

**THE GOVERNMENT**

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**SOCIALIST REPUBLIC OF VIET NAM**  
**Independence - Freedom – Happiness**

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*Hanoi, 22<sup>nd</sup> June 2010*

**DECREE**  
**DETAILING AND GUIDING A NUMBER OF ARTICLES OF THE LAW ON**  
**ATOMIC ENERGY REGARDING NUCLEAR POWER PLANTS**

**THE GOVERNMENT**

*Pursuant to the December 25, 2001 Law on Organization of the Government;*  
*Pursuant to the December 3, 2004 Law on Electricity;*  
*Pursuant to the June 3, 2008 Law on Atomic Energy;*  
*Pursuant to the November 26, 2003 Law on Construction;*  
*Pursuant to the November 29, 2005 Law on Investment;*  
*Pursuant to the November 29, 2005 Law on Environmental Protection;*  
*Pursuant to the November 29, 2005 Law on Bidding;*  
*Pursuant to the June 19, 2009 Law Amending and Supplementing a Number of*  
*Articles of the Laws concerning Investment and Capital Construction;*  
*At the proposal of the Minister of Industry and Trade,*

**DECREES:**

**Chapter I**  
**GENERAL PROVISIONS**

**Article 1. Scope of regulation**

This Decree guides the provisions of the Law on Atomic Energy regarding investment in and selection of locations, designing, building, installation, operation and termination of operation of nuclear power plants, and assurance of safety and security in these activities: conditions on organizations and individuals that invest in building nuclear power plants.

**Article 2. Subjects of application**

This Decree applies to organizations and individuals at home or abroad that conduct activities related to nuclear power plants in Vietnam.

**Article 3. Interpretation of terms**

In this Decree, the terms below are construed as follows:

1. Nuclear power turbine unit means a group of works including a nuclear reactor, and turbines, generators and other support equipment to convert nuclear energy generated by a nuclear reactor into electricity.

2. Nuclear power plant means a complex of works including one or more than one nuclear power turbine unit, a transformer system to transmit electricity to the power grid, and a facility for storing, transporting and disposing of radioactive substances which are located in the same location and directly related to the operation of that nuclear power plant.

3. Nuclear accounting means the inventory and making of a balance sheet of nuclear materials used for a nuclear reactor.

4. Nuclear inventory means the counting and measurement of nuclear materials in order to determine the quantity of materials available in a given period of time at a nuclear power plant.

5. Nuclear power plant investor means an owner of capital or a party assigned to manage and use capital for investment in building a nuclear power plant.

6. Organization with a nuclear power plant means a legal entity that directly manages assets of and operates a nuclear power plant.

#### **Article 4. General principles on investment, building, operation and termination of operation of nuclear power plants**

1. Investment in a nuclear power plant must comply with the national master plan on electricity development and relevant master plans.

2. All activities related to construction investment, operation and termination of operation of a nuclear power plant must ensure the highest safety and security requirements.

3. Investment in building and operation of a nuclear power plant must achieve economic efficiency, contribute to socio-economic development, reduce to the utmost adverse impacts on the environment, and improve living standards of local inhabitants.

4. A nuclear power plant on the list of important works related to national security must be specially protected to ensure its absolute safety in the course of survey, designing, building, operation and management under regulations on protection of important works related to national security.

5. Licensing of nuclear power plants shall be conducted by a state agency as requested by concerned organizations or individuals, expressing its responsibility for the selection of locations, designing, building, operation, exploitation or termination of operation of nuclear power plants. This provision does not exempt licensed organizations or individuals from their primary responsibility for assuring safety.

#### **Article 5. Elaboration of nuclear power development master plans**

1. A nuclear power development master plan shall be elaborated for every ten-year period with orientations for subsequent ten years.

2. Nuclear power development master plans shall be elaborated concurrently with and incorporated in national electricity development master plans.

## **Article 6. Technical standards, regulations and rules**

1. The Ministry of Industry and Trade shall promulgate or accredit technical rules applicable to nuclear power turbine units.

2. The Ministry of Science and Technology shall promulgate or accredit technical standards and regulations on nuclear safety for application to selecting locations, designing, building, operation and dismantlement of nuclear power turbine units.

3. The Ministry of Construction shall promulgate or accredit construction standards and regulations applicable to nuclear power turbine units.

## **Article 7. Tasks and powers of state management agencies in charge of nuclear power plants**

1. The Ministry of Industry and Trade:

a) To elaborate, and direct the implementation of, nuclear power development master plans and plans;

b) To promulgate, disseminate, and guide and organize the implementation of, relevant policies and laws;

c) To enter into international cooperation, negotiate and conclude cooperation agreements and treaties on nuclear power plants;

d) To license the trial operation; to grant, adjust, revoke or renew electricity operation licenses of nuclear power plants;

d') To approve the operating process of nuclear power plants;

e) To guide and assist investors in implementing their investment projects, and settling problems and requests of investors in the course of investment in the development of nuclear power projects;

g) To coordinate state management agencies at all levels in managing investment in the development and operation of nuclear power plants;

h) To hold professional training and refresher courses for state management agencies in charge of nuclear power plants in order to raise their management capacity;

i) Other tasks and powers according to its functions or as assigned by the Government.

2. The Ministry of Science and Technology:

a) To promulgate regulations concerning safety of nuclear power plants;

b) To conduct nuclear control activities;

c) To assess safety in all stages of a nuclear power plant project;

d) To guide contents of a safety analysis report;

d') To hold professional training and-refresher courses for the nuclear safety management agencies in order to raise its management capacity;

e) To coordinate with the Ministry of Natural Resources and Environment in guiding contents of a radioactivity control plan; stipulating standards on radioactive emissions, management of radioactive waste and spent nuclear fuels;

g) To coordinate with concerned ministries and branches in guiding the establishment of restricted areas and areas for protection and observation of environmental radioactivity at nuclear power plants;

h) Other tasks and powers according to its functions or as assigned by the Government.

3. Ministries and ministerial-level agencies shall, within the ambit of their tasks and powers, perform the state management of nuclear power plants as assigned by the Government.

4. Provincial-level People's Committees:

a) To organize ground clearance; to grant land use rights certificates and supervise land use;

b) To settle difficulties and problems of investors; to propose the Prime Minister or concerned ministries and branches to settle problems which fall beyond their competence.

#### **Article 8. Management of dossiers and documents related to nuclear power plants**

1. Dossiers and documents related to a nuclear power plant must be managed and preserved for at least 40 years after a competent agency issues a decision recognizing the termination of operation of that plant, which is consequently no longer responsible for safety assurance.

2. The Ministry of Industry and Trade shall specifically guide the listing, management, use and exploitation of dossiers and documents related to nuclear power plants in accordance with regulations on archive.

## **Chapter II ASSURANCE OF SAFETY OF NUCLEAR POWER PLANTS**

#### **Article 9. Objectives of safety assurance**

Upon investment in, building, operation and termination of operation of a nuclear power plant, the following objectives must be ensured:

1. Establishment and maintenance of systems and processes of assuring safety at nuclear power plants in order to protect humans, society and environment from hazardous impacts of radiation.

2. Under normal operation conditions, keeping of irradiation levels inside and outside the plant below the permitted limit level and at the lowest level reasonably possible; in case of an incident, minimization of hazardous impacts of irradiation.

3. Application of rational measures of high reliability to prevent the occurrence of incidents in the plant. For all incidents anticipated during designing the plan, including also incidents of extremely low probability of occurrence, assurance that

radioactive consequences, if any, are negligible and the possibility of a serious incident to occur is second to zero.

#### **Article 10. Safety analysis reports**

A safety analysis report shall be made on the basis of designs of a nuclear power plant in each stage and must contain the following details:

1. General introduction.
2. General description of the nuclear power plant.
3. Safety management.
4. Assessment of the location.
5. General designing aspects.
6. Description of main systems of the nuclear power plant.
7. Safety analysis.
8. Program on correction and trial operation.
9. Aspects of operation.
10. Operation conditions and limits.
11. Radiation protection.
12. Actions in response to incidents.
13. Environmental aspects.
14. Management of radioactive wastes.
15. Dismantlement and problems of operation termination.

#### **Article 11. Dossiers of request for appraisal of safety analysis reports of nuclear power plants**

1. Investors of nuclear power plants shall make and submit dossiers of request for appraisal of their safety analysis reports of these nuclear power plants to the Ministry of Science and Technology for consideration and approval. Such a dossier comprises:

- a) The investor's written request for appraisal;
- b) A safety analysis report of the nuclear power plant;
- c) Relevant legal documents.

2. The Ministry of Science and Technology shall guide contents and number of documents included in a dossier of request for appraisal of the safety analysis report of a nuclear power plant.

3. Within 15 working days after receiving an invalid dossier, the dossier-receiving agency shall notify such to the project investor for supplementation and completion of the dossier.

#### **Article 12. Appraisal of safety analysis reports**

1. The radiation and nuclear safety agency shall organize appraisal of safety analysis reports of nuclear power plants.

2. The radiation and nuclear safety agency may hire or invite fully capable and experienced organizations and individuals at home or abroad to appraise one or all contents of safety analysis reports specified in Articles 21, 22, 25, 30, 31 and 34 of this Decree.

3. Results of appraisal of safety analysis reports shall be shown in appraisal reports with all required contents and conclusions.

The radiation and nuclear safety agency shall report on results of appraisal of safety analysis reports to the Ministry of Science and Technology and the National Council for Nuclear Safety.

5. The Minister of Science and Technology shall approve results of appraisal of safety analysis reports.

6. The Ministry of Science and Technology shall promulgate specific regulations on contents, process and procedures for appraising safety analysis reports of nuclear power plants.

### **Article 13. Process of quality assurance**

The process of quality assurance related to the building of a nuclear power plant must be appropriately detailed for each stage and cover the following:

1. Organization of a quality assurance system.
2. Program on quality assurance.
3. Control of designing.
4. Control of procurement dossiers.
5. Instructions, processes and drawings.
6. Control of dossiers.
7. Control of procured supplies, equipment and services.
8. Determination and control of equipment, parts and supplies.
9. Control of special processes.
10. Program on quality inspection.
11. Control of tests.
12. Control of measuring and testing devices.
13. Control of takeover, storage and transportation.
14. Confirmation of inspection, testing and operation status.
15. Control of sub-standard equipment, parts and supplies.
16. Remedies and repairs.
17. Quality assurance dossiers.
18. Internal control.

#### **Article 14. Nuclear control**

1. For a nuclear power plant, the following objects and places are subject to nuclear control:

- a) Nuclear fuels;
- b) Nuclear materials and equipment;
- c) Places for storage and disposal of nuclear materials.

2. Organizations with nuclear power plants shall:

a) Conduct nuclear accounting and periodically report on nuclear accounting results at the request of the radiation and nuclear safety agency;

b) Take measures to supervise nuclear fuels;

c) Keep nuclear accounting dossiers throughout the lifetime of their plants;

d) Submit to inspection by competent state agencies and related international organizations;

d') Comply with other regulations on nuclear fuel sources.

3. International inspection:

a) The Ministry of Science and Technology shall assume the prime responsibility for, and coordinate with concerned agencies and organizations in, reaching agreement with the International Atomic Energy Agency on the form of and the plan on international inspection of objects and places subject to nuclear control specified in Clause 1 of this Article:

b) Concerned agencies and organizations shall abide by the international inspection plan mentioned at Point a of this Clause.

4. The Ministry of Science and Technology shall:

a) Promulgate and specifically guide the process and procedures for nuclear control;

b) Annually report on nuclear control at nuclear power plants to the Prime Minister.

#### **Article 15. Plans on management of radioactive waste and spent nuclear fuels**

1. A plan on management of radioactive waste and spent nuclear fuels of a nuclear power plant shall be appropriately detailed for each stage and contain the following:

a) Overview;

b) Optional plans on management and storage:

c) Measures to dispose of radioactive waste:

d) Control program;

e) Financial assurance mechanism.

2. Organizations with nuclear power plants shall manage radioactive waste and spent nuclear fuels under approved plans, national technical regulations and environmental standards.

### **Article 16. Protection of security of nuclear power plants**

1. Special protection measures must be taken to assure absolute safety in the process of survey, designing, building and operation of nuclear power plants.

2. Investors of nuclear power plants shall:

a) Assure absolute security and safety for humans and works in the course of survey, designing, building and operation;

b) Elaborate protection programs and plans, propose and take protection measures, prevent and combat acts infringing upon security and safety of works:

c) Organize forces to protect work items based on protection requirements and characteristics and size of each work item after reaching agreement with the Ministry of Public Security.

3. Organizations with nuclear power plants shall:

a) Organize tight protection and strict control of movements into and out of areas of nuclear power plants:

b) Establish restricted areas and safety protection areas surrounding nuclear power plants.

## **Chapter III**

### **BUILDING OF NUCLEAR POWER PLANTS**

#### **Section 1. STAGE OF INVESTMENT PREPARATION**

#### **Article 17. Order and procedures for making, appraising and submitting for approval pre-feasibility study reports (investment reports) of nuclear power plant projects**

1. Investors shall make pre-feasibility study reports of their nuclear power plant projects.

2. The pre-feasibility study report of a nuclear power plant project must contain the following details:

a) The necessity to invest in building the nuclear power plant, favorable and unfavorable conditions: regulations on exploitation and use of national natural resources, if any:

b) Expected investment scale: number of turbine units and output and construction area of each unit: work items of the project;

c) Planned location of the plant, areas in which civilian residence is banned or restricted: and land use needs:

d) Analysis and preliminary selection of technologies, technical parameters: conditions on supply of materials, equipment, fuel, energy, services and technical



infrastructure: training of human resources; plan on ground clearance and resettlement: the project's impacts on the eco-environment; assurance of radiation and nuclear safety, actions in response to radiation or nuclear incidents, management of radioactive waste and spent nuclear fuels; fire and explosion prevention and fighting; security and defense; communication on project preparations;

d') Investment form, preliminary estimation of total investment capital, project implementation duration, plans on capital raising according to implementation schedule and socio-economic efficiency of the project and investment phrases;

e) Special proposals to the National Assembly upon considering and deciding on investment in the plant.

3. Appraisal and submission to the National Assembly for consideration and decision of the investment in building a nuclear power plant:

a) The Prime Minister shall set up a state appraisal council with the Minister of Planning and Investment as its chairman to appraise the pre-feasibility study report of the plant;

b) Based on results of appraisal by the state appraisal council, the Government shall propose the National Assembly to consider and decide on investment in the plant.

### **Article 18. Making of feasibility study reports (investment projects) of nuclear power plant projects**

1. Investors shall make feasibility study reports of their nuclear power plant projects after the National Assembly approves investment in building these plants.

2. The explanation contents of a feasibility study report of a nuclear power plant project cover:

a) Necessity and objectives of investment; assessment of electricity needs of the region and the whole country: the project's social impacts on the locality and the region; forms of investment in building works: construction location, areas in which civilian residence is banned or restricted and land use needs; conditions of supply of materials, fuels and other input elements;

b) Description of sizes and areas of construction of works and work items under the project: analysis and selection of technical plans, technologies and capacity; plan on supply of nuclear fuels; plan on assurance of radiation and nuclear safety; solutions to disposing of and managing radioactive waste and protecting the environment; plan on training of human resources; plan on connection to the national power system;

c) Implementation plans and solutions, including an overall plan on compensation, support and resettlement upon land recovery by the State; architectural design plans for works in the plant: fire prevention and fighting solutions; plans on security assurance under law; plan on training and employment of human resources; implementation phrasing and schedule and project management method;

d) Total investment of the project; capability to raise capital for the project, capital sources and capability to disburse capital according to schedule; plan on loan repayment and analysis and assessment of economic-financial efficiency and social impacts of the project.

3. Contents of the basic design of a feasibility study report of a nuclear power plant project:

a) A basic design consisting of an explanation section and a drawing section;

b) An explanation section with the following principal details:

- Brief introduction of the construction location and preliminary design plans; general site plan of the project, construction positions and sizes of main work items; connection of work items under the project with the regional technical infrastructure; list of applicable regulations and standards;

- Technological plans under consideration;

- Main structure plan, technical system and major technical infrastructure works of the project;

- Projected waste volume and waste management system;

- Radiation and nuclear safety;

- Environmental protection, fire prevention and fighting plans as prescribed by law;

- List of applicable principal regulation and standards.

c) A drawing section having:

- The general site plan drawing of the project;

- Technological diagram, technological line drawings;

- Construction and architectural plan drawings;

- Drawings of the main structure plan, technical system and major technical infrastructure works of the project connected to regional technical infrastructure.

### **Article 19. Environmental impact assessment reports**

1. Investors of nuclear power plant projects shall make environmental impact assessment reports.

2. An environmental impact assessment report shall be made concurrently with a feasibility study report and contains the following principal details:

a) Listing and description of work items of the project, with their construction areas, duration and work volumes; technology(ies) for operating each work item and the whole project;

b) General assessment of the current state of radiation and non-radiation environments in the project location and surrounding areas: sensibility and bearability of the environment:

c) Assessment of environmental impacts of radiation and non-radiation which may occur in the project implementation and environmental and socio-economic factors impacted by the project; forecast of possible environmental risks caused by the project; assessment of environmental impacts of radiation in case a nuclear accident occurs;

d) Measures to reduce to the utmost adverse impacts on the environment; prevention of and actions in response to environmental incidents;

d') Commitments to take environmental protection measures in the course of construction and operation of works;

e) List of works and programs to manage and oversee environmental matters during project implementation;

g) Estimated funds for construction of environmental protection work items in the total fund estimation of the project;

h) Opinions of the commune-level People's Committee and representatives of the community in the project area;

i) Indications to data supply sources and assessment methods.

3. The Ministry of Natural Resources and Environment shall:

a) Coordinate with the Ministry of Science and Technology in guiding the making of environmental impact assessment reports for nuclear power plants;

b) Set up appraisal councils or select appraisal service providers to appraise environmental impact assessment reports for nuclear power plants;

c) Approve environmental impact assessment reports after they are appraised.

### **Article 20. Overview reports on selection of locations of nuclear power plants**

1. Survey of a location for construction of a nuclear power plant involves the following jobs:

a) Survey of faults or premonitory signs of earthquake or volcano eruption which might affect the safety of the plant according to the following contents:

- Survey of geological and tectonic conditions of the local region:

- Collection and synthesis of seismic data; determination of earthquake risks based on assessment of seismic and tectonic conditions of the local region:

- Determination of earthquake-induced ground displacement, based on tectonic features of the local region and specific data of the location.

b) Survey of geo-technical features and foundation, and formation of geo-technical sections of the location for determining:

- Potential of landslide, rockslide, river bank or coastal erosion or flank landfall in the projected location and its vicinity:

- Potential of elevation, subsidence, depression or collapse of the ground in the projected location, based on geological maps and existing documents, paying attention to caves, grottos, pits, wells and drilled holes;

- Potential of ground liquefaction, based on parameters and values of typical ground displacement;

- Physico-mechanical properties of the ground and foreign objects therein; stability of the ground under effects of static and dynamic loads:

- Movement and physico-chemical properties of groundwater.

c) Meteorological and hydrological phenomena:

- Survey and forecast of impacts of natural disasters (wind, rain, typhoon, sandstorm, tsunami, temperature change, thunderbolt, whirlwind) on the location:

- Survey and forecast of meteorological and hydrological phenomena which might cause typical radioactive dispersions or condensations, with potential hazardous impacts exceeding the permitted limits on humans and the environment in the location and the construction site of the nuclear power plant.

d) Comprehensive survey of causes of floods such as dike or dam breaking, rain, typhoon, tsunami, earthquake or other geological phenomena.

d') Assessment of impacts of human activities on the operation of the nuclear power plant:

- Collection and survey of information on hazardous, flammable, explosive, corrosive and toxic materials, which are stored, transported and used, military drills and fuel pipelines:

- Survey of warehouses, stations, storing yards, places for mining and storing minerals in which a temporary water flow impounding might cause inundation, flood or ground subsidence:

- Survey of locations of airfields, types of airplanes, flight corridor and frequency:

- Survey of road, railway, riverway and seaway routes, covering types of vehicles or vessels, transportation frequency and characteristics, ports, landings, terminals or stations, paying attention to crowded routes and junctions.

e) Impacts of radiation on the community:

- Distribution and density of population and forecast of changes in population size in the project area;

- Way of diffusion and dispersion of radioactive materials in the air and water, based on meteorological parameters (wind direction and speed, air disturbance, humidity, rainfall and sun radiation) or hydrological parameters (features of rivers, streams, surface and ground water), topographical features (mountains, valleys) and impacts of big construction works;

- Radiation background and irradiation dose for local community:

- Hazards of radiation impacts on humans, which serve as a basis for working out a plan on response to incidents, paying attention to planning land use, water and food sources in the locality;

- Conditions for building a traffic system for evacuation, capability to supply food and infrastructure works for people's daily life in the area of evacuation;

- Conditions and locations for establishing an emergency response center outside the nuclear power plant;

- Suitability of the location with the regional socio-economic development potential (in terms of commerce, industry and tourism) and the possibility of

increasing risks due to impacts of the nuclear power plant on the local area as well as impacts on local activities on the plant.

g) Water sources for cooling and power for operation of the plant.

2. An overview report on location selection contains the following details:

a) Overview of the location selection;

b) Number, technology and output of turbine units planned to be built in the location requested to be approved:

c) Satisfaction of conditions for assurance of nuclear safety for the selected location.

3. The Ministry of Science and Technology shall set out requirements on nuclear safety for assessment and approval of locations of nuclear power plants.

### **Article 21. Order, procedures and time limit for appraisal and approval of building locations of nuclear power plants**

1. Investors of nuclear power plants shall make and submit dossiers to the Prime Minister for consideration and approval of building locations of these plants. Such a dossier comprises:

a) A written request for approval of the location;

b) An overview report on the location selection as specified in Article 20 of this Decree;

c) A basic design of the plant as specified in Clause 3. Article 18 of this Decree;

d) An environmental impact assessment report as specified in Article 19 of this Decree;

d') Results of appraisal of the environmental impact assessment report;

e) A preliminary safety analysis report, which contains the details specified in Clauses 1, 2, 4, 12 and 13, Article 10 of this Decree;

g) Results of safety appraisal;

h) A plan on environmental radiation control;

i) A resolution of the provincial-level People's Council;

k) Other relevant documents.

2. Within 15 working days after receiving a complete dossier of an investor, ministries shall examine the validity and completeness of the dossier or request addition of information and documents as prescribed in case the dossier is incomplete. The appraisal must be completed within the following time limit from the date of receipt of a complete and valid dossier:

a) Three months, for appraisal of an environmental impact assessment report;

b) Six months, for appraisal of a safety analysis report;

c) Three months, for appraisal conducted by a state appraisal council.

3. The Prime Minister shall approve the building location of a nuclear power plant after obtaining results of appraisal of contents specified in Clause 2 of this Article. The validity duration of a location approval decision is 20 years.

**Article 22. Order and procedures for appraisal and approval of feasibility study reports of nuclear power plants**

1. Investors of nuclear power plant projects shall make and submit dossiers to the Prime Minister for consideration and approval of feasibility study reports of their projects. Such a dossier comprises:

- a) An application for a construction investment license;
- b) A feasibility study report of the project as specified in Article 18 of this Decree;
- c) Results of appraisal of the environmental impact assessment report;
- d) A safety analysis report, which contains the details specified in Clauses 1 thru 7 and 11 thru 15, Article 10 of this Decree;
- d') Results of safety appraisal;
- e) A quality assurance process as specified in Article 13 of this Decree;
- g) A dismantlement plan as specified in Article 35 of this Decree;
- h) A plan on management of radioactive waste and spent nuclear fuels as specified in Article 15 of this Decree.

2. The Prime Minister shall set up a state appraisal council with the Minister of Planning and Investment as its chairman to appraise feasibility study reports of nuclear power plants.

3. Jobs involved in the appraisal of a feasibility study report of a nuclear power plant:

a) Considering elements to guarantee the effectiveness of the project, including the necessity of investment: input elements of the project; size, capacity, technology, implementation duration and schedule of the project; financial analysis, total investment and socio-economic efficiency of the project;

b) Considering elements to guarantee the feasibility of the project, including the conformity with the master plan; land and natural resource use needs; capability to clear ground and raise capital to meet the project implementation progress; the investor's management experience: capability to repay loans; assurance of radiation safety: fire prevention and fighting solutions; factors exerting impacts on the projects, such as national defense, security, environmental protection and other relevant requirements set by law:

c) Considering the basic design in terms of:

- Its conformity with the approved detailed construction plan or general site plan; its consistency with the building location and scale and planning norms already approved for construction works in the area without any approved detailed construction plan;

- Its compatibility with the regional technical infrastructure for connection thereto;

- The rationality of the technology plan and line:

- The application of regulations and standards on construction, environment, fire prevention and fighting;

- Conditions on construction activity capacity of the consultancy organization and practice capacity of individuals engaged in making the basic design as prescribed.

d) The time limit for appraisal of the project, counting from the date of receipt of a valid and complete dossier:

- Three months, for appraisal of environmental impact assessment reports;

- Six months, for appraisal of safety analysis reports;

- Three months, for appraisal of feasibility study reports conducted by the state appraisal council.

4. The Prime Minister shall approve the feasibility study report of a nuclear power plant based on:

a) A report of the state appraisal council;

b) Results of appraisal of a safety analysis report;

c) Results of appraisal of an environmental impact assessment report;

d) Comments of the National Council for Development and Application of Atomic Energy and the National Council for Nuclear Safety.

### **Article 23. Adjustment of feasibility study reports**

1. The feasibility study report of a nuclear power plant may be adjusted upon occurrence of force majeure circumstances which might affect the safety of the plant; security and defense disadvantages: emergence of elements which may bring about higher efficiency for the project; an abnormal fluctuation of plant construction investment expenditures.

2. In case the adjustment of a project leads to a change in any of the following elements: location, technology, size or objectives or an excess of the approved total investment of the project, the investor shall report such to the Prime Minister for decision. In case the adjustment of a project does not lead to a change in location, technology, size or objectives or an excess of the total investment of the project, the investor may decide thereon itself.

## **Section 2. IMPLEMENTATION OF WORK CONSTRUCTION INVESTMENT PROJECTS**

### **Article 24. Designing of construction of nuclear power plants**

1. Work construction designing involves the following steps:

a) Basic design specified in Clause 3, Article 18 of this Decree;

b) Technical design, which means a design made on the basis of the basic design in the approved feasibility study report for work construction, showing all technical

parameters and materials to be used in conformity with applied regulations and standards and serving as a basis for taking the next designing step:

c) Construction drawing design, which means a design showing all technical parameters, materials to be used and structural details in conformity with applied regulations and standards and ensuring all conditions for work construction;

d) Other designing steps according to international practice.

2. Designing dossiers and work construction cost estimation:

a) A designing dossier shall be made for each work and comprise designing explanations, design drawings, survey documents, work maintenance process and work construction cost estimates;

b) Construction designing dossiers of nuclear power plants must be archived under the law on archive.

3. The Ministry of Industry and Trade shall specify steps of designing the construction of nuclear power plants; process of appraisal and approval of technical designs, construction drawing designs and other designing steps according to international practice.

#### **Article 25. Construction licenses of nuclear power plants**

1. Investors of nuclear power plants shall make dossiers of application for construction licenses and submit them to the Ministry of Science and Technology. Such a dossier comprises:

a) An application for a construction license:

b) The selected design of the nuclear power plant;

c) A safety analysis report for the stage of construction licensing as specified in Article 10 of this Decree;

d) An environmental impact assessment report as specified in Article 19 of this Decree:

d') Results of appraisal of the environmental impact assessment report:

e) The quality assurance process as specified in Article-13 of this Decree;

g) A dismantlement plan as specified in Article 35 of this Decree:

h) A plan on management of radioactive waste and spent nuclear fuels as specified in Article 15 of this Decree.

2. The Ministry of Science and Technology shall consider and grant a construction license for a nuclear power plant after consulting the National Council for Nuclear Safety.

3. Within 15 days after receiving a dossier of an investor, responsible ministries shall check the validity and completeness of the dossier and may request addition of information and documents as prescribed and completion of the dossier within the following time limit:

a) Three months, for appraisal of environmental impact assessment reports:



b) Fifteen months, for appraisal of safety analysis reports and grant of construction licenses.

#### 4. Adjustment of construction licenses

When wishing to adjust work designs to be different from their construction licenses, investors shall apply for permission for adjustment of their construction licenses before commencing construction according to adjusted contents.

#### 5. Revocation of construction licenses

The construction license of a nuclear power plant may be revoked in the following cases:

a) A serious violation is detected in the dossier of application for the license;

b) The investor fails to commence construction 5 years or more after being licensed.

6. The Ministry of Science and Technology shall specify in detail the order and procedures for grant, adjustment or revocation of construction licenses of nuclear power plants.

### **Article 26. Responsibilities of investors in the course of construction and installation**

1. To inspect the conditions for commencing construction.

2. To inspect the capacity of work construction and installation contractors against that stated in their bid dossiers and signed contracts.

3. To inspect and supervise the quality of supplies, materials and equipment to be installed supplied by contractors under signed contracts.

4. To inspect and supervise the observance of regulations on control of nuclear materials, radiation and nuclear safety by contractors.

5. To facilitate safety inspection by the radiation and nuclear safety agency.

6. To organize, and coordinate with local administrations and concerned agencies in conducting, communication and propaganda about nuclear power projects.

7. To request local People's Committees, police departments and the army to coordinate with them in assuring security for construction sites of nuclear power plants.

8. To implement action plans in response to radiation or nuclear incidents on construction sites of nuclear power plants and surrounding areas.

9. To perform other obligations specified by law.

### **Article 27. Condition on capability of organizations and individuals involved in building nuclear power plants**

1. Organizations and individuals involved in building nuclear power plants must satisfy the condition on capability suitable to work items and jobs they undertake to perform.

2. When performing the following jobs, organizations and individuals must satisfy the capability condition:

a) Making feasibility study reports for work construction;

b) Managing work construction investment projects;

c) Designing work construction:

d) Surveying for work construction;

d') Constructing works

e) Supervising work construction:

g) Conducting specialized construction experiments:

h) Inspecting work construction quality;

i) Certifying eligibility for safety assurance and certifying construction work quality conformity.

3. The Ministry of Construction shall assume the prime responsibility for, and coordinate with the Ministry of Industry and Trade and the Ministry of Science and Technology in, elaborating and promulgating capability criteria for organizations and individuals involved in building nuclear power plants according to Clause 2 of this Article.

#### **Article 28. Management of construction quality of nuclear power plants**

1. Investors of nuclear power plants shall supervise work construction. In case investors have no capable supervision consultancy organization, they shall hire domestic or foreign capable construction consultancy organizations to supervise work construction.

2. Work construction contractors must have their own quality management systems to perform jobs involved in the work construction quality management.

3. Work construction designing contractors shall perform author's supervision.

4. The Ministry of Construction shall stipulate the management of construction quality of nuclear power plants.

#### **Article 29. Safety inspector by the radiation and nuclear safety agency in the course of construction and installation**

1. When conducting inspection, the radiation and nuclear safety agency may request an investor to supply relevant documents and report on the following:

a) Capability and professional qualifications of organizations and individuals responsible for construction and those responsible for construction supervision:

b) Time limit for takeover test upon completion of work items subject to inspection:

c) Process and schedule of construction and installation of work items subject to inspection:

d) Observance of regulations on construction and installation safely.

2. Temporary cessation or suspension:

a) The radiation and nuclear safety agency may temporarily cease or suspend the construction and installation of work items of a nuclear power plant upon detecting details inconsistent with designs or elements which might affect radiation or nuclear safety and shall take responsibility before law for its decision;

b) Construction and installation of work items subject to temporary cessation or suspension may resume only after the investor makes an explanatory report and comes up with measures to assure full observance of regulations on radiation and nuclear safety which are appraised and approved by the radiation and nuclear safety agency:

c) The radiation and nuclear safety agency shall consider and reply the investor within 5 working days after receiving the explanatory report. The temporary cessation or suspension and permission for resumption of construction shall be promptly reported to the Ministry of Science and Technology and the National Council for Nuclear Safety.

### 3. Stoppage of construction

a) Upon detecting elements which might cause a serious incident, the Ministry of Science and Technology may stop the construction and installation of the whole nuclear power plant. The Ministry of Science and Technology shall appraise and reply the investor within 1 month after receiving the report on remedies for the incident:

b) After the investor remedies the incident and assures full observance of regulations on radiation and nuclear safety, the Ministry of Science and Technology shall permit the resumption of construction:

c) The stoppage and permission for resumption of construction shall be reported to the Prime Minister.

## **Chapter IV OPERATION OF NUCLEAR POWER PLANTS**

### **Article 30. Licensing of trial operation of nuclear power plants**

1. Investors of nuclear power plants shall make and send dossiers to the Ministry of Industry and Trade for consideration and grant of licenses for trial operation of these plants. Such a dossier comprises:

a) An application for a license for trial operation;

b) A report on safety analysis before trial operation:

c) Description of operation conditions, technical parameters and limitations;

d) A plan and process of fuel intake and trial operation;

d') A report on technical capability to assure safe operation of the nuclear power plant;

e) A plan on assurance of operation quality:

g) A plan of action in response to incidents.

2. The Ministry of Industry and Trade shall grant licenses for trial operation of nuclear power plants after consulting the Ministry of Science and Technology and the National Council for Nuclear Safety.

3. The safety control agency of the Ministry of Industry and Trade and the radiation and nuclear safety agency of the Ministry of Science and Technology shall inspect and supervise the trial operation of nuclear power plants.

4. The Ministry of Industry and Trade shall guide in detail contents of dossiers, order and procedures for licensing trial operation.

### **Article 31. Licensing of electricity activity of nuclear power plants**

1. For official operation of nuclear power plants, organizations with these plants shall make and send dossiers to the Ministry of Industry and Trade for consideration and grant of electricity activity licenses for their nuclear power plants.

Apart from complying with current regulations, a dossier of application for an electricity activity license for a nuclear power plant must comprise:

- a) An application for an electricity activity license;
- b) A report on safety analysis after trial operation;
- c) An operation program and a fuel renewal plan;
- d) A plan on assurance of operation quality;
- d') Emergency plan;
- e) A report on trial operation;

g) The environmental management agency is certification of the realization of contents of the environmental impact assessment report and requirements of the decision approving this report.

Reports specified at Points b and d' of this Clause shall be concurrently sent to the radiation and nuclear safety agency.

2. The radiation and nuclear safety agency shall:

- a) Appraise reports specified at Points b and d' Clause 1 of this Article;
- b) Propose the licensing of electricity activity of nuclear power plants and submit to the National Council for Nuclear Safety appraisal results for assessment.

3. The Ministry of Industry and Trade shall grant electricity activity licenses for nuclear power plants after consulting the Ministry of Science and Technology and the National Council for Nuclear Safety.

4. The Ministry of Industry and Trade shall guide in detail contents of dossiers, order and procedures for grant of electricity activity licenses for nuclear power plants.

### **Article 32. Observation of environmental radioactivity at nuclear power plants**

1. Organizations with nuclear power plants shall:

- a) Build observatories under regulations and observe environmental radioactivity at these plants;

b) Report to the radiation and nuclear safety agency on observation results every six months and immediately report on abnormal observation results.

2. Provincial-level People's Committees in localities in which nuclear power plants are located shall organize and direct the building of observatories under regulations, and observe environmental radioactivity in their localities.

3. Observatories specified in Clauses 1 and 2 of this Article shall be online-connected to the national network of environmental radioactivity observation and warning.

4. The Ministry of Science and Technology shall guide in detail the observation of environmental radioactivity at nuclear power plants.

### **Article 33. Reports on actual safety and regular inspection of the safety status of nuclear power plants**

1. Organizations with nuclear power plants shall make reports on actual safety of their nuclear power plants, including annual reports and ten-year general reports, to be sent to the safety control agency of the Ministry of Industry and Trade and the radiation and nuclear safety agency of the Ministry of Science and Technology.

2. Organizations with nuclear power plants shall make extraordinary reports on actual safety at the request of competent state agencies.

3. A report on actual safety must contain the following:

- a) Satisfaction of conditions specified in the license.
- b) Changes compared with the dossier of application for a license;
- c) Radiation or nuclear incident(s) (if any) and remedies.

4. The radiation and nuclear safety agency shall set up an inspection office at a nuclear power plant to regularly inspect the safety status of the plant.

5. The Ministry of Science and Technology shall assume the prime responsibility for, and coordinate with the Ministry of Industry and Trade in, guiding in detail the reporting on and inspection of actual safety of nuclear power plants.

## **Chapter V**

### **TERMINATION OF OPERATION OF NUCLEAR POWER PLANTS**

#### **Article 34. Termination of operation and dismantlement of nuclear power plants**

1. Organizations with nuclear power plants shall make dossiers for operation termination and dismantlement and submit them to the radiation and nuclear safety agency for approval at least 24 months before terminating operation of their plants. Such a dossier comprises:

- a) A plan on dismantlement as specified in Article 35 of this Decree;
- b) A report on analysis of safety of dismantlement of the nuclear power plant;
- c) An environmental impact assessment report:

- d) A program for assurance of quality of plant dismantlement;
  - d') Results of appraisal of the environmental impact assessment report by the Ministry of Natural Resources and Environment;
  - e) Results of safety appraisal by the radiation and nuclear safety agency.
2. A report on analysis of safety of dismantlement of a nuclear power plant contains:
- a) Reason(s) for operation termination;
  - b) A plan on dismantlement and radioactivity decontamination;
  - c) A plan on disposal of radiation sources and radioactive wastes.
3. The Ministry of Science and Technology shall specify the order and procedures for appraising and approving dossiers of operation termination and dismantlement of nuclear power plants.

### **Article 35. Plans on dismantlement of nuclear power plants**

A plan on dismantlement of a nuclear power plant must be appropriately detailed for each stage and have the following contents:

1. Overview of dismantlement of the nuclear power plant.
2. Basic principles of dismantlement of the nuclear power plant.
3. Safety requirements in the course of dismantlement.
4. Method and schedule of dismantlement.
5. Method for removal of radioactive materials and radioactivity decontamination.
6. Method for disposal and burial of radioactive wastes.
7. Necessary measures to prevent radiation incidents.
8. Environmental impact assessment and remedies.
9. Quality assurance program.
10. Expenses for dismantlement and plan on financing the dismantlement.

### **Article 36. Responsibilities of organizations with nuclear power plants in the operation termination and dismantlement of their plants**

1. To update and supplement dismantlement plans already worked out in previous stages.
2. To formulate programs for quality assurance during dismantlement.
3. To prepare safety assessment reports and environmental impact assessment reports necessary for dismantlement plans.
4. To notify the radiation and nuclear safety agency of indefinite termination of operation of their plants before actually terminating the operation of these plants.
5. To manage the dismantlement and conduct dismantlement activities.

6. To establish and comply with regulations on safety, security and environmental protection in the course of dismantlement.
7. To ensure human resources for the dismantlement.
8. To work out plans on and stay ready for action in response to incidents in the course of dismantlement.
9. To conduct the final survey to ensure satisfaction of criteria on the final status specified in the dismantlement plan.
10. To sufficiently finance all stages of the dismantlement process.
11. To keep and return dossiers at the request of the radiation and nuclear safety agency.

**Article 37. Examination and inspection of the dismantlement of nuclear power plants**

1. The radiation and nuclear safety agency shall assume the prime responsibility for, and coordinate with the environmental management agency and concerned agencies in, examining and inspecting the dismantlement, radioactivity decontamination, disposal of nuclear fuels, nuclear equipment and radioactive wastes, and may request organizations with nuclear power plants to temporarily cease or suspend the dismantlement upon detecting elements which might affect radiation or nuclear safety or seriously impact the environment.

2. The radiation and nuclear safety agency shall permit continued dismantlement after organizations with nuclear power plants send explanatory reports and come up with measures to assure the full compliance with regulations on radiation and nuclear safety or environmental protection.

3. The radiation and nuclear safety agency shall examine explanatory reports and reply organizations with nuclear power plants within 10 working days after receiving these reports. The suspension of dismantlement and permission for continued dismantlement shall be promptly reported to the Ministry of Science and Technology and the National Council for Nuclear Safety.

**Article 38. Recognition of nuclear power plants of which operation has been terminated**

1. Organizations with nuclear power plants shall make and send reports on completion of dismantlement to the radiation and nuclear safety agency.

2. The radiation and nuclear safety agency shall inspect the final status of dismantled plants and issue decisions on recognition of nuclear power plants whose operation has been terminated and on fulfillment of the responsibility to assure safety.

**Article 39. Expenses for termination of the operation of nuclear power plants**

1. Organizations with nuclear power plants shall bear all expenses for dismantlement and storing and disposal of radioactive wastes generated from the dismantlement.

2. The Ministry of Industry and Trade shall assume the prime responsibility for, and coordinate with the Ministry of Finance in, formulating and submitting to the Prime Minister for approval the obligation of organizations with nuclear power plants to finance the dismantlement of their plants and methods of managing financial sources for termination of the operation of these plants.

## **Chapter VI**

### **ACTION IN RESPONSE TO INCIDENTS OP NUCLEAR POWER PLANTS**

#### **Article 40. Responsibilities of state agencies for taking action in response to incidents of nuclear power plants**

1. The Prime Minister shall direct the taking of appropriate actions in response to incidents of nuclear power plants by mobilizing all forces to protect national assets and people's property and life.

2. The Ministry of Science and Technology shall assume the prime responsibility for, and coordinate with the Ministries of Industry and Trade, National Defense, and Public Security, and provincial-level People's Committees of localities in which nuclear power plants are located in, working out plans of action in response to incidents at the national level and submitting them to the Government for approval.

3. The National Committee for Search and Rescue shall assume the prime responsibility for, and coordinate with concerned ministries, sectors and localities in, ensuring the readiness of manpower and means to cope with incidents; and propose the Prime Minister to consider and decide on participation in and entry into international or regional cooperation on action in response to nuclear power incidents, with regard to matters falling beyond its competence.

4. Provincial-level People's Committees in localities in which nuclear power plants are located shall work out plans of action in response to incidents at the provincial level.

5. Agencies with assigned tasks in plans of action in response to incidents shall submit to direction by the National Committee for Search and Rescue and concerned provincial-level People's Committees in the preparation for and implementation of these plans.

6. The Ministry of Science and Technology shall guide contents of and approve plans of action in response to incidents at provincial and plant levels.

#### **Article 41. Responsibilities of organizations with nuclear power plants**

1. To set up systems for action in response to incidents at plant level.

2. To ensure readiness of equipment and facilities for action in response to nuclear incidents under approved plans.

3. To supply timely and truthful information on actual incidents under regulations.

4. To participate in action in response to incidents at provincial and national levels.



5. To coordinate with concerned agencies in assessing damage and working out plans on compensation for damage under regulations.

**Article 42. Drills in response to nuclear incidents**

1. Organizations with nuclear power plants shall organize drills in response to nuclear incidents under annually approved plans of action in response to incidents at the plant level and report thereon to their immediate superiors.

2. Organizations with nuclear power plants shall appoint their staff members to join Ministry of Science and Technology-organized programs on training in action in response to nuclear incidents.

**Article 43. Operation funding**

1. Organizations with nuclear power plants shall ensure funds for elaboration, drills and implementation of plans on action in response to incidents at the plant level; radiation control and environmental radioactivity observation at nuclear power plants.

2. Funds for implementation of plans of action in response to incidents at national and provincial levels come from the state budget.

**Chapter VII  
IMPLEMENTATION PROVISIONS**

**Article 44. Effect**

This Decree takes effect on August 10, 2010.

**Article 45. Implementation responsibility**

Ministers, heads of ministerial-level agencies, heads of government-attached agencies, chairpersons of provincial-level People's Committees and concerned organizations and individuals shall implement this Decree./.

**ON BEHALF OF THE GOVERNMENT  
PRIME MINISTER**

**Nguyen Tan Dung**