

Pursuant the June 3, 2008 Law on Atomic Energy;

Pursuant to the Government's Decree No. 92/2006/ND-CP of September 7, 2006, on the elaboration, approval and management of socio-economic development master plans, and Decree No. 04/2008/ND-CP of January 11, 2008, amending and supplementing a number of articles of Decree No. 92/2006/ND-CP of September 7, 2006;

Pursuant to the Prime Minister's Decision No. 01/2006/QĐ-TTg of January 3, 2006, approving the Strategy for peaceful utilization of atomic energy through 2020;

At the proposal of the Minister of Science and Technology,

DECIDES:

Article 1. To approve the master plan on peaceful development and utilization of atomic energy through 2020 (below referred to as the master plan), with the following principal contents:

I. VIEWPOINTS

1. To develop atomic energy application into a sector with greater and more effective contributions to socio-economic development, public health care and environmental protection.

2. To step by step master imported advanced technologies, create and develop internal technological abilities, invest in building some important technical infrastructure facilities for use as a foundation for the application and development of atomic energy as well as the formation of a nuclear industry.

3. To ensure safety and security according to

THE PRIME MINISTER

Decision No. 957/QĐ-TTg of June 24, 2010, approving the master plan on peaceful development and utilization of atomic energy through 2020

THE PRIME MINISTER

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

international standards for atomic energy-related activities, especially the building and operation of nuclear power plants; to adopt policies to assure socio-economic development and improve the living standards of people in localities where exist nuclear facilities.

4. To mobilize all investment sources at home and abroad for accelerating radiation application and developing nuclear power; to promote state management in the domain of atomic energy.

II. OBJECTIVES

1. To widely, safely and effectively apply radiation to socio-economic sectors and branches; striving to reach the World Health Organization-recommended percentage of people whose diseases are diagnosed and treated with nuclear medicine, radiotherapy and X-ray; to remarkably increase the rate of plant varieties created through radiation-induced mutation in the national plant structure; to manufacture some kinds of radiation equipment, radiation detecting and measuring devices and applied radiation materials and products for various socio-economic sectors and branches.

2. To concentrate efforts on building first nuclear power turbine units for safe operation by 2020 and subsequent years; to create prerequisites for the formation of the nuclear industry; to ensure sufficient supply of nuclear fuels; to set forth orientations for effective use of the country's uranium resources; and to ensure safe management of radioactive wastes and spent nuclear fuels.

3. To perfect the system of laws, standards and technical regulations; to consolidate the state management system; to improve research and development capacity, provide technical assistance, conduct nuclear control and assure

safety and security; and to develop human resources to meet the demands for effective and safe application of atomic energy.

III. PRINCIPAL CONTENTS

1. Radiation development and application

To elaborate detailed plans on radiation development and application focusing on the following sectors and branches:

a/ In health care

- To build and develop a network of nuclear medicine, radiotherapy and X-ray establishments nationwide. By 2020, 80% of provinces and centrally run cities will have nuclear medicine and radiotherapy establishments while X-ray treatment techniques will be developed at provincial-level hospitals and large health care centers and high-frequency X-ray machines will be furnished at district-level hospitals.

- To invest in the development of single-photon emission computed topography (SPECT) techniques at provincial-level hospitals and positron emission topography (PET) techniques and radiotherapy devices for cancer treatment at regional hospital and health care centers so as to improve their diagnosis and treatment capacity. By 2020, there will be at least 1 radiotherapy device and 1 radiation imaging device per million people.

- To increase domestic capacity for researching, designing and manufacturing modern radiation devices and radiation detecting and measuring devices for medical use as well as radioisotopes and radiopharmaceuticals in substitution for imports. By 2020, domestic production will satisfy 20% of the demand for hi-tech medical equipment for atomic energy application and 70% of the need for radioisotopes and radiopharmaceuticals.

- To step up the application of nuclear techniques, radioisotope techniques and radiation technologies in health and nutrition research, prevention and treatment of some diseases, congenital malformation screening and sterilization of medical devices and supplies.

- To assure radiation safety for health workers and patients, carry out testing and calibration of medical radiation devices in order to ensure the quality and effectiveness of diagnosis and treatment.

The Ministry of Health shall assume the prime responsibility for, and coordinate with the Ministry of Science and Technology, the Ministry of National Defense and concerned ministries, branches and localities in, elaborating a detailed plan on radiation development and application in health care for submission to the Prime Minister for approval before December 2010.

b/ In agriculture:

- To build regional nuclear agricultural centers so as to accelerate the research into, development and transfer of technologies on radiation application in agriculture. By 2020, 5 nuclear agricultural centers will be built nationwide.

- To develop the technique of creating plant varieties by radiation-induced mutation. To build some low-dose and high-dose gamma irradiation facilities and some laboratories specialized in plant variety research and creation.

- To apply nuclear and radiotracer techniques to researching cultivation land-fertilizer-plant relationship, conducting soil studies, managing irrigation water and studying environmental pollution caused by agricultural production; and to apply nuclear and bio-molecular techniques in animal health and reproduction research.

- To build some irradiation establishments for hygienic and safe preservation of food and

foodstuffs for domestic consumption and export and produce agricultural preparations by radiation technologies; to develop the sterile insect technique (SIT) and build SIT establishments to control harmful insects in cultivation and husbandry. By 2020, at least 1 modern SIT establishment will be built.

The Ministry of Agriculture and Rural Development shall assume the prime responsibility for, and coordinate with the Ministry of Science and Technology and concerned ministries, sectors and localities in, elaborating a detailed plan on radiation development and application to agriculture for submission to the Prime Minister for approval before December 2010.

c/ In industries and other techno-economic sectors

- To invest in the research into, import, master, develop and apply advanced radiation technologies to various industries; to develop and apply radiation processing technologies in material and chemical industries.

- To develop and apply nondestructive testing techniques in transport, construction and installation, mechanical engineering and energy industries; to improve technical capacities for nondestructive testing to ensure the operation and test the quality of nuclear power plants.

- To develop and apply sealed radiation sources, automatic nuclear control and nuclear analytical techniques to chemical, energy, construction material industries and other industries so as to optimize production processes and improve product quality.

- To research into, design and manufacture some radiation detecting and measuring devices and automatic nuclear control devices for use in industrial production lines and radiation devices

for radiation application to socio-economic sectors and branches of high demand and high economic efficiency.

The Ministry of Industry and Trade shall assume the prime responsibility for, and coordinate with the Ministry of Science and Technology and concerned ministries, sectors and localities in elaborating a detailed plan on radiation development and application to industries and other techno-economic branches for submission to the Prime Minister for approval before to December 2010.

d/ In hydrology, meteorology, geology, mining and environmental protection

- To develop and apply radioisotope and radiotracer techniques to researching water resources, evaluating sedimentation at estuaries, wharves and reservoirs and assessing dike and dam safety.

- To develop and apply nuclear geo-physical and analytical techniques to geological surveys, assessment of natural resources and mineral exploration.

- To use radiation technologies in treating some kinds of polluting wastes generated from production and daily-life activities.

- To develop and apply nuclear analytical techniques and radiotracer techniques in conducting environmental status surveys and research and environmental and natural resource observation.

- To develop and apply nuclear analytical techniques and radiotracer techniques to surveying marine resources and studying the sustainability of the marine environment.

The Ministry of Natural Resources and Environment shall assume the prime responsibility for, and coordinate with the Ministry of Science and Technology, the Ministry

of Industry and Trade and concerned ministries, branches and localities in, elaborating a detailed plan on radiation development and application to hydrology, meteorology, mining and environmental protection for submission to the Prime Minister for approval before December 2010.

2. Development of nuclear power

To elaborate a master plan on development of nuclear power in Vietnam through 2030, with the following principal contents:

a/ To determine the demand for, and identify the proportion of, nuclear power in the national power structure in each socio-economic development period;

b/ To identify potential locations of building nuclear power plants; to elaborate plans on the construction of nuclear power plants for the period from now to 2030;

c/ To set forth orientations for selection of nuclear power technologies which must be modern, safe and accredited; to adopt policies and work out a roadmap for absorption, mastering and development of nuclear power technologies;

d/ To adopt policies so as to ensure sufficient supply of fuels for nuclear power plants and elaborate plans on the performance of several stages in the nuclear fuel cycle in conformity with the scope and schedule of nuclear power development;

e/ To adopt policies on safe management of radioactive waste and spent nuclear fuels of nuclear power plants; to identify potential locations of radioactive waste landfills and storing facilities;

f/ To elaborate plans on improving capacity for joining in the designing, manufacture, construction and installation of nuclear power plants;

g/ To elaborate plans on investigation, survey, exploration, exploitation, processing and use of radioactive ores.

The Ministry of Industry and Trade shall assume the prime responsibility for, and coordinate with the Ministry of Science and Technology, the Ministry of Natural Resources and Environment, the Ministry of Construction and concerned ministries, branches and localities in, elaborating a master plan on nuclear power development for submission to the Prime Minister for approval before December 2010; and a plan on exploration, exploitation, processing and use of radioactive ores for submission to the Prime Minister for approval before December 2015.

The Ministry of Natural Resources and Environment shall realize the scheme on exploration of uranium ores in Pa Lua-Pa Rong area, Nam Giang district, Quang Nam province under the overall plan on the implementation of the strategy on peaceful utilization of atomic energy through 2010.

The Ministry of Construction shall assume the prime responsibility for, and coordinate with the Ministry of Natural Resources and Environment, the Ministry of Science and Technology, the Ministry of Industry and Trade and concerned ministries, branches and localities in, elaborating a zoning plan on radioactive waste landfills and storage sites for submission to the Prime Minister for approval before December 2015; and realize the scheme on planning and making investment to improve capabilities of, and train technicians and skilled technical workers for, major construction corporations under the overall plan on the implementation of the strategy for peaceful utilization of atomic energy through 2020.

IV. IMPLEMENTATION SOLUTIONS

1. Perfecting and raising the capacity of state management agencies in charge of atomic energy development and application and safety and security assurance, specifically as follows:

a/ Establishing and perfecting a system of legal documents, standards and technical regulations;

b/ Elaborating a plan on accession to treaties;

c/ Consolidating state management agencies in charge of atomic energy development and application;

d/ Consolidating, and raising the capacity of, state management agencies in charge of radiation and nuclear safety.

The Ministry of Science and Technology shall assume the prime responsibility for, and coordinate with concerned ministries, sectors and localities in, formulating a scheme on perfecting, and raising the capacity of, the state management system for atomic energy development and application and safety and security assurance for submission to the Prime Minister for approval before to December 2010.

2. Increasing research and application capacity and providing technical assistance for atomic energy development and application, ensuring safety and environmental protection, specifically as follows:

a/ Elaborating a program on scientific research and technological development in the domain of atomic energy;

b/ Increasing the capacity of Vietnam Atomic Energy Institute up to regional advanced level;

c/ Building an agency in charge of providing technical assistance for the safe development of atomic energy, assurance of radiation safety, measurement, inspection and observation of

environmental radioactivity and action in response to radiation and nuclear incidents;

d/ Building a system of radiotherapy establishments in accordance with the development roadmap of the nuclear power program;

e/ Applying measures to assure security in the domain of atomic energy.

The Ministry of Science and Technology shall assume the prime responsibility for, and coordinate with concerned ministries and sectors in, formulating a scheme on raising research and application capacity and providing technical assistance for atomic energy development and application and safety and security assurance for submission to the Prime Minister for approval before December 12, 2010.

The Ministry of Public Security shall assume the prime responsibility for, and coordinate with concerned ministries, branches and localities in, formulating a scheme on application of measures for security assurance in the domain of atomic energy for submission to the Prime Minister for approval before December 2010.

3. Developing human resources in the domain of atomic energy

Elaborating a program on development of human resources in the domain of atomic energy so as to meet the demand for high-qualification human resources for the following activities:

a/ Scientific research and technological development; application of radiation and radioisotopes; provision of technical assistance; assurance of nuclear safety, security and control in the domain of atomic energy;

b/ Lecturing in the domain of atomic energy;

c/ State management of atomic energy development and application; state management of radiation and nuclear safety;

d/ Selection of locations, designing, manufacture, construction, operation, maintenance and dismantlement of nuclear power plants and other nuclear facilities.

The Ministry of Education and Training shall assume the prime responsibility for, and coordinate with concerned ministries and sectors in elaborating a scheme on development of human resources in the domain of atomic energy for submission to the Prime Minister for approval before December 2010.

4. Investment policies

a/ The State invests in the construction of nuclear infrastructure works necessary for atomic energy development and application and safety and security assurance.

b/ The State provides guarantee for foreign loans for nuclear power development.

c/ The State invests in national and regional radiation application centers, prioritizing the application of radiation for public health care and national export.

d/ The State allocates funds and adopts incentive policies to support the research into and manufacture of radiation equipment and other equipment for nuclear power development.

e/ The State adopts policies to encourage the private sector to invest in development and expansion of radiation application for socio-economic development.

The Ministry of Science and Technology shall assume the prime responsibility for, and coordinate with the Ministry of Home Affairs, the Ministry of Finance and concerned ministries and sectors in, elaborating a scheme on mechanisms and policies to accelerate atomic energy research and development, application and safety and security assurance for submission

to the Prime Minister for approval before December 2012.

The Ministry of Finance shall assume the prime responsibility for, and coordinate with the Ministry of Planning and Investment, the Ministry of Science and Technology and concerned ministries and sectors in, elaborating a plan on apportioning of capital sources and allocation of budgetary funds for the elaboration, approval and implementation of contents and tasks specified in this master plan.

Article 2. This Decision takes effect on the date of its signing and replaces the Prime

Minister's Decision No. 114/2007/QĐ-TTg of July 23, 2007, approving the master plan on implementation of the Strategy on peaceful utilization of atomic energy through 2020.

Article 3. Ministers, heads of ministerial-level agencies, heads of government-attached agencies and chairpersons of provincial-level People's Committees shall implement this Decision.-

For the Prime Minister
Deputy Prime Minister
NGUYEN THIEN NHAN