

**Royal Decree on Designated Factory, B.E. 2540 (1997)**

Translation

BHUMIBOL ADULYADEJ, REX.

Given on the 10th day of March B.E. 2540 (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 (1995) and Section 8 paragraph one of the Energy Conservation Promotion Act, B.E. 2535 (1992), is graciously 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 (1997)".

**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 1st day of January to the 31st 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.

$$E_s = (h_s - h_w) \times S \times \text{eff.}$$

Where  $E_s$  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.

$$E_f = F \times \text{HHV} \times \text{eff.}$$

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 mass or unit volume per year

HHV means higher heating value of utilized non-renewable energy, mega Jules per unit mass or unit volume

eff. means efficiency in conversion of heat energy into equivalent electrical energy, the value of 0.45 shall be used herein

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

Gen. Chawalit Yongjaiyuth

Prime Minister

**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 (1992) 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.

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