Regulation 6(2) – FORM B) not later than **thirty days** after the expiry of six consecutive months from the end of the time period above.

# REGULATION 9 :REVIEW

The Commission may, review the obligations of the entity by considering: -

- the total net electrical energy consumption/generation for the reported period is below 3,000,000 kWh;
- has fully complied with the requirements of the Regulations; and
- any other reason which the Commission deems fit to show efficient management of electrical energy at the installation for the reported period.

and may by written notice notify the entity that he or it is no longer required to further submit the information and report.

# REGULATION 10 : WITHDRAWAL

- The Commission may withdraw the earlier notice by considering:-
  - the total net electrical energy consumption or generation for the reported period equals to or exceeds 3,000,000 kWh;
  - any other reason as the Commission deems fit when it is satisfied that efficient management of electrical energy at the installation for the reported period has not been practised after the date of issue of the notice



## **REGULATION 11: REGISTERED ELECTRICAL ENERGY MANAGER OF INSTALLATION**

- No person shall engage in, be employed or hold himself out as a registered electrical energy manager for the purposes of these Regulations unless the person has been registered by the Commission.
- Any person who fails to comply with subregulation (1) commits an offence under these Regulations.

# REGULATION 12: QUALIFICATION REQUIREMENTS

- Malaysian citizen aged 23 years and above; and
- holds a certificate or registration as a Professional Engineer under the Registration of Engineers Act 1967 (*Act 138*) and possesses at least six months working experience in the efficient management of electrical energy at an installation;
- holds a degree in Science, Engineering, Architecture or its equivalent and possesses at least one year working experience in the efficient management of electrical energy at an installation; or
- holds a Certificate of Competency issued by the Commission as an Electrical Services Engineer or a Competent Electrical Engineer and possesses at least nine months working experience in the efficient management of electrical energy at an installation; and

# REGULATION 12: QUALIFICATION REQUIREMENTS

- Demonstrates knowledge of the requirements of the Act and these Regulations.
- The Commission may require the person to attend an interview.

# APPLICATION PROCEDURE

- Submit application form (FORM ST(DSM/PTE/2009) and processing fee (**First Schedule**), and
- Information and documents to substantiate track record as an electrical energy manager, or evidence to show that despite the lack of a track record, he has the necessary knowledge, skill and expertise to efficiently manage electrical energy.
- Medical evidence of the physical and mental fitness of the applicant may be required.

## REGULATION 16 :FUNCTIONS AND DUTIES OF REGISTERED ELECTRICAL ENERGY MANAGER

- To audit and analyse the total electrical energy consumption or generation.
- To advise in developing and implementing measures to ensure efficient management of electrical energy at the installation.
- To monitor effective implementation of the measures.
- To supervise the keeping of records on efficient management of electrical energy at the installation and verify its accuracy; and
- To ensure the timely submission of information and reports under the regulations.

## REGULATION 17: VALIDITY PERIOD OF REGISTRATION AND RENEWAL

- Certificate of registration - valid for a period of not less than one year and not more than five years.
- Renewal of registration - at least one month before the date of expiry (must attend a 8 points CPD course).



# REGULATION 18: CANCELLATION OF REGISTRATION

Cancellation if: -

- he has contravene or failed to comply with any provision of the Act or these Regulations;
- he has obtained the certificate of registration by making or causing to be made any false or fraudulent declaration, certification or representation, either in writing or otherwise;
- he has used the certificate of registration for a purpose that differs from that for which it was issued or in a manner that is intended to mislead or deceive the public; or
- he has fail to carry out the functions and duties as specified in the regulations 16.

# APPEAL PROCEDURES

- Within 14 days of notice issue, provide a written submission of reasons for registration not to be cancelled.
- Due consideration to the written submission shall be given by the Commission.
- If after consideration, certificate is to be cancelled, notice of such shall be given.
- Cancellation of certificate will take effect after 21 days of the notice of cancellation.
- If Commission is of the opinion that urgent action is needed to protect the interest of the public, the certificate of registration may be cancelled immediately.

# GENERAL PROVISIONS

- Commission to maintain a list of registered electrical energy managers.
- Procedures for replacement of certificates of registration.
- Procedures for certified true copies of the certificate of registration.
- Extension of time – may be requested.
- Service of notice – personally or by registered post.

## REGULATION 22: GENERAL PENALTY

- Any person who commits an offence under the Regulations shall, on conviction, be liable to a fine not exceeding five thousand ringgit or to imprisonment for a term not exceeding one year or both

**5. CONDITIONS FOR THE REGISTRATION  
OF ESCOs WITH THE ENERGY  
COMMISSION FOR ENERGY  
PERFORMANCE CONTRACTING (EPC)  
WORKS IN GOVERNMENT BUILDINGS  
-  
GUIDELINES FOR REGISTRATION**

# OBJECTIVES

- i. To disseminate information on the process for the registration of Energy Service Companies (ESCOs) with the Energy Commission.
- ii. To spell out the requirements and conditions for the registration and issuance of a Letter of Registration as an Energy Service Company (ESCO).



# BACKGROUND

- The implementation of energy saving measures in government buildings will be done based on the Energy Performance Contracting (EPC) concept.
- All ESCOs are required to register with the Ministry of Finance (MOF) to qualify them as EPC contractor, consultant or supplier.
- MOF requires that ESCOs applying for registration under the Green Technology Services Code (222801) must be registered with the Energy Commission.

# SCOPE OF WORK OF ESCOs

Under the Green Technology Services Code, registration of ESCOs is required for the following scope of work:

- 1) Supply of energy efficient devices and equipment.
- 2) Consultancy Services.
- 3) Contract Works.
- 4) Energy Audit.
- 5) Design Engineering.
- 6) Project Financing.
- 7) Management of EPC Contract.
- 8) Commissioning and Services.
- 9) The operation and maintenance of equipment / energy-efficient installation, and
- 10) Inspections of energy efficiency improvement projects .

# CRITERIA FOR REGISTRATION OF ESCOs

For purposes of registration of ESCOs with the Energy Commission, the list of requirements and criteria to be fulfilled by applicants are as follows:

- i. the applicant has registered his business with either the Registrar of Business or the Registrar of Companies,
- ii. the applicant has employed, on a full time basis, a Registered Electrical Energy Manager as prescribed under the Efficient Management of Electrical Energy Regulations 2008,
- iii. the applicant has access to suitable monitoring and testing equipment and instruments required (i.e. electrical power and energy data logger, thermal energy data logger, flow data logger) for energy efficiency management works , and
- iv. the applicant has satisfactorily furnished all the information as stipulated in the Application Form.

# CONDITIONS OF REGISTRATION

- The Letter of Registration issued is valid for a period of one year from the date of issuance of the said Letter of Registration.
- The renewal of the Letter of Registration as an Energy Service Company must be made not less than 1 month before the date of expiry of the registration.
- Energy Commission may cancel a Certificate of Registration of an Energy Service Company if-
  - the holder of the Letter ceases to carry on the business in respect of which he is registered;
  - the holder of the Letter has been adjudicated a bankrupt;
  - the company goes into liquidation.

## CONDITIONS OF REGISTRATION (cont.)

- The Letter of Registration as an Energy Service Company may not be transferred unless with the written approval of the Energy Commission.
- Any change of name, address and other details of the business or company stated in the Letter of Registration must be informed in writing to the Energy Commission within 14 days of such change.
- All electrical works in relation to the Energy Services provided by the Registered Energy Service Company must be performed by Competent Persons in accordance with the Electricity Supply Act 1990 and the Electricity Supply Regulations 1994.

# APPLICATION FORM

## Attachment A



**SURUHANJAYA TENAGA**  
No.12, Jalan Tun Hussein  
Presint 2, 62100 ,Putrajaya

Tel: 03-88708664  
Fax: 03-88888648  
Website: [www.st.gov.my](http://www.st.gov.my)

ST(DSM/ESCO/2012)

### PERMOHONAN PENDAFTARAN KONTRAKTOR PERKHIDMATAN TENAGA (ESCO)

#### PANDUAN KEPADA PEMOHON

Untuk Kegunaan  
Pejabat

No. fail :

1) Borang ini hendaklah diisi dan dikemukakan bersama surat permohonan kepada **Pengarah Jabatan Pengurusan Tenaga dan Pembangunan Industri (JPTPI), Suruhanjaya Tenaga** di alamat seperti di atas.

2) Sila kemukakan dokumen sokongan yang berkaitan seperti berikut;

BIL	PERKARA	TANDAKAN (√)
<b>MAKLUMAT PERNIAGAAN/SYARIKAT</b>		
1	Pendaftaran Perniagaan/Syarikat	
	i. Borang D (Perakuan Pendaftaran)	
	ii. Borang maklumat perniagaan	
<b>ATAU (Jika Sendirian Berhad)</b>		
	i. Borang 9 (Perakuan Pemerbadanan Syarikat Sendirian)	
	ii. Borang 24 (Return of Allotments of Share)	
	iii. Borang 49 (Particulars in Registers of Directors, Managers & Secretaries)	
	iv. MAA (Memorandum & Articles of Association of Company)	
	v. Salinan perjanjian sewa atau salinan hakmilik/perjanjian jual beli premis perniagaan (Perjanjian hendaklah ditandatangani oleh pemohon atau salah seorang pemegang saham atau rakan kongsi)	
	vi. Profil syarikat pemohon yang mengandungi maklumat mengenai organisasi, kepakaran teknikal syarikat, rekod kerja syarikat dan pendaftaran dengan agensi lain yang berkaitan.	

<b>MAKLUMAT ORANG KOMPETEN</b> (Pengurus Tenaga Elektrik-PTE)		
2	i.	Salinan kad pengenalan pemohon (depan dan belakang)
	ii.	Salinan kad pengenalan orang kompeten (depan dan belakang)
	iii.	Salinan perakuan kekompetenan
	v.	Salinan surat tawaran/penerimaan jawatan

**BAHAGIAN A: MAKLUMAT PEMOHON**

Gambar Ukuran Pasport	Nama Pemohon:
	No K/P:
	Alamat:
	Jawatan Dalam Syarikat:

**BAHAGIAN B: MAKLUMAT PERNIAGAAN/SYARIKAT**

1. Nama Syarikat:	
2. No. Pendaftaran Syarikat:	
3. Alamat Berdaftar: (Dengan Pendaftar Syarikat)	No. Telefon:
	No. Fax:
	Sewa [    ]      Milik sendiri [    ]
4. Alamat Premis: (Jika berlainan dengan alamat di atas)	No. Telefon:
	No. Fax:

5. Ahli-Ahli Lembaga Pengarah / Perkongsian / Milikan Saham

BIL.	NAMA DAN NO. KAD PENGENALAN	ALAMAT POS	MILIKAN (%)
1			
2			
3			

- Sila gunakan lampiran berasingan sekiranya bilangan melebihi ruang diatas

**BAHAGIAN C: MAKLUMAT ORANG KOMPETEN (PENGURUS TENAGA ELEKTRIK)**

Sertakan salinan setiap perakuan kekompetenan, kad pengenalan dan surat tawaran lantikan / senarai tugas jawatan orang kompeten yang dijawat.

BIL.	NAMA ORANG KOMPETEN	NO. PERAKUAN	NO. KAD PENGENALAN
1			
2			

- Sila gunakan lampiran berasingan sekiranya bilangan orang kompeten melebihi di atas.



**BAHAGIAN D: PERALATAN PEMANTAUAN DAN PENGUJIAN**

BIL.	PERALATAN MENGUJI	JENAMA, MODEL DAN NO. SIRI PERALATAN		
1	<i>Electrical Power and Energy data logger</i>			
2	<i>Thermal Energy data logger</i>			
3	<i>Flow data logger</i>			
4	Lain-lain jika ada (senaraikan):			

**BAHAGIAN E: PENGESAHAN**

**Pengesahan Pemohon**

Saya mengaku bahawa maklumat yang terkandung di dalam permohonan ini adalah benar dan orang kompeten seperti butiran di bahagian C adalah bekerja sepenuh masa.

Tandatangan pemohon : \_\_\_\_\_

Cop Syarikat : \_\_\_\_\_

Tarikh : \_\_\_\_\_

## 6. IMPROVING ELECTRICAL EQUIPMENT ENERGY EFFICIENCY THROUGH ENERGY RATING / LABELING AND REBATE SCHEMES

Energy Efficiency Rating and Labeling for energy efficient product. Currently Energy Commission is providing the above for the following products:

- Domestic Refrigerators
- Domestic Fans
- Television
- Air Conditioners (Single Split Wall Mounted Type)
- Lamps
- Ballast for Fluorescent Lamps
- Insulation Materials
- High Efficiency Motors

- *SAVE or Sustainability Achieved via Energy Efficiency*, is a program spearheaded by the Ministry of Energy, Green Technology and Water to improve energy efficiency in Malaysia. Rebates will be awarded on a first-come, first-served basis to qualified domestic consumers who purchase 5-Star rated refrigerators, air conditioners or chillers during the rebate offer period through participating retailers. Detailed please Log in to [www.saveenergy.gov.my](http://www.saveenergy.gov.my)



- Energy rating 1 to 5-Star
- Appliance energy rating (equals the number of stars)
- Model information
- Energy consumption (in kWh/year)
- Energy saving compared to an average 3-Star model (in percentage)

# EE LABEL- Comparative Label

- ❑ Only for 5-STAR rated models



EE LABEL - Endorsement Label

## 7. Capacity Building of Industry Players

1. The Government of Malaysia has encourage the adoption of Energy Efficiency (EE) for the benefit of energy users in Malaysia and to ensure a sustained national economic development for the future. The current environment of rising energy prices worldwide makes the adoption of these initiatives by local industry and service providers is critical for maintaining business competitiveness in the world market.

2. Adopting MS ISO 50001:2011 (Energy Management Systems) which specifies requirements for establishing, implementing, maintaining and improving an energy management system, whose purpose is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance, including energy efficiency, energy use and consumption.

3. MS 1525 Code Of Practice On Energy Efficiency And Use Of Renewable Energy For Non-residential Buildings which provides guidance on the effective use of energy, including the application of renewable energy in new and existing non-residential buildings.



## No Cost Measures:

### ■ Energy Management System

- Introduction of energy management policy
- Establishment of internal energy management committee
- Plan and implement energy saving measures
- Monitoring and verification
- Review results for continual improvement

### ■ Energy Efficient Practices

- Switch off equipment when not in use
- Optimum temperature settings (24°C)
- Utilization of day lighting
- Use the stairs instead of an elevator

# Standard Measures:

- technologies or projects proven to save energy & have high benefit-cost ratio
- amount of support assessed based on
  - payback period for the measures

## Measures for Industrial Sector:

- **Energy Audits**
  - large & medium industrial facilities
  
- **Energy Management**
  - mandate industrial facilities to implement energy management
  
- **Co-generation and Tri-generation**
  - to maximise the utilisation of the fuel

## Measures for Building Sector:

### ■ Energy Audits

- large Government facilities
- large & medium commercial facilities

### ■ Energy Management

- Mandate Govt. & large commercial facilities to implement energy management

### ■ Energy Efficient Building Design

- New buildings are designed and built with EE features (MS1525/GBI)

# Measures for Equipment Sector:

- Introduction of Minimum Energy Performance Standards (MEPS)
  - ensure low efficient technologies do not enter local market
    - Compact Fluorescent Lamp (CFL)
    - High Efficiency Motor (HEM)
- Promotion of Energy Efficiency Label for Appliances
  - Encourage the use of 5-Star rated appliances
  - Appliances labelled
    - Refrigerator (SAVE Programme launched on 7 July 2011)
    - Air-conditioner (SAVE Programme launched on 7 July 2011)

# Thank you

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