Unofficial Translation

Manual

Explanation of Energy Conservation Act B.E.2535 (Amended) For Designated Factory / Designated

Building



Department of Alternative Energy Development and Efficiency

MINISTRY OF ENERGY

17 August 2009

Manual

Explanation of Energy Conservation

Act B.E.2535 (Amended)

For Designated Factory / Designated

Building

© 2009, the Department of Alternative Energy Development and Efficiency (www.dede.go.th) Translated by Direction Plan. Co.,ltd. (www.Directionplan.org) Remark: Reference to Thai legislation in any jurisdiction shall be made to the Thai version only. This translation has been made so as to establish correct understanding about this Act to the foreigners

Content

		0				
1. Intro	duction and Structure of Law	1				
2. Scop	2. Scope of the Act					
3. Char	3. Characteristics of Designated Factory and Designated Building 4					
4. Ener	gy Conservation on the Act	5				
4.1	Energy Conservation in the Factory	6				
4.2	Energy Conservation in the Building	7				
4.3	3 Right to Request the Delay of the Compliance according to the Act of Designated					
	Factory and Designated Building	8				
4.4	Energy Conservation in Machinery or Equipment and Promotion of the Use					
	of Material or Equipment for Energy Conservation	9				
5. Dutie	es of Designated Factory and Designated Building	9				
6. Prov	ision of Personnel Responsible for Energy	10				
6.1	Qualification of Personnel Responsible for Energy	10				
6.2	Number of Personnel Responsible for Energy	11				
6.3	Duties of Personnel Responsible for Energy	11				
6.4	Notification of the Appointment of Personnel Responsible for Energy	12				
6.5	Notification of the Termination of Personnel Responsible for Energy	14				
7. Ener	gy Management	15				
7.1	Provision of Energy Management Steering Committee	16				
7.2	Evaluation of Preliminary Status of Energy Management	16				
7.3	Identification of Energy Conservation Policy	17				
7.4	Provision of Evaluation of Energy Conservation Potential	18				
7.5	Provision of Energy Conservation Goals and Plans	18				
7.6	Provision of Control, Supervision, Examination, and Analysis of Compliance with					
	Energy Conservation Goals and Plans	18				
7.7	Provision of Audit and Evaluation of Energy Management	18				
7.8	Provision of Review, Analysis and Correction of Defects on Energy Management	19				
7.9	Audit and Certification of Energy Management and Submission of Report	19				

Page

8. Energy Conservation Promotion Fund	
8.1 Source of Fund	20
8.2 Objective of the Use of Fund	20
9 Right to Request for Promotion and Assistance from the Fund	21
10. Payment of Special Fee for Electricity Usage and Appeal	
11. Penalties	

- Appendix A : Energy Conservation Promotion Act B.E. 2535 (Amended)
- Appendix B : Royal Decree on Designated Building B.E. 2538

Appendix C : Royal Decree on Designated Factory B.E. 2540

- Appendix D : Ministerial Regulation, Prescribing Type or Size of Building and Standard, Criteria and Procedure in Designing Building for Energy Conservation B.E.
 2552
- Appendix E :Ministerial Regulation, Prescribing Qualifications, Duties and Number of
Personnel Responsible for Energy B.E.2552
- Appendix F : Ministerial Regulation, Prescribing Standard, Criteria, and Energy Management Procedures in Designated Factories and Designated Buildings B.E. 2552

Manual

Explanation of Energy Conservation Act B.E.2535 (Amended) For Designated Factory / Designated Building

1. Introduction and Structure of Law

Since the demand for energy for responding to the economic and social growth of the country sharply increases, the country must absorb the burden in the investment for provision of domestic and international energy in order to respond to such growth. Currently, the country is still not able to achieve the goal in terms of the energy conservation for the economical and efficient production and use of energy and the production of highly efficient machinery and equipment and the materials for energy conservation within the country. Thus, the Department of Alternative Energy Development and Efficiency issues the draft of Energy Conservation law to identify the measure to supervise, promote, and assist the energy usage by identifying energy conservation policies, energy conservation goals and plans, audit and analysis of energy conservation, procedures in energy conservation, identifying the level of energy usage in machinery and equipment, establishing energy conservation promotion fund to support and assist the energy conservation, protecting and solving the environmental problems from energy usage and the research on energy, and identifying the measures to support the energy conservation or to produce highly efficient machinery and equipment or materials for energy conservation. Finally, the Energy Conservation Promotion ACT B.E.2535 passed the consideration from the parliament and H.M. The King ordered to notify such act on the Royal Gazette on 2 April 1992 and the act has been effective on 3 April 1992.

However, since the Energy Conservation Promotion Act B.E.2535 has some provisions that are improper with the current situation, the parliament agreed to amend such provisions to be able to supervise and promote the efficient energy usage and conservation and to change the guidelines for energy conservation responsive to the technology, to identify the standards for efficiency of machinery and equipment production, the storage of cash and assets of the fund to promote the energy conservation and the assignment of individuals or juristic persons to audit and certify energy management, energy usage in machinery or equipment, and quality of materials or equipment for energy conservation on behalf of the officers in order to respond to the changes in economy and society. Therefore, the "Energy Conservation Promotion Act (No. 2) B.E.2550" has been effective by notifying on the royal gazette on 4 December 2007 and shall be effective after 180 days from the date of notification on the royal gazette. Hence, the Act has been effective from 1 June 2008.

The Energy Conservation Promotion Act B.E.2535 amended by Energy Conservation Promotion Act (No. 2) B.E.2550 has the following 3 main objectives.

(1) To supervise, promote, and support the persons who need energy conservation according to the law to conserve energy from the efficient and economical energy production and usage.

(2) To promote and support the production and the usage of highly efficient machinery and equipment, and the materials used in the energy conservation within the country.

(3) To promote and support the energy conservation by establishing "Energy Conservation Promotion Fund" in order to be the mechanism for financial assistance to persons who need energy conservation according to the law.

The Energy Conservation Promotion Act B.E.2535 (Amended) consists of the following 9 provisions.

General Provisions and Definitions (Section 1-6)

Category 1 Energy Conservation in the Factory (Section 7-16)

Category 2 Energy Conservation in the Building (Section 17-22)

Category 3 Energy Conservation in the Machinery or Equipment or Promotion of Materials or Equipment for Energy Conservation (Section 23)

Category 4 Energy Conservation Promotion Fund (Section 24 – 39)

Category 5 Measures for Promotion and Assistance (Section 40 - 41)

Category 6 Special Fee (Section 42-46)

Category 7 Officers (Section 47 – 49)

Category 8 Appeal (Section 50 – 52)

Category 9 Penalty (Section 53 – 61)

The details of Energy Conservation Promotion Act B.E.2535 (Amended) are in Appendix A.

In this case, Department of Alternative Energy Development and Efficiency prepared the explanation of the compliance with Energy Conservation Promotion Act B.E.2535 (Amended) for designated factories and designated buildings to comply with the second-class and amended Acts and laws in order for the owners of designated factory / designated building and the relevant parties to understand the guidelines for energy conservation according to this law, leading to the accurate compliance with the law.

2. Scope of the Act

Since the Energy Conservation Promotion Act B.E.2535 (Amended) aims to Supervise, promote, and support the designated factory and designated building to conserve energy via the efficient and economical energy production and usage and to promote and support the production of highly efficient machinery or equipment, and to promote the use of materials or equipment for energy conservation within the country. Thus, the government pays attention to the following 3 main target groups to supervise, promote, and support the energy conservation according to this Act.

- (1) Designated Factory
- (2) Designated Building
- (3) Producers or Sellers of Highly Efficient Machinery or Equipment or Materials or Equipment for Energy Conservation

With this case, the Energy Conservation Promotion Act B.E. 2535 (Amended) has been effective for the abovementioned 3 main target groups only.

Regarding the group of designated factories and designated buildings under the enforcement of this Act, the Act focuses on the factories and buildings that use high amount of energy and are ready to conserve energy immediately. Whether any factories or buildings are under the scope of this Act or not shall comply with the Royal Decree Identifying Designated Factory B.E.2550 and Royal Decree Identifying Designated Building B.E.2538 according to the details in Part 3.

In terms of the producers or sellers of highly efficient machinery or equipment and materials or equipment for energy conservation, shall obtain the financial support for the production or sale of machinery, equipment, and materials to people at cheap price. This will help people reduce the use of energy. The identification of machinery or equipment according to types, sizes, and amount of energy usage, rate of energy changes, and efficiency of energy usage to be highly efficient machinery or equipment under the enforcement of this Act shall comply with the ministerial regulation on a case-by-case basis such as the ministerial regulation identifying highly efficient air-conditioner B.E.2552, the ministerial regulation identifying highly efficient refrigerator B.E.2552 or the ministerial regulation identifying highly efficient according to be the materials or equipment for energy conservation according to types, quality, and standards to be the materials or equipment for energy conservation acase-by-case basis such as the ministerial regulation on a case-by-case basis such as the ministerial regulation on a case-by-case basis or equipment for energy conservation according to types, quality, and standards to be the materials or equipment for energy conservation acase-by-case basis such as the ministerial regulation on a case-by-case basis such as the ministerial regulation on a case-by-case basis such as the ministerial regulation on a case-by-case basis such as the ministerial regulation identifying mirror for energy conservation B.E.2552, etc.

3. Characteristics of Designated Factory and Designated Building

Persons who need energy conservation according to Energy Conservation Promotion Act B.E.2535 (Amended) shall be called "**Designated factory**" or "**Designated Building**", depending on the case, by focusing on the factories and buildings that use high amount of energy usage and are ready to conserve energy immediately. The characteristics of designated factory or building shall comply with the Royal Decree Identifying Designated Factory B.E.2550 and Royal Decree Identifying Designated Building B.E.2538 as follows.

4

"Designated Factory or Designated Building" means the factory or building responsible for energy conservation according to Energy Conservation Promotion Act B.E.2535 (Amended). The factory or building considered to be designated factory or building shall possess one of the following characteristics of energy usage.

(1) Shall be the factory or building approved from the energy sellers to use electrical meter or install one set or several sets of transformer with the size from 1,000 Kilowatt or 1,175 Kilo Volt Ampere or

(2) Shall be the factory or building that uses electricity from the system of energy sellers, heat from steam from energy sellers or other types of energy from energy sellers or from itself from 1 January to 31 December of the previous year with the total amount of energy equivalent to the electrical power from 20 million Mega joules.

However, for some types of buildings, although the characteristics of the energy usage are considered designated buildings as mentioned above, the Royal Decree Identifying Designated Building B.E.2538 exempts that the following types of buildings are not designated buildings : Throne Hall or Palace, Embassy or Consulate, Office of International Organizations or Office of Agencies Established according to Agreement between Thai and Foreign Government, ancient remains, temples or buildings used for religious activities that have specific laws for controlling the construction.

For the calculation of amount of energy usage according to (2), shall calculate according to the criteria on the Royal Decree as follows.

(1) In case of electricity, shall calculate the amount of electricity usage in Kilowatt – hour and shall multiply with 3.60.

(2) In case of heat from steam, shall calculate the amount of heat from steam to be equivalent electrical power via the following formula.

 $Es = (h_s - h_{w)*}s * e_{ff}$

Es means amount of heat from steam to be equivalent electrical power (Mega Joule

/Year)

h _s means	Enthalpy of steam used (Mega Joule / Ton) from steamtable
h _w means	Enthalpy of water at temperature of 27 Degree Celsius and atmospheric
	pressure (Here, $h_w = 113$ Mega Joule / Ton)
S means	Amount of steam used (Ton / Year) from steam meter of the building or
	factory
e _{ff} means	efficiency of the change of heat energy to be equivalent electrical energy
	(Here, $e_{ff} = 0.45$)

(3) In case of other types of energy, shall calculate amount of heat from other types of nonrenewable energy as follows.

 $E_{f} = F * HHV * e_{ff}$ $E_{f} means amount of heat from other types of nonrenewable energy to be equivalent electrical energy (Mega Joule / Year)$ F means Amount of nonrenewable energy (Weight or Volume per Year) HHV means Higher Heating Value of nonrenewable energy in Mega Joule / Weight or Volume $e_{ff} means efficiency of the change of heat energy to be equivalent electrical energy (Here, e_{ff} = 0.45)$

In case that there is no higher heating volume, shall use average heat identified by Department of Alternative Energy Development and Efficiency.

The details of Royal Decree Identifying Designated Building B.E.2538 and Royal Decree Identifying Designated Factory B.E.2550 appear on Appendix B and appendix C, respectively.

4. Energy Conservation on the Act

The Energy Conservation Promotion Act B.E.2535 (Amended) identifies the energy conservation in designated factory, designated building and in the machinery or equipment and the promotes the use of materials or equipment for energy conservation so the relevant parties (users, operators, and regulatory authorities) commonly understand that any actions are considered energy conservation according to this law.

4.1 Energy Conservation in the Factory

The energy conservation in the factory according to section 7 is one of the following actions.

- (1) Improvement of efficiency of fuel combustion
- (2) Protection of energy losses
- (3) Energy reuse
- (4) Changes to another type of energy

(5) Improvement of the electricity usage via improvement of power factor and reduction of maximum electrical demand in the period of maximum electrical demand of the electrical equipment system in order to be proper with other procedures and burden.

(6) Use of highly efficient machinery or equipment and the control system and materials used for energy conservation

(7) Energy conservation via other methods as identified on the ministerial regulation

In order to benefit the energy conservation in the designated factory, section 9, paragraph 1 identifies that Minister of Energy, by the recommendation of the National Energy Policy Council, is authorized to issue the following ministerial regulation.

(1) Identification of Standards, criteria, and procedures for energy management for the owners of designated factories

(2) Identification of the owners of designated factories to provide personnel responsible for energy in each designated factory and qualifications and duties of personnel responsible for energy

In additions, if it is appropriate that Director – General of Department of Alternative Energy Development and Efficiency is authorized to issue the order that the owners of designated factories inform the facts regarding the energy usage for auditing the energy conservation according to the standards, criteria, and procedures identified on the ministerial regulation issued by Minister of Energy and that such owners of designated factories shall comply with within 30 days from the date of receiving such order according to section 10.

4.2 Energy Conservation in the Building

The energy conservation in the factory according to section 17 is one of the following actions.

(1) Heat reduction from sunlight in the building

(2) Efficient air-conditioning and maintenance of temperature in the building

(3) Use of construction materials for energy conservation and demonstration of quality of such construction materials

(4) Efficient use of light in the building

(5) Use and installation of machinery, equipment and materials for energy conservation in the building

(6) Use of control system of machinery and equipment

(7) Other methods of energy conservation as identified on the ministerial regulation

In order to benefit the energy conservation in the building that is in the process of construction or modification, section 19, paragraph 1 identifies that the Minister, by the recommendation from National Energy Policy Council, is authorized to issue the following ministerial regulation.

(1) Identification of types or sizes of building that is in the process of construction or modification and that shall be designed for energy conservation

(2) Identification of standards, criteria, and procedures for building design according to (1) for energy conservation

The details of ministerial regulation identifying types or sizes of building and standards, criteria, and procedures in building design for energy conservation B.E.2552 appear on Appendix D.

In order to issue the abovementioned ministerial regulation, section 20 identifies that if the Building Control Committee according to the building control law approves such regulation to be applied to the building control according to the building control law, such ministerial regulation shall be similar to the ministerial regulation issued according to section 8 of Building Control Act B.E.2522 and the authorized person according to the building control law shall be authorized to control and supervise the construction or modification of buildings in accordance with such ministerial regulation. In this case, although the buildings that are designated buildings are in the areas that the Royal Decree regarding the building control is not effective, such buildings are also under the enforcement of building control law only in the scope beneficial to the compliance with this Act.

In additions, in order to benefit the energy conservation in the designated building, section 21, paragraph 1 identifies that the Minister, by the recommendation from National Energy Policy Council, is authorized to issue the following ministerial regulation.

(1) Identification of standards, criteria, and procedures of energy management for the owners of designated buildings

(2) Identifying that the owners of designated buildings shall provide personnel responsible for energy in each designated building and identification of qualifications and duties of personnel responsible for energy

In case that it is appropriate that the Director – General of Department of Alternative Energy Development and Efficiency is authorized to issue the order that the owners of designated buildings inform the facts regarding the energy usage for auditing the energy conservation according to the standards, criteria, and procedures identified on the ministerial regulation issued by Minister of Energy and that such owners of designated buildings shall comply with within 30 days from the date of receiving such order according to section 21 and section 10.

4.3 Right to Request the Delay of the Compliance according to the Act of Designated Factory and Designated Building

In case that any owners of the designated factories or designated buildings use energy lower than size or amount identified on the Royal Decree Identifying Designated Factory B.E.2540 or Royal Decree Identifying Designated Building B.E.2538 and shall use such amount of energy for at least 6 months, the owners of the designated factories or owners of designated buildings shall inform the details and reasons, and shall request the Director – General of Department of Alternative Energy Development and Efficiency to delay the compliance with such Act throughout such period of time, and in case of such request, the Director – General shall delay or shall not delay and shall issue the letter to inform the outcome to the owners of designated factories or designated buildings immediately according to section 8, paragraph 3 or section 18 and section 8, paragraph 3, depending on the case.

When the owners of the designated factories or owners of designated buildings obtain such letter and do not agree with such letter, the owners of the designated factories or owners of designated buildings shall appeal to Minister of Energy within 30 days from the notification date. In this case, Department of Alternative Energy Development and Efficiency shall wait until the Minister solves the problem and informs the solution to the owners of designated factories or designated buildings according to section 50. The Minister shall complete the appeal immediately and the decision of the Minister shall be final according to section 52.

If the owners of the designated factories or owners of designated buildings inform the wrong details and reasons for using energy lower than size or amount identified on the Royal Decree, the owners of the designated factories or designated buildings shall be imprisoned for no more than 3 months or fined for no more than 150,000 Baht or both according to section 53.

4.4 Energy Conservation in Machinery or Equipment and Promotion of the Use of Material or Equipment for Energy Conservation

Regarding the energy conservation in machinery or equipment and the promotion of the use of materials or equipment for energy conservation, the Energy Conservation Promotion Act does not identify any actions for energy conservation. However, in order to benefit the energy conservation in machinery or equipment and the promotion of material or equipment used for energy conservation, section 23, paragraph 1 identifies that the Minister, by recommendation from National Energy Policy Council, is authorized to issue the following ministerial regulation.

(1) Identification of standards on efficiency of the energy usage for machinery or equipment

(2) Identification of machinery or equipment according to types, size, amount of energy usage, rate of energy changes, and efficiency of energy usage to be highly efficient machinery or equipment

(3) Identification of materials or equipment for energy conservation according to any types, quality and standards to be materials or energy conservation

(4) Identifying that the producers and sellers of machinery or equipment shall demonstrate efficiency of energy usage

Section 23, paragraph 2 identifies that the producers and sellers of highly efficient machinery or equipment or materials or equipment for energy conservation according to (2) or (3) shall be authorized to request for the promotion and assistance according to section 40 of this Act.

5. Duties of Designated Factory and Designated Building

The Energy Conservation Promotion Act and the second-class law according tothis Act identify that the owners of designated factories and designated buildings shall be responsible for energy conservation as follows.

(1) Providing personnel responsible for energy in each designated factory or building with the number and qualifications as identified on the ministerial regulation identifying qualifications, duties, and number of personnel responsible for energy B.E.2522 according to the details in Part 6.

(2) Providing the energy management in the designated factories and designated buildings as identified in the ministerial regulation identifying standards, criteria, and procedures of energy management in the designated factories and designated buildings B.E.2552 according to the details in Part 7.

(3) Following the order of the Director – General according to section 10 or section 21 and section 10, depending on the case, that orders such person to inform the fact about the energy usage for auditing the energy conservation in accordance with the standards, criteria, and procedures identified on the ministerial regulation according to (1) and (2).

6. Provision of Personnel Responsible for Energy

The provision of personnel responsible for energy in each designated factory or designated building aims that the personnel responsible for energy who possess specific knowledge shall be the assistant of the owners of designated factories or owners of designated buildings to efficiently conserve the energy according to the law. The details of qualifications, number, duties, notification of appointment and notification of termination of personnel responsible for energy shall comply with the ministerial regulation on the identification of qualifications, duties, and number of personnel responsible for energy B.E.2552 according to the details in Appendix E as follows.

6.1 Qualification of Personnel Responsible for Energy

The personnel responsible for energy shall have one of the following qualifications.

(1) Shall obtain Higher Vocational Certificate and have work experience in the factory or building for at least 3 years with the performance regarding energy conservation as certified by the owner of designated factory or designated building.

(2) Shall obtain Degree in Engineering or Science with the performance regarding energy conservation as certified by the owner of designated factory or designated building.

(3) Shall pass the training regarding energy conservation or training with the similar objective as approved by Director – General of Department of Alternative Energy Development and Efficiency.

(4) Shall pass the training regarding the senior personnel responsible for energy or training with similar objectives as approved by Director – General of Department of Alternative Energy Development and Efficiency.

(5) Shall pass the examination according to the criteria identified from the examination of personnel responsible for energy held by Department of Alternative Energy Development and Efficiency.

The Certification of energy conservation performance of the owners of designated factories or owners of designated buildings according to Clause (1) and (2) shall comply with the form as notified by the Director – General.

6.2 Number of Personnel Responsible for Energy

The owners of designated factories or owners of designated buildings shall provide the personnel responsible for energy in each designated factory or designated building with the following number and qualifications.

(1) The designated factory / building approved by persons who sell the energy to use the electrical meter or to install one set or several sets of transformer with the size lower than 3,000 Kilowatt or 3,530 Kilo Volt Ampere or use electrical energy, steam energy or other kinds of nonrenewable energy from persons who sell energy or from themselves or both from 1 January to 31 December of the previous year with total energy equivalent to electrical power lower than 60 million Mega Joule shall provide at least one personnel responsible for energy with one of the 5 qualifications in Part 6.1.

(2) The designated factory / building approved by persons who sell the energy to use the electrical meter or to install one set or several sets of transformer with the size more than 3,000 Kilowatt or 3,530 Kilo Volt Ampere or use electrical energy, steam energy or other kinds of energy from persons who sell energy or from themselves or both from 1 January to 31 December of the previous year with total energy equivalent to electrical power more than 60 million Mega Joule shall provide at least 2 personnel responsible for energy and one of them shall have qualifications according to part 6.1 (4) or (5). For the remaining personnel responsible for energy, they shall possess one of the 5 qualifications in part 6.1.

6.3 Duties of Personnel Responsible for Energy

The personnel responsible for energy shall be responsible for the following.

(1) Conducting maintenance and examining the efficiency of machinery and equipment periodically.

(2) Improving the procedures of energy usage according to the energy conservation principles.

(3) Assisting the owners of designated factories or owners of designated buildings in energy management according to the ministerial regulation identifying standards, criteria, and procedures of energy management in designated factories and designated buildings.

(4) Assisting the owners of designated factories or owners of designated buildings to follow the order of Director – General according to section 10 of Energy Conservation Promotion Act.

6.4 Notification of the Appointment of Personnel Responsible for Energy

The owners of designated factories or designated buildings shall inform / notify the appointment of personnel responsible for energy to Director – General of Alternative Energy Development and Efficiency within the period of time and conditions of designated factories or designated buildings as follows.

(1) In case of designated factories or designated buildings according to Part 6.2 (1), the owners of designated factories or designated buildings shall provide at least one personnel responsible for energy with one of the qualifications identified in Clause 6.1 within 180 days from the date of being the designated factories or designated buildings and shall inform the Director – General immediately.

(2) In case of designated factories or designated buildings according to Part 6.2 (2), the owners of designated factories or designated buildings shall provide at least 2 personnel responsible for energy within 180 days from the date of being the designated factories or designated buildings and at least one of them shall have qualifications according to part 6.1 (4) or (5). For the remaining personnel responsible for energy, they shall possess one of the 5 qualifications in part 6.1 and shall inform the Director-General immediately.

(3) In case of being designated factories or designated buildings according to part 6.2 (1) before or on the date that the ministerial regulation identifying the qualifications, duties, and number of personnel responsible for energy is effective and the owners of designated factories or designated buildings have already provided the personnel responsible for energy with one of the qualifications in part 6.1 (1), (2), or (3), shall inform the Director – General and the personnel responsible for energy shall be the personnel responsible for energy according to this ministerial regulation.

In case that the owners of designated factories or designated buildings according to part 6.2 (1) mentioned above do not provide the personnel responsible for energy, the owners of designated factories or designated buildings shall provide the personnel responsible for energy according to the number and qualifications identified on this ministerial regulation within 180 days from the date that this ministerial regulation is effective.

(4) In case of being designated factories or designated buildings according to part 6.2 (2) before or on the date that the ministerial regulation is effective and the owners of designated factories or designated buildings have already provided the personnel responsible for energy with one of the qualifications in part 6.1 (1), (2), or (3), shall inform the Director – General and the personnel responsible for energy shall be the personnel responsible for energy according to this ministerial regulation. After informing the Director – General, the owners of designated factories or designated buildings mentioned above shall act as follows.

(4.1) Shall provide the personnel responsible for energy according to the number and qualifications identified on this ministerial regulation within 180 days from the date that this ministerial regulation is effective and shall inform the Director – General immediately.

(4.2) In case that it is not able to provide the personnel responsible for energy with qualifications according to part 6.1 (4) or (5) within 180 days as identified in part (4.1) and such errors do not result from the owners of designated factories or designated buildings, the owners of such designated factories or designated buildings shall issue the letter to inform the reason to extend the period of time to the Director – General and the Director – General shall approve the extension for no more than 2 years from the date that this ministerial regulation is effective. The owners of designated factories or designated buildings shall provide the personnel responsible for energy within the approved period and shall inform the director – General immediately.

(5) In case of being designated factories or designated buildings according to part 6.2
(2) before or on the date that the ministerial regulation is effective and the owners of designated factories or designated buildings have not yet provided the personnel responsible for energy, such owners of designated factories or designated buildings shall provide the personnel responsible for energy within the period of time and conditions identified in part (4.1) and (4.2).

(6) In case of being the designated factories or designated buildings according to part 6.2 (2) from the following date after this ministerial regulation is effective but less than 2 years from the date that this ministerial regulation is effective, the owners of designated factories or designated buildings shall provide the personnel responsible for energy according to the number and qualifications identified on this ministerial regulation within 180 days from the date of being the designated factories or designated buildings and shall inform the Director – General immediately.

In case that the owners of designated factories or designated buildings cannot provide the personnel responsible for energy with the qualifications according to part 6.1 (4) or (5) within 180 days and such errors do not result from the owners of designated factories or designated buildings, the owners of designated factories or designated buildings shall provide the personnel responsible for energy according to the procedures and steps in part (4.2)

The procedures of notifying the appointment of personnel responsible for energy, the documents and evidences according to this ministerial regulation shall comply with the form notified by Director – General of Department of Alternative Energy Development and Efficiency.

6.5 Notification of the Termination of Personnel Responsible for Energy

In case of the termination of personnel responsible for energy, the owners of designated factories or designated buildings shall act as follows within the specified period of time.

(1) In case of the termination of personnel responsible for energy and the number of personnel responsible for energy in the designated factories or designated buildings does not comply with the criteria identified in part 6.2, the owners of designated factories or designated buildings shall take the following actions.

(1.1) Shall inform the Director – General in writing regarding the termination of personnel responsible for energy.

(1.2) Shall appoint the new personnel responsible for energy within 90 daysfrom the date of the termination of personnel responsible for energy and shall inform the Director – General immediately.

(2) In case of the termination of the personnel responsible for energy with qualifications according to part 6.1 (4) or (5) within 2 years from the date that this ministerial regulation is effective and the number of personnel responsible for energy in the designated factories or designated buildings does not comply with the criteria identified in part 6.2, the owners of designated factories or designated buildings shall take the following actions.

(2.1) Shall inform the Director – General in writing regarding the termination of personnel responsible for energy.

(2.2) Shall appoint the new personnel responsible for energy within 180 days from the date of the termination of personnel responsible for energy and shall inform the Director – General immediately.

(2.3) In case that it is not able to provide the personnel responsible for energy with qualifications as identified in part 6.1 (4) or (5) within 180 days as identified in part (2.2) and such errors do not result from the owners of designated factories or designated buildings, the owners of designated factories or designated buildings shall issue the letter to inform the reason to extend the period of time to the Director – General and the Director – General shall approve the extension for no more than 2 years from the date that this ministerial regulation is effective. The owners of designated factories or designated buildings shall provide the personnel responsible for energy within the approved period and shall inform the director – General immediately.

The details of the procedures and steps of the appointment of personnel responsible for energy appear on the manual of the appointment of personnel responsible for energy of the designated factories and designated buildings prepared by Department of Alternative Energy Development and Efficiency.

7. Energy Management

The owners of designated factories and designated buildings shall manage the energy within the designated factories and designated buildings according to the standards, criteria, and procedures of energy management identified on the Ministerial Regulation on the Identification of Standard, Criteria, and Procedures for Energy Management in Designated Factory and Designated Building B.E.2552 according to the details in Appendix F in order to efficiently conserve the energy and in order for the government to possess the information in evaluating the efficiency of energy management in the designated factories or designated buildings beneficial to the energy conservation. Such ministerial regulation classifies the energy management procedures into 8 steps according to the details in Clause 7.1 - 7.8. For Clause 7.9, it is about the submission of audit report and certification of energy management. The chart of energy management structure is as follows.

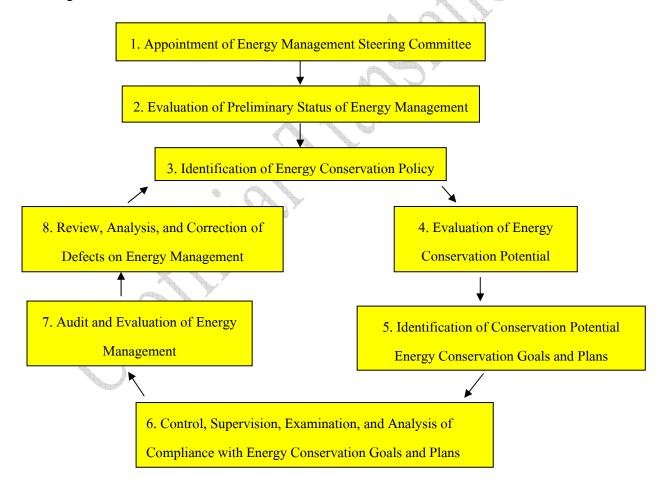


Chart of Energy Management Structure

7.1 Provision of Energy Management Steering Committee

The owners of designated factories and designated buildings shall provide the Energy Management Steering Committee and such committee shall directly report to the owners of designated factories or designated buildings and shall identify the structure, authorities, duties and responsibilities of the Energy Management Steering Committee and prepare some documents regarding such structure, authorities, duties and responsibilities and distribute to the employees and personnel within the designated factories or designated buildings.

The authorities of Energy Management Steering Committee shall be at least as follows.

(1) Manage energy in order to accord with the energy conservation policies and energy management procedures within the designated factories or designated buildings.

(2) Coordinate with the relevant parties to ask for cooperation in following the energy conservation policies and energy management procedures and arrange trainings or activities to generate awareness among relevant personnel.

(3) Control and supervise the energy management within the designated factories or designated buildings according to the energy conservation policies and energy management procedures

(4) Report the conservation and energy management outcomes according to the energy conservation policies and energy management procedures within the designated factories or designated buildings.

(5) Propose the identification or review of the energy conservation policies and energy management procedures within the designated factories or designated buildings.

(6) Support the owners of designated factories and designated buildings to follow this ministerial regulation.

7.2 Evaluation of Preliminary Status of Energy Management

In case of the first time of applying energy management procedures, the owners of designated factories or designated buildings may not realize the current status of their own energy management. Thus, the evaluation of the preliminary status is needed by considering from the previous performance. This action aims to realize the current status of the energy management of the organization, the strengths, the weaknesses, and the identification of guidelines for energy conservation policies, including the energy management direction and action plans of the designated factories or designated buildings.

In the evaluation of preliminary status of energy management, the Energy Management Steering Committee shall apply Energy Management Matrix. In such matrix, shall consider the system consisting of 6 parts, namely, energy management policies, organization structure, reinforcement and motivation, communication system, public relations, and investment. Each part shall have the points ranging from 0 - 4. The Steering Committee shall evaluate each part fairly in order to realize the most realistic status of energy management of the organization and then, the goals of each part are set in order to identify the direction of energy conservation policies.

7.3 Identification of Energy Conservation Policy

The owners of designated factories and designated buildings shall identify the energy conservation policies to show the intention and commitment in the energy management within the designated factories or designated buildings, and to generate understanding and awareness among employees, workers, or relevant parties within the designated factories or designated buildings in the energy conservation and to set the guidelines for such groups of people in terms of the energy conservation within the designated factories or designated buildings. The owners of designated factories or designated buildings shall prepare the documents and sign their names on such documents.

The energy conservation policies shall at least possess the following details.

(1) Statements mentioning that the energy conservation is a part of the actions of the owners of designated factories or designated buildings.

(2) Energy conservation policies proper with the characteristics and amount of energy used in such designated factories or designated buildings.

(3) Intention to follow the laws relevant to the energy conservation and energy management.

(4) Guidelines to continuously improve the efficiency of energy usage.

(5) Guidelines for efficient resource allocation according to the energy management procedures.

In additions, the owners of designated factories and designated buildings shall communicate and publicize the energy conservation policies within the designated factories or designated buildings so the relevant parties realize and follow such energy conservation policies.

7.4 Provision of Evaluation of Energy Conservation Potential

The owners of designated factories and designated buildings shall evaluate the energy conservation potential by examining and evaluating the significant energy usage for every activity incurred in the designated factories or designated buildings. It starts from collection of data about production and services and data about energy usage in machinery and equipment, and overall image about the energy usage in designated factories and designated buildings. This will lead to the evaluation of energy usage at the organization, product or service, and machinery and equipment level. The evaluation shall comply with the criteria and procedures identified on the notification of Ministry of Energy Re : Criteria and Procedures about Energy Management Procedures in Designated Factories and Designated Buildings B.E.2552.

7.5 Provision of Energy Conservation Goals and Plans

The owners of designated factories and designated buildings shall identify the energy conservation goal and plans by identifying % of the current amount of energy used or level of energy usage per unit of products or services, and mentioning period of time for goal achievement. The energy conservation plan shall at least consist of period of time, investment, and expected outcome. This action shall comply with the criteria and procedures identified on the notification of Ministry of Energy Re : Criteria and Procedures about Energy Management Procedures in Designated Factories and Designated Buildings B.E.2552.

In additions, the owners of designated factories and designated buildings shall provide training plans and arrange activities for energy conservation promotion and request the employees within the designated factories and designated buildings to participate in the training and activities continuously in order to provide knowledge and generate awareness regarding the impacts from energy usage and publicize this information among employees.

7.6 Provision of Control, Supervision, Examination, and Analysis of Compliance with Energy Conservation Goals and Plans

The owners of designated factories and designated buildings shall control and supervise the compliance with energy conservation plan, and shall examine and analyze the compliance with energy conservation goals and plans according to the criteria and procedures identified on the Notification of Ministry of Energy Re : Criteria and Procedures about Energy Management within Designated Factories and Designated Buildings.

7.7 Provision of Audit and Evaluation of Energy Management

The owners of designated factories and designated buildings shall audit and evaluate the energy management in designated factories and designated buildings at least once a year according to the criteria and procedures identified on Notification of Ministry of Energy Re : Criteria and Procedures about Energy Management within Designated Factories and Designated Buildings.

7.8 Provision of Review, Analysis and Correction of Defects on Energy Management

The owners of designated factories and designated buildings shall review, analyze, and correct the defects of energy management at least once a year according to the criteria and procedures identified on Notification of Ministry of Energy Re : Criteria and Procedures about Energy Management within Designated Factories and Designated Buildings.

7.9 Audit and Certification of Energy Management and Submission of Report

The owners of designated factories and designated buildings shall audit and certify the energy management by the certified energy management auditors on the list provided by Department of Alternative Energy Development and Efficiency according to the ministerial regulation regarding the identification of the qualification of persons who are qualified to be certified energy management auditors, and criteria, procedures, and conditions for obtaining the certificate, approval, and the renewal of certificate and submit the report to Director – General of Department of Alternative Energy Development and Efficiency within March of every year, except that in the previous year, the owners of designated factories and designated buildings possess the period for energy management as identified on this ministerial regulation until 31 December less than 180 days. The owners of designated factories and designated buildings shall submit the audit report and certify the energy management of such period to Director – General of Department of Alternative Energy Development and Efficiency within March next year.

The audit report and certification of energy management shall be submitted in hard copy with CD via the following methods.

(3.1) Submit by themselves

(3.2) Submit via registered mail and the date of registration shall be viewed as the date of submission.

The details of steps and procedures of energy management and the submission of report as mentioned on Clause 7 appear on the manual of energy management system development for designated factories and designated buildings prepared by Department of Alternative Energy Development and Efficiency.

8. Energy Conservation Promotion Fund

The Energy Conservation Promotion Act identifies that the fund named "Energy Conservation Promotion Fund" shall be established in Ministry of Energy in order to be working capital and used for assisting or supporting the energy conservation as follows.

8.1 Source of Fund

The fund consists of cash and assets as follows.

- (1) Fund Transfer from Fuel Oil Fund
- (2) Money remittance from producers, importers, and sellers of fuel oil and gas
- (3) Special fee for electricity usage
- (4) Government Subsidy

(5) Cash or assets obtained from private sectors within and outside the country, foreign government or international organizations

(6) Interests and benefits from this fund

8.2 Objective of the Use of Fund

Section 25 identifies the objective of the use of fund as follows.

(1) To be the working capital, financial assistance, or subsidy for investment and energy conservation or solving environmental problems incurred from the energy conservation of the government agencies or state enterprises.

(2) To be the working capital, financial assistance, or subsidy for private entities for investment and energy conservation or solving environmental problems incurred from the energy conservation

(3) To be the financial assistance or subsidy for government agencies, state enterprises, state enterprises, educational institutes or other private organizations in the following issues.

(3.1) Energy conservation project or project regarding the protection and correction of environmental problems incurred from energy conservation.

(3.2) Research about the development, research and study about the energy conservation, development, and promotion, the protection and correction of environmental problems incurred from energy conservation and the identification of energy conservation policies and plans.

(3.3) Study, training, and meeting about energy

(3.4) Demonstration project or new projects, advertising, communication and public relations about the energy conservation promotion and development and the protection and correction of environmental problems incurred from energy conservation.

(4) To be the administrative expenses for energy conservation promotion according to this Act.

9. Right to Request for Promotion and Assistance from the Fund

The designated factories or designated buildings that need to conserve energy and to provide machinery, equipment, tools, instrument, and supplies for conservation or the producers or sellers of highly efficient machinery or equipment for energy conservation shall be entitled to request for promotion and assistance according to section 40, paragraph 1 as follows.

(1) Request for Exemption of Special Fee for Electricity Usage according to This Act according to Section 40 (1) : The special fee for electricity usage is considered the supervisory measures in terms of the fine for punishment of the owners of designated factories or designated buildings who do not conserve energy according to the ministerial regulation identifying standards, criteria and procedures of energy management in designated factories and designated buildings B.E.2552 issued according to section 9 (1) and section 21 (1). The owners of designated factories and designated buildings shall pay for the special fee for electricity usage to the Energy Conservation Promotion Fund according to section 42, paragraph 1 according to the details in part 10.

(2) Request for Financial Assistance or Subsidy from Energy Conservation Promotion Fund according to this Act (section 40 (2)) : Since one of the main objectives of the establishment of Energy Conservation Promotion Fund is to be the financial assistance or subsidy for the owners of designated factories or designated buildings in the energy conservation according to the law according to the details in section 25.

In additions, the owners of the factories or buildings, government agencies or state enterprises who are not responsible for energy conservation but would like to provide machinery, equipment, tools, instrument or control system for energy conservation shall be entitled to request for promotion and assistance.

10. Payment of Special Fee for Electricity Usage and Appeal

In addition to the supervisory measures in terms of the fine for punishment, this Act also identifies "Special Fee for Electricity Usage" for the owners of designated factories or designated buildings who do not conserve energy according to the ministerial regulation identifying standards, criteria and procedures of energy management in designated factories and designated buildings B.E.2552 issued according to section 9 (1) and section 21 (1) shall pay for special fee for electricity usage according to section 42, paragraph 1.

Such special fee for electricity usage shall be collected from the designated factories or designated buildings according to the amount of electricity purchased or obtained from Electricity Generating Authority of Thailand, Metropolitan Electricity Authority, or Provincial Electricity Authority according to section 42, paragraph 2 at the rate specified by the Committee

of Energy Conservation Promotion Fund with the approval of the National Energy Policy Council according to section 43, paragraph 1.

In case that the special fee for electricity usage needs to be collected, the Director – General of Department of Alternative Energy Development and Efficiency shall issue the letter to the owners of the designated factories or designated buildings to notify the payment of special fee for electricity usage and shall identify that the payment of special fee for electricity usage shall be effective from the first date of the following month after the date that the Director – General notifies such owners. The Electricity Generating Authority of Thailand, Metropolitan Electricity usage from the designated factories or designated buildings who purchased or obtained the electricity from them and the monthly electricity expenses at the same time, and shall submit to Energy Conservation Promotion Fund within 30 days from the date that they receive special fee for electricity usage according to section 44.

When the designated factories or designated buildings have to pay the special fee for electricity usage, the Committee of Energy Conservation Promotion Fund shall temporarily withdraw the right to request for the promotion and assistance from the designated factories or designated buildings or shall withdraw or reduce the promotion or assistance temporarily in case that such designated factories or designated buildings have already received the promotion and assistance deemed as appropriate according to section 45.

If the owners of designated factories or designated buildings who obtain the letter to inform the payment of special fee for electricity usage disagree with the letter, shall appeal to Minister of Energy within 30 days from the date of receiving the letter. Such appeal shall not relax the enforcement according to the law, except that the Minister believes that it is appropriate to relax the enforcement of the law temporarily according to section 51. The Minister shall finish the appeal immediately and the decision of the Minister shall be final according to section 52.

11. Penalties

The Energy Conservation Promotion Act is the law focusing on the promotion and assistance to the designated factories and designated buildings. However, in order to enforce this Act, it is necessary to identify the penalties in terms of the fine for people who do not follow the law. For instance, the owners of designated factories or designated buildings do not manage the energy as identified on the ministerial regulation, the owners do not notify the appointment of personnel responsible for energy, the certified energy management auditors report inaccurate audit outcomes, etc. The penalties for violators of this Act and the second-class law of this Act are as follows.

Types of Violation		Penalties
1. Any owners of desi	gnated factories inform	
inaccurate details	or reasons for the	Shall be imprisoned for no more than 3
request to the Direc	ctor - General to delay	months or shall be fined for no more than
the compliance with	h this Act according to	150,000 Baht or both (section 53).
section 8, paragraph	ı 3.	
2. The owners of d	esignated factories or	
designated building	gs who do not follow	
the order of Directo	or - General according	
to section 10 and se	ection 21 to order such	Shall he fined for up more than 50,000 Daht
persons to inform	the facts about energy	Shall be fined for no more than 50,000 Baht
usage for the audit	of energy conservation	(section 54).
according to the s	standards, criteria, and	1 ADY
procedures identifi	ed on the ministerial	
regulation.		
3. Any owners of desig	nated factories, owners	A OF
of designated bu	ildings, or personnel	
responsible for energy	rgy who do not follow	
the ministerial regu	lation issued according	
to section 9 or section	on 21 as follows.	
- The identification	of standards, criteria,	
and procedures fo	r energy management	
for the owners of	designated factories or	Shall be fined for no more than 200,000 Baht
owners of designate	ed buildings.	(section 55).
- The owners of d	esignated factories or	
designated build	ings shall provide	
personnel responsi	ble for energy within	
each designated t	factory or designated	
building and	shall identify the	
qualifications and	duties of personnel	
responsible for ener	gy.	
4. Any certified energy	y management auditors	Shall be imprisoned for no more than 3
who certify the en	ergy management, the	months or fined for no more than 200,000
energy usage in ma	achinery or equipment,	Baht or Both (section 56).

Types of Violation	Penalties			
and quality of materials or equipment for				
energy conservation according to section				
48/1 report inaccurate or false audit and				
certification outcomes.				
5. Any persons do not remit the money / cash				
into the fund or do not completely remit	Shall be imprisoned from 3 months to 2 years			
the money / cash into the fund according	or shall be fined from 100,000 Baht to			
to the specified amount on section 35,	1,000,000 Baht or both (section 58).			
section 36, or section 37.				
6. Any persons impede or do not facilitate the officers who perform their legal duties	Shall be fined for no more than 5,000 Baht (section 60).			
according to section 47 (2).	(section oo).			
Unother and the				

Appendix A

Energy Conservation Promotion Act

B.E. 2535

(Amended)

THE ENERGY CONSERVATION PROMOTION ACT,

B.E. 2535

BHUMIBOL ADULYADEJ REX. Given on the 2nd day of April proclaim B.E. 2535 Being the 47th year of the Present Reign

His Majesty King Bhumibol Adulyadej has been graciously pleased to proclaim that Whereas it is deemed appropriate to enact an Energy Conservation Promotion law, His Majesty the King, by and with the advice and consent of the National Assembly in the capacity as Parliament, is graciously pleased to enact an Act as follows:

Section 1 : This Act is called "Energy Conservation Promotion Act, B.E.2535".

Section 2^1 : This Act shall come into force on the day following the date of its publication in the Government Gazette.

Section 3 : In this Act,

"Energy" means ability to ability to perform work that is inherent in the sources that may provide work, consisting of renewable energy and non renewable energy, and includes sources that may provide work such as fuels, heat, and electricity

"Renewable Energy" includes energy obtained from sources such as: wood, firewood, paddy husk, bagasse. biomass, hydro power, solar power, geothermal power, wind power, waves and tides.

"Non-Renewable Energy" includes energy from sources such as: coal, oil shale, tar sands, crude oil, oil, natural gas, and nuclear power.

¹ Government Gazette Volume 109 / Part 33 A / Page 1/2 April 1992

"Fuels" includes: coal, oil shale, tar sands, oil, natural gas, fuel gas, synfuels, wood, firewood, paddy husk, bagasse, garbage, and other materials designated in the Government Gazette by the National Energy Policy Council.

"Petroleum" means gas, gasoline, fuel for aircraft, kerosene, diesel oil, fuel oil, and other oils similar to the above-mentioned and other petroleum products de signated in the Government Gazette by the National Energy Policy Council.

"Gas" means liquefied petroleum gas used for cooking, or liquefied hydrocarbon gases, i.e. propane, propylene, normal butane, iso-butane and butylenes, each of, or a combination of these gases.

"Refinery" means a petroleum refinery, a place where petroleum products are produced and sold. The term also includes a gas separation plant, and petro-chemical and solvent plants

"The National Energy Policy Council" means the National Energy Policy Council under the National Energy Policy Council Act.

"Energy conservation" means to produce and use energy efficiently and economically.

"Inspect" means survey, audit and collect data.

"Factory" means a factory under the laws governing factories.

"Factory Owner" includes those who are responsible for the management of the factory.

"Building" means a building under the Building Code.

"Fund" means fund for promotion of energy conservation.

"Fund Committee" means the Committee of the Fund for promotion of energy conservation.

"Competent officer" means an officer appointed by the Minister for the execution of work under this Act.

"Director General" means the Director General of the Department of Alternative Energy Development and Efficiency or a person assigned by the Director General of the Department of Alternative Energy Development and Efficiency.

"Minister" means the Minister of Ministry of Energy.

Section 4 : For the benefit of promotion of energy conservation under this Act, the National Energy Policy Council shall have the following authority and duties.

(1) To propose to the Cabinet policies, targets, or measures with respect to energy conservation.

(2) To propose to the Cabinet the making of decrees under Section 8 and Section 18.

(3)² To provide advice in issuing Ministerial Regulations according to Section 9, Section 19, Section 21 and Section 23.

(4) To prescribe guidelines, criteria, and priorities for the use of the Fund under 28 (1)

Section 28 (1)

(5) To prescribe the types of petroleum that are not required to send contributions to the Fund under Section 28 (5).

(6) To prescribe the rates of the contribution to be sent to the Fund for petroleum under Section 35, Section 36 and Section 37.

(7) To approve a surcharge under Section 43.

(8) To prescribe guidelines, criteria, and conditions in providing promotion and assistance for factories, buildings, producers or distributors of machinery or equipment which has high efficiency, and to manufacturers or distributors of materials used for energy conservation under Section 40.

(9) To carry out other duties as stipulated under this Act.

Prescriptions under (5) and (6) shall be made in the Government Gazette.

Section 5 : The Competent officer shall deliver a written notice or instruction addressed to any person for the purpose of the execution of this Act between sunrise and sunset or during working hours of the said person, or he shall send the same by certified mail.

In the event that for any reason, delivery cannot be made in the manner prescribed in Clause one hereof, the notice or instruction shall be delivered by posting them at a conspicuous spot at the place of residence, office, or at the house where the addressee is latest registered in the House Registration Certificate, under the laws that govern the census records; or a short announcement may be made in a local newspaper of such area.

 $^{^2}$ Section 4 (3) amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

After delivery in the manner prescribed in Clause two hereof has been made and seven days have passed, such notice or instruction shall be deemed as received.

Section 6^3 : The Prime Minister, the Minister of Ministry of Energy, the Industry Minister, the Finance Minister, and the Interior Minister shall have the care and charge of the Act, On the parts that are relevant to their authority and duties.

The Minister of Ministry of Energy has power to appoint competent official and issue Ministerial Regulation or Notification and has power to prescribe other activities to comply with this Act.

Such Ministerial Regulation and Notification, when they have been published in the Government Gazette, shall be enforceable.

DIVISION 1

ENERGY CONSERVATION IN FACTORIES

Section 7 : Energy conservation in factories means one of the following measures.

- (1) Improvement in combustion efficiency of fuels.
- (2) Prevention of energy loss.
- (3) Recycling of energy wastes.
- (4) Substitution of one type of energy by another type.

(5) More efficient use of electricity through improvements in power factors, reduction of maximum power demand during the period of the electricity system's peak demand, use of appropriate equipments, and through other approaches.

(6) The use of energy-efficient machinery or equipment as well as the use of operation control systems and materials that contribute to energy conservation.

(7) Other means of energy conservation as stipulated in the Ministerial

Regulations.

³ Section 6 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

Section 8 : Designation of factories, by types, quantities of energy use, or methods of energy utilization, as being "designated factories", shall be made into decrees. The decrees under Clause one hereof, shall come into effect one hundred and twenty days after its publication in the Government Gazette.

Should the owner of any designated factory which is using energy at a level lower than the quantity prescribed in the decrees under Clause one hereof, and will continue to use energy at the said level for a minimum of six consecutive months, the said owner of the such designated factory may submit details together with reasons and file an appeal to the Director General for leniency with respect to having to comply with this Act at all times. In the event that the said appeal has been filed, the Director General shall decide whether such leniency may or may not be granted, and shall notify the owner of the designated factory of the decision in writing promptly.

Section 9⁴: For purpose of conserving energy in a controlled factory, the Minister, by advice of the National Energy Policy Committee, shall have power to issue Ministerial Regulations in the following matters:

(1) To establish standard, criteria and procedures in managing energy that must be followed by owner of the controlled factory.

(2) To stipulate that owner of the controlled factory must provide a person, who will be the permanent responsible person for energy in each controlled factory as well as to prescribe qualifications and duties of the person, who will be permanently responsible for the energy.

The Ministerial Regulation according to paragraph one shall prescribe which type, kind or size of controlled factory can be exempted from complying with any matter and such Ministerial Regulation and such Ministerial Regulation can also prescribe technical, academic details or other matters, which are the matters that can be changed rapidly according to economic and social condition, to comply with criteria, which the Minister prescribes by publishing in the Government Gazette.

Section 10 : In the event that there are reasonable causes, the Director General may give an instruction to the owner of any designated factory, to furnish factual information on energy utilization for the purpose of inspection, to assure that energy conservation measures are in accordance with the standard, criteria and procedures provided under the Ministerial Regulations issued under Section 9, and the said owner of designated factory must comply within thirty days starting from the date of receipt of such instruction.

⁴ Section 9 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

Section 11⁵ Section 12⁶ Section 13⁷ Section 14⁸ Section 15⁹ Section 16¹⁰

DIVISION 2

ENERGY CONSERVATION IN BUILDINGS

Section 17: Energy conservation inside the buildings means one of the following measures :

- (1) Reduction of heat from the sunlight that enters the building.
- (2) Efficient air-conditioning, including maintaining room temperature at an

appropriate level.

(3) Use of energy-efficient construction materials and demonstration of qualities

of such materials.

- (4) Efficient use of light in the building.
- (5) Use and installation of machinery, equipment, and materials that contribute to

energy conservation in the building.

(6) Use of operation control systems for machinery and equipment.

(7) Other measures for energy conservation as prescribed in the Ministerial

Regulations.

⁵ Section 11 revoked by the Energy Conservation Promotion Act (No.2) B.E. 2550.

⁶ Section 12 revoked by the Energy Conservation Promotion Act (No.2) B.E. 2550.

⁷ Section 13 revoked by the Energy Conservation Promotion Act (No.2) B.E. 2550.

⁸ Section 14 revoked by the Energy Conservation Promotion Act (No.2) B.E. 2550.

⁹ Section 15 revoked by the Energy Conservation Promotion Act (No.2) B.E. 2550.

¹⁰ Section 16 revoked by the Energy Conservation Promotion Act (No.2) B.E. 2550.

Section 18 : Designation of any building as a designated building, by types, quantities of energy use and methods of energy utilization in such building, shall be made into decrees.

Provisions of Clause two and Clause three of Section 8 shall apply mutatis mutandis.

Section 19¹¹: For purpose of conserving energy in a building, which is being constructed or being modified, the Minister by advice of the National Energy Policy Committee, shall have power to issue Ministerial Regulation in the following matters:

(1) To prescribe type and size of building, which will be constructed and modified. This must be designed for energy conservation.

(2) Standard, criteria and procedures in designing the building according to (1) for energy conservation.

Ministerial Regulation according to paragraph one shall prescribe technical, academic details or other matters, which are the matters that can be changed rapidly according to economic and social condition, to comply with criteria, which the Minister prescribes by publishing in the Government Gazette.

Section 20 : In issuing the Ministerial Regulation under Section 19, if the Building Control Committee under the laws governing control of buildings deems it appropriate to impose such regulations on control of buildings, under the laws governing control of building; such Ministerial Regulations shall be treated as having the same effects as the Ministerial Regulations issued under Section 8 of the Building Code, B.E. 2522. In this event the authorized persons under the laws governing control buildings, shall have the authority and duties to oversee that construction or modification of such building is in accordance with the said Ministerial Regulations.

In this case, even though the building that may by classified as a designated building, is in the location where there are still no decrees to enforce the laws governing control of buildings, such building shall still be considered as being under the laws governing the control of buildings. This however, is applicable only to the extent that it is related to and for the benefit of the execution of this Act.

Section 21¹²: For purpose of conserving energy in controlled buildings, the Minister, by advice of the National Energy Policy Committee, shall have power to issue Ministerial Regulation in the following matters:

¹¹ Section 19 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

¹² Section 21 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

 To prescribe standard, criteria and procedures for managing energy that must be followed by owner of the controlled building.

(2) To stipulate that owners of controlled building must provide a person, who will be the permanent responsible person in each controlled building as well as to prescribe qualifications and duties of the person, who will be permanently responsible for energy.

Section 9 paragraph two and Section 10 shall be enforced with compromise.

Section 22¹³

DIVISION 3

ENERGY CONSERVATION IN MACHINE OR EQUIPMENT AND PROMOTION OF USE OF MATERIAL OR EQUIPMENT FOR ENERGY CONSERVATION¹⁴

Section 23¹⁵: For purpose of conserving energy in machine or equipment including promotion of use of material or equipment for energy conservation, the Minister, by advice of the National Energy Policy Committee, shall have power to issue Ministerial Regulation in the following matters:

(1) To prescribe efficiency standard of use of energy in machine or equipment.

(2) To prescribe machine or equipment according to the type, size, volume of

energy consumption, rate of change of energy and efficiency of use of energy and whether it is a highly efficient machine or equipment.

(3) To prescribe material or equipment for energy conservation according to which type, quality and standard, and whether it is the material or equipment for energy conservation.

(4) To prescribe producer and seller of machine or equipment that efficiency rate of use of energy must be shown.

Producer and seller of machine or equipment or material or equipment for energy conservation, which has high efficiency according to paragraph one (2) or (3) has right to apply for promotion and assistance according to Section 40.

8

¹³ Section 22 revoked by the Energy Conservation Promotion Act (No.2) B.E. 2550.

¹⁴ Division 3 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

¹⁵ Section 23 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

Ministerial Regulation according to paragraph one shall prescribe technical and academic details or other matters, which can be changed rapidly according to economic and social condition, to comply with criteria, which the Minister prescribes by publishing in the Government Gazette. If Industrial Standard Committee according to the law concerning industrial standard sees that it is suitable to prescribe standard of industrial product or that which industrial product must comply with the standard concerning efficiency of use of energy prescribed in the Ministerial Regulation issued according to this section, the Industrial Standard Office shall process according to the law concerning standard of industrial products.

DIVISION 4

FUND FOR PROMOTION ENERGY CONSERVATION

Section 24¹⁶: A fund called "Energy Conservation Promotion Fund" shall be established in the Ministry of Energy, to be used as working capital and as grants or subsidy in carrying out energy conservation work. The Fund shall consist of capital and property as follows:

(1) The money transferred from the oil Fund under the laws governing correction and prevention of oil shortages, by the amount prescribed by the Prime Minister.

(2) The contributions delivered under Section 35, Section 36, and Section 37.

- (3) Surcharges collected under Section 42.
- (4) Subsidy from the government, at times as appropriate.

(5) Money or property received from the private sector locally and from overseas, and from foreign governments or international organizations.

(6) Interest and other benefits incurred from this Fund.

The Ministry of Energy shall keep money and property of the fund and to execute withdrawal and payments of money of the fund according to this Act.

Section 24/1¹⁷ : All activities, property, right, liability and money shall be transferred from Energy Conservation Promotion Fund in the Ministry of Finance to the Energy Conservation Promotion Fund according to this Act.

9

¹⁶ Section 24 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

¹⁷ Section 24/1 added by the Energy Conservation Promotion Act (No.2) B.E. 2550.

Section 25 : The fund shall be used as follows:

(1) As working capital, grants, or subsidies for investment in and operations of energy conservation programs, or for solving environmental problems resulting from energy conservation programs of the government agencies or state enterprises.

(2) As working capital, grants or subsidies for the private sector for investment in and operations of energy conservation programs or for correction of environmental problems resulting from energy conservation.

(3) As grants or subsidies to government agencies, state enterprises, educational institutions or private organizations, to be used on the following matters:

(a) Energy conservation programs or programs related to environment protection and correction of the problems of the environment resulting from energy conservation.

(b) Study or research projects on energy development, promotion and conservation, environment protection, and correction of environmental problems resulting from energy conservation, and energy policy and planning.

(c) Demonstration projects or pilot projects on energy conservation or environment protection and correction of environmental problems resulting from energy conservation.

(d) Education, training and conferences with respect to energy.

(e) Advertisements, information dissemination, and public relations work, with regard to energy development, promotion, and conservation, and environment protection and correction of environmental problems arising from energy conservation.

(4) Administrative cost of energy conservation promotion work in accordance

with this Act.

Section 26 : A private organization entitled to grant or subsidy under Section 25 (3) shall be a juristic person under Thai or foreign laws, whose business is directly related to energy conservation or environment protection and correction of environmental problems arising from energy conservation, and which does not have political or profit oriented objectives.

10

Section 27¹⁸: There shall be a Fund Committee consisting of one Deputy Prime Minister, who is assigned by the Prime Minister as Chairman, Minister of Energy, Permanent Secretary of the Ministry of Finance, Permanent Secretary of the Ministry of Energy, Secretary General of the National Economic and Social Development Committee, Secretary General of Industrial Standard Institute, Director General of the Comptroller-General's Department, Director General of the Department of Alternative Energy Development and Efficiency, Director General of Department of Public Works and Town & Country Planning, Director General of the Department of Industrial Works, President of the Federation of Thai Industries, Chairman of Engineer Council, Chairman of Architect Council and not more than seven qualified persons as members of the Committee and Director of the Energy Policy and Planning Office as member and secretary.

In appointing qualified person as committee members in Clause one hereof, consideration shall be given to the person who have the knowledge, expertise, achievements, and experience in economics, finance, energy technology, and promotion and protection of the quality of the environment.

Section 28 : The Fund Committee shall have the following authority and duties:

(1) Propose to the National Energy Policy Council guidelines, criteria, conditions and priorities for disbursement of fund in accordance with the objectives prescribed under Section 25.

(2) Allocated appropriations from the Fund to be used in accordance with the objectives prescribed in Section 25, provided that they conform to the guidelines, criteria, conditions and priorities prescribed by the National Energy Policy Council under Section 4 (4)

(3) Prescribe rules with respect to the criteria and procedures in making requests to allot, and requests for grants and subsidies from the Fund.

(4) Propose the rates of contributions for petroleum to be sent to this Fund to the National Energy Policy Council.

(5) Propose the types of petroleum that shall be exempted from sending contribution to the Fund to the National Energy Policy Council.

(6) Prescribe the surcharges under the approval of the National Energy Policy

Council.

(7) Prescribe the exception of surcharges.

¹⁸ Section 27 paragraph one amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

(8) Review and approve requests for promotion and assistance under Section

40(2) in accordance with the guidelines, criteria and conditions prescribed by the National Energy Policy Council under Section 4 (8)

(9) Prescribe rules with respect to the criteria and procedures in making requests for promotion and assistance under Section 41.

(10) Carry out other duties as prescribed under this Act.

Prescriptions under (3), (7) and (9) shall be made in the Government Gazette.

Section 29 : Qualified members shall hold office for a term of three years. A member who has left office may be reappointed.

Section 30 : Apart of leaving office upon completion of the term under Section 29, a qualified member shall retire from his office upon.

- (1) death;
- (2) resignation;
- (3) being dismissed by the Cabinet on the grounds of negligence, dishonesty, or

incompetence;

- (4) being adjudged as bankrupt;
- (5) being adjudged incompetent or quasi-incompetent;

(6) being convicted and sentenced by a final judgement to imprisonment, except for offenses committed by negligence or petty offenses.

Section 31 : In the event of appointment of qualified member during the term of appointed members, whether it be an additional appointment or an appointment to fill the vacancy, the newly appointed member shall hold office for the remainder of the term the appointed members.

Section 32 : In the event that the appointed member has completed the term and a new member has not yet been appointed, the retired member shall continue to perform his duties until a new member is appointed.

Section 33 : At any meeting of the committee, attendance of not less than half of the total membership shall be required to constitute a quorum. In the event that the Chairman is absent from the meeting, the members present shall elect on among themselves to be the Chairman of that meeting.

Any decision of the meeting shall be taken by a majority of votes. In the event of a tie, the Chairman shall cast on extra vote to reach a decision.

Section 34¹⁹: Fund Committee shall have power to appoint Sub-committee to consider or act as assigned by the Fund Committee as well as to invite a person to come and give statement on the fact, explanation, advice or opinion for benefit in performing duties as necessary.

In appointment of Sub-committee to consider or act according to Section 28 (2), the Fund Committee may empower the Sub-committee in approving request for change of fund appropriation for activity, plan or project to the extent that it does not exceed the limit appropriated by the Fund Committee and must comply with the rules prescribed by the Fund Committee.

The Sub-committee appointed by the Fund Committee according to paragraph one shall invite a person to come and give statement on fact, explanation, advice or opinion for benefit in acting according to authority and duty as necessary and Section 33 shall be enforced for the meeting of Sub-committee by compromise.

Section $34/1^{20}$: Receiving money, paying money, keeping money, selling of properties of the fund and accounting shall be in accordance with the rules prescribed by the Committee and approved by the Ministry of Finance.

Section $34/2^{21}$: The Fund Committee shall make financial statement to submit to the Office of the Auditor General of Thailand or third-party person, who is appointed by the Fund Committee with approval of the Office of the Auditor General of Thailand as auditor of the Fund and shall make audit and certification of all types of account and finance of the Fund within ninety days from the ending day of every fiscal year.

The Office of the Auditor General of Thailand or auditor according to paragraph one shall make report of result of audit and certify account and finance of the Fund and propose to the Fund Committee within one hundred fifty days from the ending day of fiscal year to propose to the National Energy Policy Committee and the Cabinet for information.

¹⁹ Section 34 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

²⁰ Section 34/1 added by the Energy Conservation Promotion Act (No.2) B.E. 2550.

²¹ Section 34/2 added by the Energy Conservation Promotion Act (No.2) B.E. 2550.

Report of result of audit of account and finance according to paragraph two, the Minister shall propose to the Prime Minister to propose to the Parliament for acknowledgement and to arrange for publication in the Government Gazette.

Section 35 : The person who produces petroleum at a refinery and sells it for consumption in Thailand must send contributions to the Fund in proportion with the quantities of petroleum produced and sold for consumption in Thailand , at the rates prescribed by the National Energy Policy Council.

Contributions to be given to the Fund under Clause one hereof shall be sent to the Excise Department together with payment for excise taxes for petroleum, if any, in accordance with the rules prescribed the Excise Department.

Section 36 : Importers of petroleum for consumption in Thailand shall send contributions in proportion to the quantities of imported petroleum for consumption in Thailand at the rates prescribed by the National Energy Policy Council.

Contributions to be made under clause one hereof shall be sent the Customs Department together with payment of duties for such petroleum, if any, under the rules prescribed by the Customs Department.

Section 37 : Whoever buys or obtains gas from a concessionaire under the laws that govern petroleum, who produces such gas from separation of natural gas, shall send contributions to the Fund at the rate prescribed by the National Energy Policy Council.

Contributions to be sent to the Fund under Clause one hereof shall be sent to the Department of Mineral Fuels together with payment of royalty for such gas, if any under the rules prescribed by the Department of Mineral Fuels.

Section 38^{22} : In case person who has duty to surrender money to the Fund according to Section 35, Section 36 or Section 37 does not surrender money to the Fund or surrenders incomplete amount of money, which he must surrender in specified time period, to the Excise Department for person, who produces fuels at refinery and sells for use in the Kingdom or to the Customs Department for fuels importer or to the Department of Mineral Fuels for person, who buys or acquires gas from person, who has concession according to the law concerning petroleum, the Excise Department or the Customs Department or the

²² Section 38 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

Department of Mineral Fuels, depending on the case, shall process case according to Section 58 quickly, except in the following cases:

(1) In case such person sees by himself that he has such case, such person shall surrender payable amount or omitted amount of money together with three percents per month of surcharge of that amount from the due date of payment to the Fund until completion of the amount to the Department of Excise, the Department of Customs or the Department of Mineral Fuels, depending on the case.

(2) In case that the Department of Excise, the Department of Customs or the Department of Mineral Fuels, depending on the case, checks and finds that there is such case, the Department shall, in writing, notify the person, who has duty to surrender money to the Fund, to surrender money to the Fund within given time and such person has surrendered the amount of money, which he must surrender or omitted amount together with six percents per month of such amount from the due date for surrendering to the Fund, until completion, to the Department of Excise, the Department of Customs or the Department of Mineral Fuels, depending on the case, within given time period.

When the person who has duty to surrender money to the Fund, has executed as specified in (1) or (2), such person is not guilty.

The surcharge shall be deemed as money, which must be surrendered to the Fund. In calculating time period for calculation of surcharge according to (1) or (2), if there is fraction of month, it shall be counted as one month.

Section 39 : Contributions to the Fund under Section 35, Section 36, and Section 37 shall be regarded as expenses under the Code of Revenue.

DIVISION 5

MEASURES FOR PROMOTION AND ASSISTANCE

Section 40 : The designated factory of designated building which is required to have an energy conservation program together with machinery, equipment, tools, articles and materials essential for such a program, or a producer or distributor of machinery or equipment which has high efficiency, or materials to be used in the energy conservation programs, shall have the right to request for promotion and assistance as follows:

- (1) exemption from paying surcharges under this Act.
- (2) grant or subsidy from the Fund under Section 25.

Owners of factories, buildings, or government agencies and state enterprises which ate not required to have energy conservation programs under Clause one hereof, but desire to make provisions for machinery, equipment, tools, articles, or operation control systems of their own for the purpose of energy conservation, shall have the right to request for promotion and assistance under Clause one hereof.

Section 41 : Requests for promotion and assistance under Section 40 shall be submitted to the Fund Committee in Accordance with the rules prescribed by the Committee. In considering the requests under Clause one, the Fund Committee may employ any person or organization who is an expert or has expertise on the matter to study and report or give opinion in addition to its own consideration.

The Fund Committee shall review and approve the requests for promotion and assistance according to the guidelines, criteria, and conditions prescribed by the National Energy Policy Council under Section 4 (8), and shall inform the government agencies concerned to act upon the resolution of the Fund Committee with respect to providing promotion or assistance to the persons whose requests have been approved

The Energy Development and Promotion Department shall have the duty to follow-up and assure that the persons who are granted promotion and assistance, shall execute their operations as stated in Clause three hereof, and to report to the Fund Committee.

DIVISION 6

SURCHARGES

Section 42^{23} : When three years have elapsed from the effective date of the Ministerial Regulation issued according to Section 9 (1) or Section 21 (1), in case it has been controlled factory or controlled building before or on effective date of such Ministerial Regulation or from the date of being controlled factory or controlled building in case of being controlled factory or controlled building after the effective date of such Ministerial Regulation, if owner of the controlled factory or owner of the controlled building does not comply with such Ministerial Regulation, the owner must pay special premium for using electricity according to this Chapter.

²³ Section 42 paragraph one amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

The surcharges for use of electricity under Clause one hereof shall be collected from the designated factory or designated building according to the quantities bought or acquired from EGAT, MEA, or PEA, and such surcharges shall be imposed upon in the same manner as payment for use of electricity under the laws governing EGAT, the laws governing the MEA, or the laws governing the PEA whichever is the case.

Section 43 : The Fund Committee, with the approval of the National Energy Policy Council, shall prescribe the rates of the surcharges for the use of electricity.

In prescribing the surcharge rates for the use of electricity under Clause one hereof, consideration shall be given to the differences between the rates payable to EGAT, MEA, or PEA by the designated factory or designated building and total inclusive cost of production and distribution in providing such quantities of electricity to the designated factory or designated building. The total inclusive cost under Clause two hereof means the cost of power production and distribution systems, the cost in procuring fuels for power generation maintenance cost, administrative cost, the cost of power loss in the system, and other miscellaneous cost in the electricity operations, as well as the cost of impacts on the environment or on the general public which arise from production and distribution of such electricity which have not been directly incurred by EGAT, MEA, or PEA.

Section 44 : In the event that the surcharge for the use of electricity under Section 42 must be collected, the Director General shall inform the owner of the designated factory or designated building who must pay for such surcharge in writing, and the obligation to make payments for such surcharge shall take effect on the first day of the following month counting from the date of being informed by the Director General.

EGAT, MEA, or PEA each shall collect payment for the surcharge for use of electricity from the designated factories on designated buildings that bought or acquired electricity from them, together with monthly payments for regular use of electricity, and deliver to the Fund within thirty days after the dates of receipt of the surcharges.

Section 45 : During the period when the designated factory and designated building must remit payment for the surcharges for use of electricity under this Division, the Fund Committee, as it deems appropriate, may consider termination of the right to request for promotion and assistance of that designated factory or designated building temporarily, or may reduce the promotion or assistance temporarily, in the case that such designated factory or designated building has already been granted promotion and assistance.

Section 46^{24} : After the designated factory or designated building. With must remit payment for the surcharge for use of electricity, has already complied with the Ministerial Regulations issued under Section 9 (1) or Section 21 (1), it shall inform the Director General accordingly.

The Director-General shall examine and shall complete examination within thirty days from the date of receipt of notification that such controlled factory or controlled building whether complies with the Ministerial Regulation issued according to Section 9 (1) or Section 21 (1) or not. In case there has been compliance with such Ministerial Regulation, the Director-General shall order cessation of collection of special premium for use of electricity and notify in writing for acknowledgement of the controlled factory or controlled building.

Order for cessation of special premium collection for use of electricity according to paragraph two shall be effective on the first day of the following month.

DIVISION 7

COMPETENT OFFICERS

Section 47 : In the execution of this Act, the competent officer shall have the power to:

(1) Issue a written notice to the owner of the designated factory or designated building asking him to furnish statements of facts in person, or to submit written explanation, or to furnish any document or evidence, for the competent officer to inspect or consider.

(2) To enter upon a designated factory or designated building between sunrise and sunset or during working hours of such place for the purpose of inspection or execution of this Act. In this case, he shall have the power to make enquiries about or inspect the records on conditions of the factory, building, machinery and equipment, and other matters related to energy conservation in the factory and building, including the execution of work of any person in such place. He shall also have the authority to inspect the machinery and equipment or take as samples reasonable quantities of materials for tests.

 $(3)^{25}$ To check and certify management of energy, use of energy in machine or equipment and quality of material or equipment for conservation of energy to comply with this Act.

²⁴ Section 46 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

²⁵ Section 47 (3) added by the Energy Conservation Promotion Act (No.2) B.E. 2550.

Section 48 : The owner of the designated factory or designated building as well as other persons concerned shall accord facility to the competent officer who is executing his duties under Section 47 (2)

Section $48/1^{2^6}$: In case there must be checking and certifying of management of energy, use of energy in machine or equipment and quality of material or equipment for conservation of energy according to Section 47 (3), the Director-General may grant a person or a juristic person to be processor on behalf of the competent official.

Specification of qualifications, application for license, granting and renewal of license of a person or a juristic person shall comply with the rules, procedures and conditions prescribed in the Ministerial Regulation.

Section $48/2^{27}$: Any licensee according to Section 48/1 makes report of checking and certifying, which is false or which is not coincident with the fact and the court has made final judgment to punish according Section 56 of this Act, the Director-General shall revoke the license.

Section 48/3²⁸ : In case a licensee according to Section 48/1 is sued with a court for committing an offense according to Section 56 of this Act, the Director-General shall also have power to order suspension of license pending final judgment.

The licensee, whose license is being suspended, is prohibited to operate business according to such license.

Section $48/4^{29}$: The licensee, whose license is being suspended, has right to appeal to the Minister within thirty days from the date of acknowledgement of the order.

The order of the Minister shall be final.

Appeal to Minister shall not be a cause for an abatement of enforcement of license suspension.

Section 49 : In performing duty, the competent official must show identification card to concerned persons.

The I.D. Card of the competent officer shall be in accordance with the form prescribed in the Ministerial Regulations.

 $^{^{26}}$ Section 48 /1 added by the Energy Conservation Promotion Act (No.2) B.E. 2550.

²⁷ Section 48 /2 added by the Energy Conservation Promotion Act (No.2) B.E. 2550.

²⁸ Section 48 /3 added by the Energy Conservation Promotion Act (No.2) B.E. 2550.

²⁹ Section 48 /4 added by the Energy Conservation Promotion Act (No.2) B.E. 2550.

DIVISION 8

APPEALS

Section 50 : The person who has been informed in writing, of the decision under Section 8, Clause three, who does not consent to the decision, may appeal to the Minister within thirty days of the date of being informed.

In this case, Department of Alternative Energy Development and Efficiency shall suspend any action until the Minister has made a decision and the appellant has already been informed of such decision.

Section 51 : The person who received a notice under Section 44, Clause one, who does not consent to the decision, may appeal to the minister within thirty days of the date of having been informed.

The appeal shall not be the cause to suspend lawful enforcement, except when the Minister deems appropriate to suspend lawful enforcement temporarily.

Section 52 : The Minister shall take prompt actions on the proceedings of the appeal under Section 50 and Section 51.

The decision of the Minister shall be treated as final.

DIVISION 9

PUNISHMENT

Section 53 : The owner of any designated factory who furnishes false information or false reasons under Section 8, Clause Three, shall be punished with imprisonment of not exceeding three months and a fine of not exceeding one hundred and fifty thousand Baht, or both.

Section 54 : Any owner of a designated factory who fails to comply with the instruction of the Director General under Section 10, or any owner of the designated building who fails to comply with the instruction of the Director General under Section 10, which applies mutatis mutandis under Section 21, shall be punished with a fine of not exceeding fifty thousand Baht.

Section 55³⁰ : Any owner of controlled factory, owner of controlled building or a person, who is responsible for energy does not comply with the Ministerial Regulation issued according to provision in Section 9 or Section 21, shall be punished by a fine of not exceeding two hundred thousand baht.

Section 56^{31} : Any licensee for checking and certifying management of energy, use of energy in machine or equipment and quality of material or equipment for energy conservation according to Section 48/1 reports result of checking and certifying according to Section 47 (3), which is false or is not coincident with the fact must be punished by not exceeding three month imprisonment or a fine of not exceeding two hundred thousand baht or both.

Section 57³²

Section 58 : Any person who fails to send contributions to the Fund, or sends less than the full amount of contributions to the Fund, under Section 35, Section 36, or Section 37, shall be punished with imprisonment of three months to two years, or a fine of one hundred thousand Baht to ten million Baht, or both.

Section 59 : Whoever obstructs or fails to accord facility to the competent officer in the execution of his duties under Section 47 (2) shall be punished with a fine of not exceeding five thousand Baht.

Section 60 : In the event that the person who has committed an offence and shall be punished under this Act is a juristic person, the director or manager of such juristic person, or a person responsible for carrying out the business of such juristic person, shall also be punished likewise, unless he can prove that he has not part in committing such an offence.

Section 61 : For any offence under this Act, the committee appointed by the Minister to settle the case, consisting of three law experts chosen from among government officials, shall have the power to settle the case. When the offender has paid the fine for the amount to be settles, within the limit of time determined by the Committee, the case shall be considered settled under the Criminal Procedure Code.

³⁰ Section 55 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

³¹ Section 56 amended by the Energy Conservation Promotion Act (No.2) B.E. 2550.

³² Section 57 revoked by the Energy Conservation Promotion Act (No.2) B.E. 2550.

During the inquiry, if the inquiry officials finds that any person commits an offence under this Act, and such person consents to settle the case, the inquiry official shall refer the case to the Committee under Clause one hereof, within seven days counting from the date such person has shown consent

to settle the case

Countersigned by Mr. Anand Panyarachun Prime Minister

Appendix B

Royal Decree

On Designated Building

B.E. 2538

ROYAL DECREE ON DESIGNATED BUILDINGS B.E. 2538

Bhumibol Adulyadej ; Rex. Given on the 17th. July, B.E. 2538 Being the 50th. year of the present Reign

By command of His Majesty the King bhumibol Adulyadej that,

Whereas it is expedient specify certain types of buildings to be designated buildings for energy conservation purposes,

By virtue of Section 178 of the Constitution of the Kingdom of Thailand, amended by the Constitution of the Kingdom of Thailand Amendment (5th edition), B.E. 2538 and Section 18, Paragraph 1, of the Energy Conservation Promotion Act, B.E. 2535, this Royal Decree is hereby enacted by the King as follows.

Section 1: This Royal Decree shall be called "Royal Decree on Designated Buildings, B.E. 2538"

Section 2 : This Royal Decree shall come into force after completion of a 120 day period from the date of its publication in the Royal Gazette.

Section 3: Buildings which are not the royal buildings or palaces, embassies or consulates, offices of international organizations or any which is established by the agreement between the Thai and foreign governments, ancient places, temples or buildings for religious purposes which are already governed by other specific laws for construction control, and meet the following conditions, shall be designated buildings:

(1) A building or buildings under same address which are allowed by any energy distributor to install electricity metering device, or to install one or more transformers whose combined capacity is 1,000 kilowatts or 1,175 kilovolt-amperes and up. (2) A building or buildings under same address which consume commercial energy including electricity and steam as from January 1, to December 31 of the past year in total volume of energy of 20 million megajoules or more of electrical energy equivalent.

Section 4 : Calculation of energy consumption pursuant to Section 3 (2) shall be made in unit of megajoule as per the followings:

(1) For electricity, the total electricity consumption in kwhr must be multiplied by 3.60.

(2) For heat from steam, the heat from steam must be converted by using the following formula:

$$\mathbf{E}_{\rm s} = (\mathbf{h}_{\rm s} - \mathbf{h}_{\rm w}) \mathbf{x} \mathbf{S} \mathbf{x} \mathbf{e}_{\rm ff}$$

 $E_{\rm s}\,$ means Volume of heat from steam in unit of megajoule/year of electrical energy equivalent.

 h_s means Enthalpy Value of steam consumed in unit of megajoule/ton derived from any general steam table.

 h_w means Enthalpy of water at 27 degrees Celsius at atmospheric pressure which is hereby valued at 113 megajoule/ton.

S means the amount of steam consumed in unit of ton/year shown from the steam flow meter at the building.

 $e_{\rm ff}$ means Efficiency Factor of conversion from heat to an equivalent electrical energy, which is hereby valued at 0.45.

(3) For other commercial energy, the amount of commercial energy must be converted by using the following formula:

$$E_f = Fx HHV x e_{ff}$$

 $E_{\rm f}$ means Volume of heat from other commercial energy in unit of megajoule/year of electrical energy equivalent.

F means an amount of commercial energy consumption in unit of weight or volume per year.

HHV means Higher Heating Value of the commercial energy consumed in unit of megajoule/unit of weight or volume.

 $e_{\rm ff}$ means Efficiency Factor of conversion from heat to an equivalent electrical energy which is hereby valued at 0.45.

In case that higher heating value is not available from the distributor, an average heating value as prescribed by the Department of Energy Development and Promotion shall be used.

Section 5 : The Minister of Science, Technology and Environment shall take charge of and control the execution of this Royal Decree.

Countersigned by Chuan Leekphai Prime Minister

Published in the Government Gazette, Vol. 112, Part 33a, dated 14th August 1995

Remarks : Reason of the enactment of this Royal Decree is that, whereas it is expedient to specify the building which is allowed by any energy distributor to install electricity metering device or to install one or more transformers whose combined capacity is 1,000 kilowatts or 1,175 kilovolt-amperes and up, or the building which consumes commercial energy including electricity and steam as from January 1 to December 31 of the past year in total volume of energy of 20 million megajoules or more of electrical energy equivalent, to be designated building, and whereas Section 18 Paragraph 1 of the Energy Conservation Promotion Act B.E. 2535 stipulates that definition of designated building shall be enacted by the issue of the Royal Decree, the enactment of this Royal Decree is necessary.

Appendix C

Royal Decree

On Designated Factory

B.E. 2540

Royal Decree on Designated Factory B.E. 2540

BHUMIBOL ADULYADEJ, REX.

Given on the 10th day of March 1997; Being the 52nd Year of the Present Reign

His Majesty King Bhumibol Adulyadej has been graciously pleased to proclaim that:

Whereas it deems appropriate to specify certain factory as designated factory for the purpose of energy conservation,

His Majesty the King, by virtue of Section 178 of the Constitution of the Kingdom of Thailand and its amendments (No.5) B.E. 2538 and Section 8 paragraph one of the Energy Conservation Promotion Act, B.E. 2535, is preciously pleased to enact this Royal Decree as follows:

Section 1 This Royal Decree shall be called the "Royal Decree on Designated Factory, B.E. 2540"

Section 2 This Royal Decree shall come into force after the elapse of a period of 120 days from the date following its publication in the Government Gazette.

Section 3 The following factories that utilize energy shall be recognized as designated factory.

(1) Single factory or many factories using the same address number which is approved from a distributor to use electricity meter or to install one or many transformers with a total installed capacity of no less than 10,000 kilowatts or 11,750 kilovolts-ampere (KVA).

(2) Single factory or many factories using the same address number which use electricity from the system of heat distributor from steam distributor or other nonrenewable energy from distributor or oneself, either one source or in combination, since the 1^{st} day of January to the 31^{st} day of December of the previous year in the overall amount equivalent to electrical energy of not less than 200 millions mega Jules.

Section 4 Once this Royal Decree has come into effect for one year, the following factories that utilize energy shall be recognized as designated factory as well as those prescribed in Section 3.

(1) Factory under Section 3 (1) with a total installed capacity of equal or greater than 3,000 kilowatts but less than 10,000 kilowatts, or equal or greater than 3,530 kilovolts-ampere but less than 11,750 kilovolts-ampere(KVA).

(2) Factory under Section 3 (2) with the overall amount of energy in equivalent to electrical energy of equal or greater than 60 millions mega Jules but less than 200 millions mega Jules.

Section 5 Once this Royal Decree has come into effect for two years, the following factories that utilize energy shall be recognized as designated factory as well as those prescribed in Section 3 and Section 4.

(1) Factory under Section 3 (1) with a total installed capacity of equal or greater than 2,000 kilowatts but less than 3,000 kilowatts, or equal or greater than 2,350 kilovolts-ampere but less than 3,530 kilovolts-ampere (KVA).

(2) Factory under Section 3 (2) with the overall amount of energy in equivalent to electrical energy of equal or greater than 40 millions mega Jules but less than 60 millions mega Jules.

Section 6 Once this Royal Decree has come into effect for three years, the following factories that utilize energy shall be recognized as designated factory as well as those prescribed in Section 3, Section 4 and Section 5.

(1) Factory under Section 3 (1) with a total installed capacity of equal or greater than 1,000 kilowatts but less than 2,000 kilowatts, or equal or greater than 1,175 kilovolts-ampere but less than 2,350 kilovolts-ampere (KVA).

(2) Factory under Section 3 (2) with the overall amount of energy in equivalent to electrical energy of equal or greater than 20 millions mega Jules but less than 40 millions mega Jules.

Section 7 The amount of utilized energy under Section 3 (2), Section 4 (2), Section 5 (2) and Section 6 (2) shall be calculated in mega Jules unit according to the following criteria.

(1) For electricity, the amount of utilized electricity shall be calculated in kilowatt-hour unit and then multiplied by 3.60

(2) For heat obtained from steam, the amount of heat from the steam shall be calculated in equivalent to electrical energy using the following equation.

$$\mathbf{E}_{\mathbf{s}} = (\mathbf{h}_{\mathbf{s}} - \mathbf{h}_{\mathbf{w}}) \mathbf{x} \mathbf{S} \mathbf{x} \mathbf{e}_{\mathbf{f}\mathbf{f}}$$

Where Es means the amount of heat from steam as equivalent to electrical energy, mega Jules per year

h _s means	Enthalpy of utilized steam (from general steam
	table), mega Jules per ton
h _w means	Enthalpy of water at temperature of 27°c and
	one atmospheric pressure, the value of 113 mega
	Jules per ton shall be used herein
S means	amount of utilized steam, ton per year (measured
	from steam meter of designated factory)
eff means	efficiency in conversion of heat energy into
	equivalent electrical energy, the value of 0.45
	shall be used herein

(3) For other non-renewable energy, the amount of heat obtained from such non-renewable energy shall be calculated in equivalent to electrical energy using the following equation.

$E_f = F x HHV x e_{ff}$

Where E_f means	the amount of heat obtained from non-renewable
	energy as equivalent to electrical energy, mega
	Jules per year
F means	amount of utilized non-renewable energy, unit
A.	mass or unit volume per year
HHV means	higher heating value of utilized non-renewable
• 0	energy, mega Jules per unit mass or unit volume
e _{ff} means	efficiency in conversion of heat energy into
CALIX.	equivalent electrical energy, the value of 0.45
CKK	shall be used herein
	1. 1. 1. 1

In case there is no high heating value available from distributor, the average heating value prescribed by Department of Energy Development and Promotion shall be used.

Section 8 Designated factory under the provision of this Royal Decree shall be exempted from the provision on promotion of energy conservation in designated building.

Section 9 The Minister of Science, Technology and Environment shall take charge of and control the execution of this Royal Decree.

Countersigned by

(Signed) Gen. Chawalit Yongjaiyuth Prime Minister

Published in the Government Gazette, Vol. 114, Part 6a, dated 19th March 1997

Remark: The reason for the promulgation of this Royal Decree is that, whereas it deems appropriate to specify the factory that is approved from distributor to use electricity meter, to install one or more transformer with total installed capacity of no less than 1,000 KW or 1,175 KVA, or to use electricity from the system of heat supplier, steam supplier or other non-renewable energy from supplier or oneself, either one or in combination in the previous year in the quantity equivalent to electrical energy of not less than 20 million mega Jules as designated factory, and whereas Section 8 paragraph one of the Energy Conservation Promotion Act B.E. 2535 stipulates that designated of any factory as a designated factory, by types, quantities of energy use and methods of energy utilization in such factory, shall be enacted by the issue of the Royal Decree, the enactment of this Royal Decree is therefore necessary.

- Control

Appendix D

Ministerial Regulation

Prescribing Type or Size of Building

and Standard, Criteria and Procedure

in Designing Building for Energy

Conservation B.E. 2552



Ministerial Regulation

Prescribing Type or size of building and standard, criteria and procedure in designing building for energy conservation

B.E. 2552

By virtue of provision in Section 6 paragraph two and Section 19 of the Energy Conservation Promotion Act B.E. 2535 amended by the Energy Conservation Promotion Act (No. 2) B.E. 2550, which is the law, which has some provision concerning limitation of personal right and freedom, which Section 29 in conjunction with Section 33, Section 41 and Section 43 of constitution of Thai Kingdom provides that it can be done by virtue of provision of law, the Minister of Energy, by advice of the National Energy Policy Committee, issues Ministerial Regulation as follow:

Clause 1 This Ministerial Regulation shall be enforced when one hundred twenty days have elapsed from the date of its publication in the Government Gazette onward.

Chapter 1 Type and Size of Building

Clause 2 Construction or modification of following buildings, if there is total area in all stories in the same building from 2,000 square meters and more, must be designed for energy conservation according to this Ministerial Regulation.

- (1) Clinic according to the law concerning Clinic.
- (2) Educational place.
- (3) Office.
- (4) Condominium according to the law concerning condominium.
- (5) Building for congregation according to the law concerning Building Control.
- (6) Theatrical building according to the law concerning building control.
- (7) Hotel building according to the law concerning hotel.
- (8) Entertainment service building according to the law concerning place for entertainment service.
- (9) Building of department store or trade center.

Chapter 2

Standard and Criteria for Designing Building

Part 1 Building Frame System

Clause 3 Combined heat ventilation rate of building.

(1) Rate of combined heat ventilation of external wall of building in part, which has air conditioning in each type of building, must have the rate not exceeding the following:

Turne of Duilding	Rate of combined heat of external wall of			
Type of Building	building (Watt/Square Meter)			
(a) Educational Place, Office	50			
(b) Theater, Trade Center, Place of				
Entertainment Service, Building for				
congregation.	40			
(c) Hotel, Clinic, Condominium	30			

Rate of combined heat ventilation of external wall of building in part, which has air conditioning, shall be calculated from averaged rate of balancing weight of combined heat ventilation rate of external wall of combination of each side of the building.

	Page 11	
Volume 126 Part 12 A	Government Gazette	20 February 2009

(2) Rate of combined heat ventilation of building roof in part, which has air conditioning in each type of building, must have the rate not exceeding the following rates:

Type of Building	Rate of combined heat ventilation of			
	building roof (Watt/Square meter)			
(a) Educational Place, Office	15			
(b) Theater, Trade Center, Place of				
Entertainment Service, Building for				
congregation.	12			
(c) Hotel, Clinic, Condominium	10			

(3) For building, which has use of several manners, each part of area must use specification of building frame system according to manner of use of each part of that area.

Part 2 Lighting Electricity System

Clause 4 Use of lighting electricity inside of building excluding car parking area (1) Use of lighting electricity inside of building must have sufficient level of lighting for each type of work and must comply with the law concerning building control or specific law concerning such case.

(2) Electrical equipments for lighting inside of building must use electrical power in each type of building, which does not exceed follow rate:

Type of Building	Highest power of lightening
(a) Educational Place, Office	14
(b) Theater, Trade Center, Place of	18
Entertainment Service, Building for	
congregation	
(c) Hotel, Clinic, Condominium	12

(3) Building which has use of several manners, each part of area must use rates in table according to the manners of use of that part of the area.

Part 3

Air Conditioning System

Clause 5 Air conditioning system. All types and sizes of air conditioning system installed in the building must have minimum rate of co-efficiency, rate of cooling effectiveness and rate of electrical power per cooling tonnage complying with the rule prescribed in announcement by the Minister.

Part 4 Hot Water Producing Equipment

Clause 6 Hot water producing equipment installed in the building must have minimum effectiveness rate and minimum co-efficiency rate as following:

(1) Steam Boiler and Hot Water Boiler.

Tuit	Minimum Rate of Efficiency
Туре	(%)
(a) Oil fired steam boiler	85
(b) Oil fired hot water boiler	80
(c) Gas fired steam boiler	80
(d) Gas fired hot water boiler	80

(2) Air-source heat pump water heater.

Status Rate				
Manner of Designing	Temperature of In-coming water	Temperature of Out-going water	Air Temperature	Minimum Rate of Effectiveness (%)
(a) Design 1	30.0	50.0	30.0	3.5
(b) Design 2	30.0	60.0	30.0	3.0

Part 5 Collective Use of Energy of Building

Clause 7 Request for permission for construction or modification of building according to Clause 2, which is not complying with the rules established in Chapter 2, part 1, part 2 or part 3, shall be considered according to the rule for consideration of collective use of energy of building.

Rule for consideration of collective use of energy of building according to paragraph one must have rate of collective use of energy of such building lower than collective use of energy of referenced building, which has area of the same use, same direction and same area of building frame in each side as building, which will be constructed or modified and must have building frame system, lighting electrical system and air conditioning system in compliance with the requirements of each system.

Part 6 Use of circulating energy in all systems of building

Clause 8 When there is use of circulating energy in a building, there shall be exemption from combination of some part of use of electricity in building, in case that lighting electrical system of building has designing for use of natural light for lighting inside of building in area along building frame line, it shall be deemed as there is no installation of lighting electrical equipment in the area along that building frame line and such designing must comply with the following conditions:

(1) Must expressly show that there is designing of a switch, which is able to open and close lighting electrical equipment being used in area along that building frame line and lighting electrical equipment must have distance from building frame line for not exceeding 1.5 times of the height of window in that area and

(2) Glasses of window along building frame line according to (1) must have rate of effective shading co-efficiency of not less than 0.3 and ratio of light to solar gain more than 1.0 and area of window glass along building frame line according to (1) must not be less than solid wall area.

Clause 9 Building, which has production of electrical energy from solar cell for use in building, can bring rate of electrical energy produced for deduction from the rate of collective electrical use in the building.

Chapter 3

Rules and Procedures for Calculation in Designing Building

Clause 10 Rules and procedures in designing building according to Chapter 2 shall be as prescribed in announcement by the Minister.

Transitory Provision

Clause 11 Plan of building, for which a request for permission for construction, modification or change of use, has been submitted according to the law concerning building control or which has received permission according to specific law concerning such case before the date of enforcement of this Ministerial Regulation, shall be exempted from complying with this Ministerial Regulation.

This is given on 5th February 2009 Wannarat Channukul Minister of Energy

Volume	126	Part	12 A	
volume	120	ган	$I \angle A$	

<u>Remarks</u> :- Reasons for promulgation of this Ministerial Regulation are: Whereas Section 19 of the Energy Conservation Promotion Act B.E. 2535 amended by the Energy Conservation Promotion Act (No. 2) B.E. 2550 provides that Minister of Energy, by advice of the National Energy Policy Committee, has power to issue Ministerial Regulation to prescribe type or size of building, which will be constructed or modified, which has designing for energy conservation and to prescribe standard, rules and procedures in designing building according to type or size of such building for energy conservation. It is, therefore, necessary to issue this Ministerial Regulation.

Unolling and and a second

Appendix E

Ministerial Regulation

Prescribing Qualifications, Duties, and

Number of Personnel Responsible for

Energy B.E.2552



Ministerial Regulation

Prescribing Qualifications, Duties and Number of Personnel Responsible for Energy

B.E. 2552

By virtue of the provision in paragraph 2 of Section 6, Section 9 (2) and Section 21 (2) of the Energy Conservation Promotion Act B.E. 2535, amended by the Energy Conservation Promotion Act (No. 2) B.E. 2550 which is the Act having some provisions concerning restriction of right and freedom of persons, in which Section 29 in addition to Section 33, Section 41 and Section 43 of the Constitution of the Kingdom of Thailand has prescribed it can be done by virtue of the legal provisions, the Minister of Energy, by an advice of the National Energy Policy Board, issues the ministerial regulation as follows:

Clause 1 In this ministerial regulation.

"Designated Factory" means a factory, classified as the designated factory by a Royal Decree according to Section 8 of the Energy Conservation Promotion Act.

"Owner of Designated Factory" means also the person responsible for managing the designated factory.

"Designated Building" means a building, classified as the designated building by a Royal Decree according to Section 18 of the Energy Conservation Promotion Act.

"Owner of Designated building" means also the person responsible for managing the designated building.

Clause 2 The person responsible for energy must have one the following qualifications.

(1) Holding a Higher Vocational Certificate and having at least three years experience in the factory, with evidence of work in energy conservation verified by the owner of the designated factory or building.

(2) Holding a degree in Science or Engineering, with evidence of work in energy conservation verified by the owner of the designated factory or building.

(3) Having taken a training course in energy conservation or training course with similar objectives organized or approved by the Director-General.

(4) Having taken a training course for senior personnel responsible for energy conservation or training course with similar objectives organized or approved by the Director-General.

(5) Having passed the exam for personnel responsible for energy organized by the Department of Alternative Energy Development and Efficiency.

Verification of the owner of the designated factory under (1) and (2) shall conform to the form prescribed by the Director General.

Clause 3 The person responsible for energy shall have the following duties.

(1) Periodically maintain and inspect the efficiency of machinery and equipment that uses energy.

(2) Improve energy consumption method according to the principle of energy conservation.

(3) Assist the owner of the designated factory or building in energy conservation management according to the ministerial regulation prescribing standard, criteria and methods for energy conservation in designated factory or building.

(4) Assist the owner of the designated factory or building in complying with the order of the Director-General according to Section 10.

Clause 4 Owner of the designated factory or building must arrange to have personnel responsible for energy conservation in the designated factory or building within 180 days after the designation and must immediately inform the Director-General. The number and qualifications of the appointed personnel must be as follows.

(1) The following types of designated factory or building must have at least 1 energy conservation personnel with qualifications, specified in Clause 2.

(a) The designated factory or building, approved by power distributor agency to install one or more transformer unit with combined capacity lower than 3,000 kilowatts or 3,530 Kilovolts-ampere or

(b) The designated factory or building that consumes either or all of the electricity, steam power or other types of non-renewable fuels, provided by power distributors or produced by oneself since January 1 to December 31 of the past year at a combined amount equivalent to or lower than 60 million Mega Joules.

(2) The following types of designated factory or building must have at least 2 energy conservation personnel and at least one of them must have qualification, specified in Clause 2 (4) or (5). The rest must have qualification, specified in Clause 2.

(a) The designated factory or building, approved by power distributor agency to install one or more transformer unit with combined capacity of 3,000 kilowatts or 3,530 Kilovolts-ampere or more or.

(b) The designated factory or building that consumes either or all of the electricity, steam power or other types of non-renewable fuels, provided by power distributors or produced by oneself since January 1 to December 31 of the past year at a combined amount equivalent to 60 million Mega Joules or more.

Clause 5 If the designated factory or building doesn't have enough number of responsible personnel according to a requirement in Clause 4 because the responsible person has retired from the duty, the owner of the designated factory or building must take the following actions:

(1) Notify the Director-General in writing of the retirement from duty of the responsible personnel immediately.

(2) Appoint a new person to be responsible for energy within 90 days and inform the director-general immediately.

Clause 6 For the designated factory or building, specified in Clause 4 (1) (a) or (b) before this regulation becomes effective and has a team of personnel responsible for energy according to Section 2 (1) (2) or (3), the owner must inform the Director-General and the person responsible for energy must comply with provisions in this regulation.

If the owner of the designated factory or building, specified in paragraph 1 has not appoint the personnel responsible for energy, that owner must appoint the personnel responsible for energy conservation in pursuance to the number and qualifications, specified in this regulation within 180 days after this regulation is in force.

Clause 7 For the designated factory or building, specified in Clause 4 (2) (a) or (b) before this regulation becomes effective and has a team of personnel responsible for energy according to Clause 2 (1) (2) or (3), the owner must inform the Director-General and the person responsible for energy must comply with provisions in this regulation.

After informing the Director-General, the owner of the designated factory or building must take the following actions:

(1) Appoint the personnel responsible for energy conservation in pursuance to the number and qualifications, specified in this regulation within 180 days after this regulation is in force and inform the Director-General immediately.

(2) If unable to arrange for appointment of personnel responsible for energy pursuant to Clause 2 (4) or (5) within a period specified in (1) and the owner is not at fault, that owner of designated factory or building must clarify the problem in writing with the Director-General and ask for extension for not more than 2 years after this regulation is effective. The owner must appoint personnel responsible for energy within a period of time, prescribed by the Director-General and must notify the Director-General of the appointment immediately.

Clause 8 For the designated factory or building, specified in Clause 4 (2) (a) or (b) before this regulation becomes effective and the owner has not appoint the personnel responsible for energy, that owner must take action according to provisions in Clause 7 (1) and (2).

Clause 9 For the designated factory or building, specified in Clause 4 (2) (a) or (b) from the date that this regulation becomes effective but not longer than 2 years, the owner must appoint the personnel responsible for energy conservation in pursuance to the number and qualifications, specified in this regulation within 180 days after the date of designation and inform the Director-General immediately. If unable to arrange for personnel responsible for energy with qualifications specified in Clause 2 (4) or (5) within the said period of time and is not the fault of the owner of the designated factory or building, that owner must take actions, specified in Clause 7 (2).

Clause 10 If the designated factory or building doesn't have enough number of responsible personnel according to a requirement in Section 4 because the responsible person with qualifications according to Clause 2 (4) or (5) has retired from the duty, the owner of the designated factory or building must notify the Director-General in writing of the retirement from duty of the responsible personnel immediately and take the following actions.

(1) Appoint personnel to be responsible for energy with the number and qualifications according to this regulation within 180 days and inform the director-general immediately.

(2) If unable to arrange for appointment of personnel responsible for energy pursuant to Clause 2 (4) or (5) within a period specified in (1) and the owner is not at fault, that owner of designated factory or building must clarify the problem in writing with the Director-General and ask for extension for not more than 2 years after this regulation is effective. The owner must appoint personnel responsible for energy within a period of time, prescribed by the Director-General and must notify the Director-General of the appointment immediately.

Clause 11 Methods, documents and evidence of appointing the personnel responsible for energy according to this regulation must be in compliance with those prescribed by the Director-General.

This is given on 15th July 2009

Wannarat Channukul

Minister of Energy

Remarks:- Reasons for promulgation of this Ministerial Regulation are:Whereas the provisions of Section 9 (2) and Section 21 (2) of the Energy Conservation Promotion Act B.E. 2535, as amended by the Energy Conservation Promotion Act (No. 2) B.E. 2550 provided that the Minister of Energy, by an advice of the National Energy Policy and Planning Board, has the power to issue a ministerial regulation to require the owner of the designated factories and building to assign personnel to be responsible for energy management and to prescribe the qualifications, duties and number of those personnel, it is therefore necessary to issue this ministerial regulation.

Appendix F

Ministerial Regulation

Prescribing Standard, Criteria and Energy

Management Procedures in Designated

Factories and Designated Buildings

B.E. 2552

Page 7



Ministerial Regulation

Prescribing Standard, Criteria, and Energy Management Procedures

In Designated Factories and Designated Buildings

B.E. 2552

By virtue of the provision in paragraph 2 of Section 6, Section 9 (1) and Section 21 (1) of the Energy Conservation Promotion Act B.E. 2535 amended by the Energy Conservation Promotion Act (No. 2) B.E. 2550 which is the Act having some provisions concerning restriction of right and freedom of persons, in which Section 29 in addition to Section 33, 41 and Section 43 of the Constitution of the Kingdom of Thailand has prescribed it can be done by virtue of the legal provisions, the Minister of Energy, by an advice of the National Energy Policy Board, issues the ministerial regulation as follows:

Clause 1 This Ministerial Regulation shall become effective in 120 days after it is published in the Government Gazette.

Clause 2 In this Ministerial Regulation:

"Designated Factory" means a factory, classified as the designated factory by a Royal Decree according to Section 8 of the Energy Conservation Promotion Act.

"Owner of Designated Factory" means also the person responsible for managing the designated factory.

"Designated Building" means a building, classified as the designated building by a Royal Decree according to Section 18 of the Energy Conservation Promotion Act.

"Owner of Designated building" means also the person responsible for managing the designated building.

Page	8
------	---

Volume 126 Part 47 A	Government Gazette	23 July 2009

"Auditor and Certifier" mean the authorized person who has the power to audit and certify energy management according to the Energy Conservation Promotion Act.

Clause 3 The owner of the designated factory or building shall arrange to have energy conservation management system in the designated factory or building that includes energy conservation policies, objectives, plans and energy management procedures.

In a case where the energy conservation procedures are implemented for the first time, the owner of the designated factory or building must evaluate the condition of energy management, basing on the energy management procedures, existed in prior to the establishment of energy conservation policy.

Clause 4 The owner of the designated factory or building may set up a working group to help establish energy conservation policies.

The established energy policies must include an intention and determination to manage energy in the designated factory or building by establishing written policy guideline which was signed by the owner of the designated factory or building and contains the following detail:

(1) A clause, stipulating that energy conservation is a part of the operation of the owner of the designated factory or building.

(2) A set of energy conservation policies that are appropriate with the nature and quantity of energy used in the designated factory or building.

(3) An intention to comply with the laws related to energy conservation and management.

(4) Guidelines for continuing improvement of energy consumption efficiency.

(5) Guidelines for effective allocation of resources for management of energy conservation.

The owner of the designated factory or building must arrange to publicize the energy conservation policies by putting up notices in areas that they can be easily seen inside the designated factory or building or by other methods to keep all personnel inform and comply with the energy conservation policies.

Volume	126	Part	47	А	

Clause 5 The owner of the designated factory or building must arrange to set up an energy management working group, its structure, authority, duties and responsibilities of this working group. A written document on structure, authority, duties and responsibilities of this working group should be published and distributed to all staff in the designated factory or building.

The working group should at least have the following authorities and duties:

(1) To manage energy conservation program according to the energy conservation policies and procedures of the designated factory or building.

(2) To coordinate and seek cooperation from all involved agencies in order to execute energy conservation policies and procedures including the arrangement of training courses or activities to create consciousness of personnel in the designated factory or building.

(3) To ensure that the management of energy conservation in the designated factory or building is carried out according to the established energy conservation policies and procedures.

(4) To prepare reports on the outcome of energy conservation management policies and procedures for the owner of the designated factory or building.

(5) To provide recommendations on how to review of revise the energy conservation policies and procedures to the owner of the designated factory or building.

(6) To support the owner of the designated factory or building to comply with this ministerial regulations.

Clause 6 The owner of the designated factory or building must evaluate the capability in managing energy conservation program by inspecting and evaluating the use of energy that has important implication according to the criteria and procedures, prescribed by the Minister and published in the Government Gazette.

Clause 7 The owner of designated factory or building must arrange to set objectives and plans to decrease the consumption amount of target energy by setting the target decreasing amount in percentage against the existing rate of consumption or set an amount of energy consumption per work unit and specify a period of project implementation, amount of an investment and expected results from the implementation of energy conservation program in order to achieve the objectives according to the criteria and procedures announced in the Government Gazette by the Minister.

Page 10

Volume	126 Part 47 A

In carrying out the implementation according to energy conservation plan according to paragraph 1, the owner of the designated factory or building must arrange to have training courses and energy conservation promotion activities for the personnel of the designated factory or building on a continuing basis in order to create knowledge and consciousness on the impact of energy usage.

Clause 8 The owner of the designated factory or building must maintain close supervision to ensure that the energy conservation is implemented as planned.

The owner of the designated factory or building must inspect and analyze to see if the energy conservation plan has been implemented according to the objectives and plans, specified in Clause 7 according to the criteria and procedures announced in the Government Gazette by the Minister.

Clause 9 The owner of the designated factory or building must arrange to have an inspection, following up and assessment of energy management including the review, analysis and improvement of shortcomings in the plan at least once a year according to the criteria and procedures announced in the Government Gazette by the Minister.

Clause 10 The owner of the designated factory or building must arrange to have the inspection and certification made on the energy conservation management plan by the inspector according to the criteria and procedures announced in the Government Gazette by the Minister.

Clause 11 The owner of the designated factory or building must submit the results of the inspection and certification of the energy conservation management of the past year to the Director-General before March of each year, except in a case where in that past year, the owner of the designated factory or building has less than 180 days to implement the energy conservation project. In such case, the owner must file the report in March of the following year.

Volume 126 Part 47 A

The filing of inspection results and certification report, specified in paragraph 1 must be in accordance with the criteria, steps and procedures announced in the Government Gazette by the Minister.

This is given on 25th June 2009

Wannarat Channukul

Minister of Energy

Unolling and and and a second

Remarks:- Reasons for promulgation of this Ministerial Regulation are : Whereas it deems appropriate to prescribe a standard, criteria and energy management procedures in designated factories and buildings as a guideline for owners of the designated factories and buildings and as government's supporting data for an assessment of energy management programs in the designated factories and buildings and, additionally, the provisions of Section 9 (1) and Section 21 (1) of the Energy Conservation Promotion Act B.E. 2535 provided that the Minister of Energy, by an advice of the National Energy Policy and Planning Board, has the power to issue a ministerial regulation, it is therefore necessary to issue this ministerial regulation.