

## DECISION

PROVIDING FOR TECHNICAL STANDARDS AND CONDITIONS FOR THE USE OF  
ELECTRICITY AS A MEANS OF DIRECT PROTECTION

### THE MINISTER OF INDUSTRY

*Pursuant to the Government's Decree No. 55/2003/ ND-CP of May 28, 2003, defining the functions, tasks, powers and organizational structure of the Ministry of Industry;*

*Pursuant to the December 3, 2004 Electricity Law;*

*At the proposal of the director of the Industrial Technical Safety Department,*

### DECIDES:

**Article 1.-** The use of electricity as a means of direct protection means the direct connection of a source of electricity with an appropriate voltage to the metal structure of the fence, barrier or shield (hereinafter collectively referred to as electric fence) of a protected area in order to prevent infiltration into the protected area. When a subject deliberately encroaching upon the protected area comes into direct contact with its electric fence, he/she will get an electric shock and at the same time the protection system will give alarm signals to the guards of such area.

**Article 2.-** Organizations and individuals are strictly prohibited to use electricity as a means of direct protection to protect their properties, trap birds and rats, protect crops or for other purposes, causing danger to humans, animals and the living environment.

**Article 3.-** Technical standards of electric fences

1. Electric fences must be safely designed and installed so as to avoid all accidental contacts with people and cattle, not to affect the normal operation of the electric system, not to cause danger to the vicinity and living environment, to stand the stormy weather and ensure a fine appearance.

2. Electric fences, installed either in combination with other protection fences or isolatedly, must satisfy the following conditions:

a/ Electric fences installed in combination with other protection fences must be put up above other fences with electricity-conducting objects hung at least 2.5 meters above the ground.

b/ For electric fences installed isolatedly, protection fences must be erected inside and outside electric fences so as to prevent accidental contacts between people or animals and electric fences. The distance between electric fences and protection fences shall not be less than 2 meters.

3. Along both sides of an electric fence, there must be signboards reading "Stop! Electricity, fatal danger" put up at noticeable places. The distance between two signboards shall not exceed 20 meters. Signboards shall be hung fixedly 1.7-2 meters above the ground. The design of signboards shall comply with Vietnam standard TCVN 2572-78.

Notes: A signboard shall be 360x240 mm<sup>2</sup> in size. Its background is in white, the letters are in black; the frame and voltage signal are in bright red.

4. Voltage used for electric fences is specified as follows:

a/ Below 1,000 V, in cases of using alternating current electric sources;

b/ Unspecified, in cases of using direct current electric sources.

5. At the working places of persons on watch, there must be sound and light alarm systems. Alarm systems must be set off when power failure occurs at electric fences, the electric current is earthed or short-circuited. Alarm signals can be switched off only by persons on watch. The operation of alarm systems shall be checked by pressing testing buttons when the watch work is handed over between two teams of guards.

6. Electricity-conducting objects must meet the following criteria:

a/ Electricity-conducting objects used for electric fences may be metal plates, nets, wires or bars. If steel-plated wires or steel nets are used, their cross-section shall not be less than 6 mm<sup>2</sup>. Where copper wires or aluminum wires are used, their cross-section shall not be less than 10 mm<sup>2</sup>. There must be no joint in single conducting wires between two supports so as to ensure mechanical durability. Where it is necessary to conjoin two wires, the ends of these two wires shall be first fixedly tied round a porcelain insulator by a clamp, and twisted or welded together.

b/ Electricity-conducting objects must be fitted firmly and fixedly on porcelain insulators. The distance between two porcelain insulators supporting an electricity-conducting object shall not exceed 5 meters. The distance between two electricity-conducting objects of two adjacent phases or between a phase and the ground shall not exceed 0.2 meter.

c/ Ordinary porcelain insulators shall be placed at an angle of no more than 45° vertically so as to prevent electric leakage caused by rainwater. Where it is necessary to place insulators at an angle exceeding 45°, reinforced porcelain insulators must be used.

**Article 4.-** Conditions for using electricity as a means of direct protection

Agencies, organizations and units may use electricity as a means of direct protection only after they have unsuccessfully applied all other protection measures and meet all following conditions:

1. They have obtained written permission of the Ministry of Public Security or the Ministry of Defense (for army units) as defined in Clause 4, Article 59 of the Electricity Law.
2. Electric fences must be designed by agencies which have electricity expertise and the legal person status and be directly approved and tested by agencies which permit the use of electricity as a means of direct protection.
3. Operators of electricity fences shall satisfy all the following criteria:
  - a/ Having been trained in electrotechnics, having certificates or diplomas granted by qualified electrotechnics-training establishments;
  - b/ Having been trained in the operation, checking and maintenance of electric fences and in safety rules, and granted certificates after passing exams.
  - c/ Having been trained in security operations by establishments which have the legal person status and the function of training in security operations.
4. Procedures and forms in service of the management, operation, inspection and maintenance of electric fences, and electric safety processes are already available.
5. Electric fences may be put into operation only after investors have completed the take-over test according to regulations and hand over all plans and documents related to the construction of electric fence systems to managing and operating units, and the latter have arranged adequate personnel according to regulations.

**Article 5.-** Procedures of application for permission to use electricity as a means of direct protection

1. Agencies and units wishing to use electricity as a means of direct protection shall elaborate a plan thereon and send a written application to the Ministry of Public Security or the Ministry of Defense (for army units) for consideration and decision.
2. Agencies permitting the use of electricity as a means of direct protection shall, within the scope of their management, carry out take-over tests, regular inspection, and oversee the

application of safety measures at agencies and units permitted to use electricity as a means of direct protection.

**Article 6.-** Organization of implementation

1. The Industry Ministry's Industrial Safety Technique Department shall coordinate with functional agencies under the Ministry of Public Security, the Ministry of Defense, and provincial/municipal People's Committees and Industry Services in disseminating, guiding, supervising and inspecting the implementation of this Decision.

2. If fatal accidents related to their electric fences occur, agencies and units shall immediately notify their superior agencies, police offices or military offices (for army units) and local Industry Services thereof for coordinated investigation and identification of causes and responsibilities.

3. Police offices, military offices and local Industry Services shall sum up, analyze and report on fatal accidents related to electric fences to specialized management ministries and provincial/municipal People's Committees.

**Article 7.-1.** This Decision takes effect 15 days after its publication in "CONG BAO" and replaces the Industry Minister's Decision No. 54/2001/QD-BCN of November 14, 2001, promulgating the Regulation on the use of electricity as a means of direct protection.

2. Agencies, organizations and units which have been permitted by the Ministry of Defense or the Ministry of Public Security to use electricity as a means of direct protection under the provisions of Decision No. 54/2001/QD-BCN shall not have to carry out procedures for application for permits but must satisfy all criteria and conditions defined herein.

3. Agencies and organizations which have been permitted by ministries, ministerial-level agencies or provincial/municipal People's Committees to use electricity as a means of direct protection under Decision No. 54/2001/QD-BCN shall have to carry out procedures of application for permission of the Ministry of Public Security according to the provisions of Clause 4, Article 59 of the Electricity Law.

**Article 8.-** Ministries, ministerial-level agencies, Government-attached agencies, provincial/municipal People's Committees, the Managing Board and the General Director of the Electricity of Vietnam, and heads of concerned agencies and units shall have to implement this Decision.

**MINISTER OF INDUSTRY**

**Hoang Trung Hai**