

Ministerial Regulation
Prescribing Type or Size of Building and
Standard, Criteria and Procedure in
Designing Building for Energy
Conservation
B.E. 2552



Department of Alternative
Energy Development and Efficiency
MINISTRY OF ENERGY

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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



Ministerial Regulation
Prescribing Type or Size of Building and
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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:

Type of Building	Rate of combined heat of external wall of 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.

(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 (Watt/Square meter of used area)
(a) Educational Place, Office	14
(b) Theater, Trade Center, Place of Entertainment Service, Building for congregation	18
(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.

Type	Minimum Rate of Efficiency (%)
(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				Minimum Rate of Effectiveness (%)
Manner of Designing	Temperature of In-coming water	Temperature of Out-going water	Air Temperature	
	(Celsius Degree)			
(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

Remarks :- 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.

Unofficial Translation