

DECREE

Detailing and guiding the implementation of a number of articles of the Electricity Law on protection of safety of high-voltage power grid works

THE GOVERNMENT

Pursuant to the December 25, 2001 Law on Organization of the Government;

Pursuant to the December 3, 2004 Electricity Law;

At the proposal of the Industry Minister,

DECREES:

Article 1.- Governing scope

1. This Decree details and guides the implementation of a number of articles of the Electricity Law on protection of safety of high-voltage power grid works.

2. High-voltage power grid works include the high-voltage power grid and its safety corridor. High-voltage power grid is a power network with a nominal voltage of 1,000 V or higher.

Article 2.- Construction of high-voltage power grid works

1. Within 15 days after construction grounds of high-voltage power grid projects are approved by competent state agencies, investors shall have to notify such in writing to local People's Committees, organizations, households and individuals being land users or owners of houses, construction works and other assets located within corridors of such high-voltage power grid works. The compensation and supports for land, assets on land and other supports to current land users upon construction of works shall comply with the provisions of law on compensation, support and resettlement. All assets and works created after receipt of notices on execution of projects and encroaching upon safety corridors according to the provisions of this Decree must be dismantled without any compensation or support.

2. Investors of high-voltage power grid works must abide by the provisions of Clauses 2 and 3, Article 49 of the Electricity Law and the provisions of construction law.

In cases where it is necessary to construct overhead power transmission lines over works of political, economic, cultural, security, defense, information and communication importance, places of frequent mass gatherings, historical-cultural relics, scenic places and landscapes which have been classified by the State, the following conditions must be satisfied:

a/ Overhead power transmission line sections stretching over above-said works and places must be reinforced with power and construction safety measures;

b/ The distance from the lowest point of the power transmission line in the maximum sagging state to the natural ground surface must not be shorter than the following:

Voltage	Up to 35 kV	Between 66-110 kV	220 kV
Distance	11 m	12 m	13 m

3. Underground cable sections connected with overhead power transmission lines at a height of 2 meters from the ground surface must be placed in protection tubes.

4. Upon completion of construction of high-voltage power grid works, work investors shall have to promptly notify such to provincial/municipal People's Committees of localities where exist such high-voltage power grid works for coordinated management.

Article 3.- Discharge safety distances for different voltages

1. Discharge safety distances for different voltages mentioned in Clause 1, Article 51 of the Electricity Law are specified in the following table:

Voltage	Up to 22 kV		35 kV		66-110 kV	220 kV
	Insulated wire	Bare wire	Insulated wire	Bare wire	Bare wire	
Discharge safety distance	1.0 m	2.0 m	1.5 m	3.0 m	4.0 m	6.0 m

2. Discharge safety distances for different voltages mentioned in Clause 4, Article 51 of the Electricity Law mean the minimum distance from electric wire to the nearest point of working equipment, tool or device within the safety corridor of a high-voltage power grid work and are specified in the following table:

Voltage	Up to 22 kV	35 kV	66-110 kV	220 kV	500 kV
Discharge safety distance	4.0 m	4.0 m	6.0 m	6.0 m	8.0 m

3. Discharge safety distances for different voltages mentioned in Clauses 5, 6 and 7, Article 51 of the Electricity Law mean minimum distances from the power transmission line in the maximum sagging state to the highest point of protected object and are specified in the following table:

Voltage	Up to 35 kV	66-110 kV	220 kV	500 kV
Discharge safety distance				
To the highest point (4.5 m) of road means of transport	2.5 m	2.5 m	3.5 m	5.5 m
To the highest point (4.5 m) of railway means of transport and traffic works	3.0 m	3.0 m	4.0 m	7.5 m
To the highest point (7.5 m) of power-operated railway means of transport and traffic works	3.0 m	3.0 m	4.0 m	7.5 m
To the clearance heights according to technical grades of inland waterways	1.5 m	2.0 m	3.0 m	4.5 m

Article 4.- Safety corridors of overhead power transmission lines

1. The safety corridor of an overhead power transmission line means the space along the line and is delimited as follows:

a/ The length of the corridor is calculated from the position at which the line stretches from the protection boundary of a station to the position at which the line runs through the protection boundary of the next station.

b/ The width of the corridor is delimited by two vertical planes on both sides of the line, running in parallel with the line and with a distance from the outmost wire to each side when the wire in the static state, being specified in the following table:

Voltage	Up to 22 kV		35 kV		66-110 kV	220 kV	500 kV
	Insulated wire	Bare wire	Insulated wire	Bare wire	Bare wire		
Distance	1.0 m	2.0 m	1.5 m	3.0 m	4.0 m	6.0 m	7.0 m

c/ The height of the corridor is calculated from the bottom of the post base to the highest point of the work plus a vertical safety distance specified in the following table:

Voltage	Up to 35 kV	66-110 kV	220 kV	500 kV
Distance	2.0 m	3.0 m	4.0 m	6.0 m

2. Safety corridors of various power cable lines stretching on the ground surface or hung in the air mean the spaces along such power cable lines and are delimited by a distance of 0.5 m to all sides from the outmost cable.

Article 5.- Trees planted inside and outside safety corridors of overhead power transmission lines

1. With regard to trees inside safety corridors of overhead power transmission lines, distances are specified as follows:

a/ For overhead power transmission lines with a voltage of up to 35 kV in cities, provincial towns or district townships, the distance from any point of trees to the transmission lines in the static state must not be shorter than those specified in the following table:

Voltage	Up to 35 kV	
Distance	Insulated wire	Bare wire
	0.7 m	1.5 m

b/ For transmission lines with a voltage of between 66 kV and 500 kV in cities, provincial towns or district townships, trees must not be higher than the lowest wire, except for special cases where technical measures must be taken to ensure safety and provincial/municipal People's Committees so permit. The distance from any point of trees to the wire when it is static must not be shorter than those specified in the following table:

Voltage	66-110 kV	220 kV	500 kV
Distance	Bare wire		
	2.0 m	3.0 m	4.5 m

c/ For transmission lines outside cities, provincial towns or district townships, the vertical distance from the highest point of trees to the lowest height of a line in the static state must not be shorter than those specified in the following table:

Voltage	Up to 35 kV		66-110 kV	220 kV	500 kV
Distance	Insulated wire	Bare wire	Bare wire		
	0.7 m	2.0 m	3.0 m	4.0 m	6.0 m

2. For trees planted outside the safety corridor of an overhead power transmission line and outside cities, provincial towns or district townships, the distance from any part of such trees in case they fall down to any part of the transmission line must not be shorter than those specified in the following table:

Voltage	Up to 35 kV	66-220 kV	500 kV
Distance	0.7 m	1.0 m	2.0 m

3. Trees which can quickly grow within a short period of time and threaten to cause unsafety and trees which, when being cut or trimmed, would no longer be of economic efficiency must be felled and not be re-planted.

4. Rice, subsidiary food and other crops must be grown at least 0.5 m from the edge of electric post base and support cable foundation.

Article 6.- Dwelling houses and projects within overhead power transmission line protection corridors

1. Conditions for dwelling houses and projects to exist within safety corridors of up to-220 kV power grid works:

a/ Their roofs and surrounding walls are made of fire-proof materials;

b/ Their roofs, frames and surrounding walls, if made of metals, must be earthed according to regulations on earthing technique;

c/ They do not block passages into high-voltage power grid works for checking, maintenance and replacement of parts of such works;

d/ The distance from any of their parts to the nearest wire in the static state must not be shorter than those specified in the following table:

Voltage	Up to 35 kV	66-110 kV	220 kV
Distance	3.0 m	4.0 m	6.0 m

e/ The electric-field intensity at any point outside the houses and one meter from the ground surface must be equal to or smaller than (=) 5 kV/m, and at any point inside the houses and one meter from the ground surface must be equal to or smaller than (=) 1 kV/m.

2. For dwelling houses and projects lawfully constructed before the construction of overhead power transmission lines, which fail to satisfy the conditions specified in Clause 1 of this Article, investors of high-voltage power grid works shall bear costs of, and organize the modification thereof in order to satisfy such conditions. In cases where they are partly dismantled while other parts still exist, are usable and satisfy the conditions specified in Clause 1 of this Article, compensations for values of the dismantled parts of houses or projects and expenses for renovation and re-improvement of such houses or projects shall be paid according to equivalent technical standards of houses and projects before dismantlement. Investors of high-voltage power grid works shall have to pay compensations for such dismantled parts. In cases where houses or projects cannot be modified to satisfy the above-said conditions and must be dismantled or relocated, compensations therefor and supports for relocation shall be paid according to provisions of law on compensation, support and resettlement.

Article 7.- Underground or underwater power cable safety corridors

The underground or underwater power cable safety corridor is delimited as follows:

1. Its length is calculated from the position where the cable runs out of the protection scope of a station to the position where the cable gets into the protection scope of the next station.
2. Its width is delimited by:

a/ Outer side of the cable trough for cables placed in troughs;

b/ Two vertical planes on both sides of the underground or underwater cable line and separated from the outer edge of the cable casing or the outermost cable by distances specified in the following table:

Type of electric cable	Placed directly underground		Placed directly underwater	
	Stable ground	Unstable ground	Without boat/ship navigation	With boat/ship navigation
Distance	1.0 m	1.5 m	20.0 m	100.0 m

3. Its height is calculated from ground surface or water surface to:

a/ Outer edge of the cable trough base bottom, for cables placed in troughs;

b/ The depth lower than the lowest point of the cable casing by 1.5 m, for cables placed directly underground or underwater.

Article 8.- Transformer station safety corridors

1. The transformer station safety corridors mean the space surrounding such stations and are delimited as follows:

a/ For stations without surrounding walls or fences, their safety corridors are delimited by the surrounding spaces and away from the nearest electrically charged parts of the stations by distances specified in the following table:

Voltage	Up to 22 kV	35 kV
Distance	2.0 m	3.0 m

b/ For stations without fixed surrounding walls or fences, the width of their safety corridors are delimited to the outer side of walls or fences; the height of their corridors is calculated from their deepest base bottom to their highest point plus a vertical safety distance specified at Point c, Clause 1, Article 4 of this Decree.

2. Houses and projects constructed near safety corridors of stations must not cause damage to any part of the stations; must not encroach upon ways in and out of the stations, water supply or drainage pipelines of the stations, safety corridors of underground cable lines and overhead power transmission lines; must not block ventilation systems of the stations; must not let wastewater infiltrate into, thus damaging the power works.

Article 9.- Signboards and signals

1. Units managing high-voltage power grid works must put up "restricted" boards and signboards according to current regulations and standards.
2. Electric posts must be painted in white-red from the height of 50 meters upward and signal lights must be placed on top of the posts in the following cases:
 - a/ Electric posts are 80 meters or more high;
 - b/ Electric posts are between 50 and 80 meters high at positions of special requirements.
3. In cases where a high-voltage power transmission line lies within the boundary of 8,000 meters from the nearest runway of an airport, the painting of electric posts and putting up of signal lights shall comply with regulations of the state management agency in charge of aviation.
4. Along underground power cable lines, project owners must place marker posts or signboards.

Article 10.- Management and operation of high-voltage power grid works

1. Units which manage and operate high-voltage power grid works have the responsibilities:
 - a/ To check the safety corridors of high-voltage power grid works under their management in order to promptly detect acts of violating regulations on protection of safety of high-voltage power grid works. When detecting acts of violation, to request violators to immediately stop their acts and report thereon to and coordinate with local competent state agencies for making written records on, and handling of such acts of violation.
 - b/ To check, regularly repair and maintain transmission lines within the set time limit. Not to overload transmission lines stretching over dwelling houses or projects;
 - c/ To make statistics on and monitor encroachments upon safety corridors of high-voltage power grid works under their management, and report such to local state management agencies in charge of electricity activities and power use and their superior agencies according to regulations.
2. Persons who manage the operation and repair of power grids must observe regulations on safety assurance according to technical safety rules.
3. The felling or trimming of trees to protect safety of high-voltage power grid works shall be conducted by units managing such works and must be notified to managing units or owners of such trees five working days in advance.
4. Where it is a must to fell trees for remedying incidents, units managing high-voltage power grid works shall have to promptly notify the number of trees to be felled and pay compensations therefor to tree owners. Where they cannot notify such to tree owners, they shall have to notify such to local commune-level People's Committees before felling the trees.
5. It is strictly prohibited to take advantage of the protection or repair of high-voltage power grid works to fell trees without permission.
6. Units managing high-voltage power grid works which perform the task of periodical repair must notify such to organizations or individuals using land where underground cable lines run through or overhead power transmission lines stretch over three days in advance; notify such organizations or individuals of irregular repairs prompted by incidents before conducting them. Where they cannot notify such organizations or individuals of the repairs, they must notify local commune-level People's Committees before conducting them. Upon completing checking and repair, units managing high-voltage power grid works shall have to restore grounds to their original state.
7. Organizations or individuals using land where underground cable lines run through or overhead power transmission lines stretch over shall have to create favorable conditions for units managing high-voltage power grid works to check or repair damage of works.

Article 11.- Prohibited acts

1. Entering transformer stations, disconnecting or climbing onto parts of power grid works when being not tasked to do so.
2. Stealing, throwing, shooting and causing damage to parts of power grid works.
3. Using high-voltage power grid works for other purposes without reaching agreement with units managing those works.
4. Flying kites or other flying objects near high-voltage power grid works; flying any objects which may cause damage to high-voltage power grid works.
5. Installing antennas, drying wires, scaffoldings, advertising billboards or lamp boxes and other appliances at positions where such things, when falling down, may hit parts of high-voltage power grid works.
6. Planting trees or letting tree branches or creepers encroach upon safety distances for overhead power transmission lines; letting trees fall down and hit power lines when spaces along the lines are cleared of trees.
7. Shooting birds perching on wires and stations; casting or throwing any object onto power lines and stations; removing stay wires, earthing cables and other accessories of electric posts; digging ground thus causing land subsidence at high-voltage power grid works; embanking earth in encroaching upon safety distances; using electric posts and stations as houses, huts or stalls or for tying bovine animals or other cattle.
8. Blasting mines, opening pits, piling up in storage inflammables, explosives or chemicals which eat away parts of power grid works; slashing and burning fields, using construction means which cause strong quakes or damage to power grid works.
9. Operating flying means at a distance of less than 100 meters to the nearest part of power grid works, except where such means are performing tasks of managing, maintaining or repairing power lines under the Industry Ministry's regulations.
10. Other acts violating regulations on protection of safety of high-voltage power grid works.

Article 12.- Responsibilities to protect safety of high-voltage power grid works

1. Upon detecting that a high-voltage power grid work is encroached upon, destroyed, on fire or struck by a serious incident, its managing unit, local People's Committee, police and armed force units stationing in the locality shall have to coordinate with one another in quickly remedying the incident in order to minimize the damage and put the work back into normal operation.

2. Presidents of provincial/municipal People's Committees shall have to direct functional agencies in inspecting, promptly preventing and handling acts of violating the regulations on protection of safety of high-voltage power grid works under their management.

3. Basing themselves on the situation in their respective localities, presidents of provincial/municipal People's Committees shall set up provincial-level steering boards to resolve problems relating to the protection of high-voltage power grid works. Composition and operation regulations of steering boards shall be decided by presidents of provincial/municipal People's Committees.

Article 13.- Implementation effect

This Decree takes effect 15 days after its publication in "CONG BAO" and replaces Decree No. 54/1999/ND-CP of July 8, 1999, on protection of safety of the high-voltage power grids and Decree No. 118/2004/ND-CP of May 10, 2004, amending and supplementing a number of articles of Decree No. 54/1999/ND-CP of July 8, 1999, on protection of safety of the high-voltage power grids.

Article 14.- Implementation responsibilities

1. The Industry Minister shall have to monitor, inspect and guide the implementation of this Decree.

2. Ministers, heads of ministerial-level agencies, heads of Government-attached agencies and presidents of provincial/municipal People's Committees shall have to implement this Decree.

**THE PRIME MINISTER OF GOVERNMENT
PRIME MINISTER**

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Phan Van Khai