THE PRIME MINISTER

SOCIALIST REPUBLIC OF VIET NAM Independence - Freedom - Happiness

No. 1558/QD-TTg

Hanoi, August 18, 2010

DECISION

APPROVING THE SCHEME ON TRAINING AND DEVELOPMENT OF HUMAN RESOURCES IN THE FIELD OF ATOMIC ENERGY

THE PRIME MINISTER

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

Pursuant to the June 14, 2005 Law on Education;

Pursuant to the June 3, 2008 Law on Atomic Energy;

At the proposal of the Minister of Education and Training,

DECIDES:

Article 1. To approve the Scheme on training and development of human resources in the field of atomic energy with the following principal contents:

I. VIEWPOINTS

Human resources must be developed one step ahead physical foundations and the State shall adopt a program on training and building of human resources, especially highly qualified experts, to meet requirements of the nuclear power development program and requirements of research, development, application and assurance of security and safety of atomic energy;

- To make drastic progress in the development of human resources, focusing on the building of educational and training establishments and institutions for research and development of nuclear science and technologies, and concurrently attaching importance to training managerial, policy- and regulation-making personnel in the field of atomic energy;
- To effectively tap available resources, bringing into full play the capability of domestic experts and attracting outstanding overseas Vietnamese experts, and concurrently promote and take advantage of international cooperation in the field of atomic energy in order to build and develop human resources in the field.

II. OBJECTIVES

1. General objectives

To train human resources in the field of atomic energy up to the prescribed quantitative and qualitative requirements, meeting needs of the nuclear power development program and requirements of development, safe application and security of atomic energy in socio-economic sectors, and promoting the country's scientific and technological potential.

2. Specific objectives a/By 2015

- To plan and invest in upgrading the system of tertiary education establishments and specialized training centers to meet the need for human resources in the field of atomic energy, focusing in the first phase on the following five universities: the University of Science (the Hanoi National University), the University of Science (the Ho Chi Minh City National University), the Hanoi Polytechnic University, the Da Lat University, the Electric Power University and the Nuclear Training ("enter at the Vietnam Atomic Energy Commission (the Ministry of Science and Technology):
- To renovate and perfect teaching and training curricula and courses for specialties in atomic energy up to advanced and modern standards, combining theories with experiments and lecturing with research and application;
- To complete the training, retraining, update of knowledge and raising of the capability of staff of authorities managing nuclear power plant projects and nuclear regulation authorities to manage, elaborate policies and regulations on, and assess and evaluate nuclear safety;
- To perfect mechanisms and policies toward university graduates with distinction and students studying specialties in atomic energy in order to raise the quality of enrolled students. The total number of students annually enrolled for disciplines in atomic energy at universities nationwide must be at least 250.

b/ By 2020

To train quantitatively and qualitatively sufficient human resources for management, application and assurance of safety and security in the field of atomic energy, who will be able to receive transferred technologies for operating maintaining, regularly repairing and managing nuclear power plants, proceeding to localize and master these technologies, specifically as follows:

- Human resources for nuclear power plants: Annually, to train 240 engineers and bachelors. 35 masters and doctors (including 20 engineers and bachelors and 15 master and doctors trained abroad). By 2020. to train a total of 2.400 engineers, 350 masters and doctors in nuclear power specialties (including 200 engineers. 150 masters and doctors trained abroad):
- Human resources for research, application and assurance of safety and security in the field of atomic energy: Annually, to train 65 engineers and bachelors, 35 masters and doctors (including 30 engineers and bachelors and 17 masters and doctors trained abroad). By 2020. to train a total of 650 engineers and 250 masters and doctors in the management, application and assurance of safety and security in the field of atomic energy (including 150 engineers and 100 masters and doctors trained abroad):
- Human resources for training and teaching: To train 100 new masters and doctors to work as lecturers in training establishments:
- To send 500 turns of managers and scientists on survey and experience study tours or to join short-term refresher courses or practice trips for professional skill improvement in countries with a developed atomic energy industry.

III. IMPLEMENTATION SOLUTIONS

The Ministry of Education and Training shall coordinate with ministries, sectors. Electricity of Vietnam, universities and research institutes which provide training in atomic energy in formulating detailed projects and implementing the following solutions:

- 1. Strengthening, and improving the effectiveness of, the organizational and managerial system
- a/ To establish the National Steering Committee headed by a Deputy Prime Minister to uniformly direct the training of human resources in the field of atomic energy;
- b/ Sectors, administrations at all levels and educational establishments shall work out long-term and annual plans on training of human resources in the field of atomic energy, organize the implementation of these plans, and inspect and evaluate the implementation. Each management authority or educational establishment shall appoint a leading official or a functional section to manage training and development of human resources in the field of atomic energy.
- 2. Perfecting mechanisms and policies
- a/ To formulate incentive mechanisms and policies for lecturers, students and employees in the field of atomic energy:
- b/ To conduct public information work to raise the awareness of sectors, administrations at all levels and educational establishments about the task of development and training of human resources in the field of atomic energy.
- 3. Investing in and consolidating physical foundations for education and training

To make intensive and selective investment in universities and centers selected for training and development of human resources in the field of atomic energy for building laboratories and nuclear reactor simulation systems and control systems, and equipment for training, research and practice.

- 4. Making a manpower breakthrough and building a contingent of leading experts and personnel
- a/ To send leading and managerial officials and top scientists in the field of nuclear power on survey and study tours in countries with a developed atomic energy industry to learn their experience in training human resources in the field of atomic energy;

b/To work out plans on retraining and short-term probation at home or in countries with a developed atomic energy industry for engineers, bachelors, scientists and managers working in domestic nuclear facilities so that they can attain international standards and become the core for implementing plans on domestic training of human resources in the field of atomic energy;

- c/ To build a pool of professionally knowledgeable and pedagogically capable lecturers of educational establishments up to the international level.
- 5. Improving training curricula and programs
- a/ To renovate training curricula and programs to conform with international standards and use advanced programs of foreign countries;
- b/ To develop and perfect course books for atomic energy specialties; formulate programs on nuclear power training and retraining for human resources in such related sectors as construction, transport, electricity, mechanical engineering, environmental protection, law and economics to serve different

stages of building nuclear power plants and to conduct research, management, application and assurance of safety and security in the field of atomic energy.

6. International cooperation

To step up international cooperation in training, research, management and application in the field of atomic energy. To implement programs on cooperation with foreign universities in atomic energy training. To efficiently use international aid and loans for training of human resources for research, management, application and assurance of safety and security in the field of atomic energy.

IV. IMPLEMENTATION FUNDS

1. Principles

a/ Funds for the implementation of the Scheme shall be raised from the state budget and various sources of enterprises, organizations and individuals at home and abroad;

b/ Funds for training and development of human resources for nuclear power projects other than state budget funds for the Scheme shall be raised by the investor being Electricity of Vietnam in coordination with suppliers and donors.

c/ To provide annual state budget supports for investment in laboratories, physical foundations, teaching materials, sending of lecturers for overseas training or refresher courses for improving their knowledge about research, management, application and assurance of safety and security in the field of atomic energy, and domestic or overseas training of students in atomic energy;

d/ Scheme funding structure

- During 2010-15: To use 75% of the total funding from the state budget and 25% from other lawful financial sources for the implementation of the Scheme;
- During 2016-20: To use 50% of the total funding from the state budget and 50% from other lawful financial sources.

2. Funds for the implementation of the Scheme

The total fund for the Scheme will be VND 3 trillion (including VND 2 trillion from the state budget).

- a/ During 2010-15: The total fund for the Scheme will be VND 2 trillion and used for the following activities:
- Elaboration of legal documents on incentive mechanisms and policies for lecturers, students and employees in the field of atomic energy;
- Organization of survey and study tours to learn foreign countries' experience in human resource training in the field of atomic energy;
- Investment in physical foundations and specialized laboratories in the field of atomic energy, nuclear measuring devices, supplies and equipment for manufacturing specimens, research and training networks, building or upgrading of laboratories, radioactivity-shielding systems and reactor simulation systems;

- Development of training curricula and programs up to international standards; compilation of course books and lectures; organization of scientific training and research at 6 human resource training establishments in the field of atomic energy;
- Invitation of foreign and overseas Vietnamese experts to provide domestic training in atomic energy specialties;
- Training courses for raising qualifications of lecturers of 6 human resource training establishments in the field of atomic energy;
- Retraining or short-term training for engineers and bachelors in nuclear power specialty and related specialties to serve nuclear power plants;
- Sending of atomic energy personnel for graduate and postgraduate training in some countries with a developed atomic energy industry;
- Short-term refresher courses for improving professional skills of leading and managerial officials and scientists in countries with a developed atomic energy industry;
- Development of a system of criteria for accreditation and organization of periodical accreditation of the quality of training in atomic energy specialties.

b/ During 2016-20: The total fund for the Scheme will be VND 1 trillion and used for the following activities:

- Continued training activities and addition of equipment and physical foundations;
- Periodical evaluation of the implementation of the Scheme.

V. ORGANIZATION OF IMPLEMENTATION

- 1. To establish the National Steering Committee in charge of training human resources in the field of atomic energy with a Deputy Prime Minister acting as its head, the Minister of Education and Training as its standing deputy head, and representatives of leaderships of the Ministry of Science and Technology, the Ministry of Industry and Trade, the Ministry of Agriculture and Rural Development, the Ministry of Health, the Ministry of Finance, the Ministry of Planning and Investment and the Ministry of Home Affairs as its members. The Steering Committee shall uniformly coordinate all activities related to human resource training in the field of atomic energy of concerned ministries, sectors, enterprises and training establishments.
- 2. The Ministry of Education and Training as the focal point shall:
- a/ Direct and organize the implementation of the Scheme; guide, inspect, supervise and review the implementation and periodically report it to the Prime Minister. Organize a preliminary review of the implementation of the Scheme by 2015 and the final review by 2020;

b/Assume the prime responsibility for, and coordinate with the Ministry of Home Affairs, the Ministry of Finance and concerned ministries and sectors in. elaborating and specifying legal documents on mechanisms and policies for lecturers, students and employees in the field of atomic energy;

c/ Assume the prime responsibility for. and coordinate with the Ministry of Science and Technology, the Ministry of Industry and Trade. the Ministry of Agriculture and Rural Development, the Ministry of Health, the Ministry of Planning and Investment in. making annual training plans and enrolment quotas: working

out plans on investment in physical foundations, laboratories and equipment for atomic energy training establishments:

- d/ Assume the prime responsibility for. and coordinate with the Ministry of Foreign Affairs and the Ministry of Science and Technology in. developing a databank on foreign and overseas Vietnamese atomic energy experts and inviting them to participate in teaching and lecturing activities in the country.
- 3. The Ministry of Science and Technology shall:
- a/ Build and operate specialized training centers, train scientific and technological personnel and experts of high qualifications for research, development, application and provision of services in the field of atomic energy:
- b/ Conduct personnel planning, train human resources in the management and assurance of nuclear safety and security and elaboration of nuclear regulations to meet requirements of development and application of atomic energy and building of nuclear power plants in Vietnam;
- c/ Assume the prime responsibility for, and coordinate with the Ministry of Education and Training, the Ministry of Planning and Investment, the Ministry of Finance and concerned ministries and sectors in, formulating programs on research, management, application and assurance of safety and security in the field of atomic energy.
- 4. The Ministry of Industry and Trade and the Electricity of Vietnam shall;
- a/ Assume the prime responsibility for, and coordinate with concerned ministries and sectors in, studying the need for the first nuclear power plant project in Vietnam, and working out appropriate plans and organizing human resource training in response to the demand there for in each phase of project implementation:
- b/ Assume the prime responsibility for and coordinate with the concerned ministries, sectors and local administrations in. building establishments for training nuclear power human resources on the basis of the system of universities, colleges and vocational schools in their sectors or localities in which nuclear power plants arc to be built;
- c/ Cooperate or associate with foreign partners in nuclear power plant projects, and organize human resource training in the designing. building, operation and maintenance of nuclear power plants.
- 5. The Ministry of Science and Technology, the Ministry of Industry and Trade, the Ministry of Health, the Ministry of Agriculture and Rural Development and the Ministry of Natural Resources and Environment shall coordinate with the Ministry of Education and Training in proposing needs for and organizing the training and development of human resources in line with their sectors' detailed plans on atomic energy development and application.
- 6. 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, the Ministry of Industry and Trade, the Ministry of Education and Training and concerned ministries and sectors in, proportioning and allocating funds from the state budget for the implementation of the Scheme.
- 7. The selected universities and research institutes and Electricity of Vietnam shall formulate projects on training and development of human resources in the field of atomic energy suitable to the Scheme's objectives and practical conditions, and submit them to the Ministry of Education and Training for approval before implementing them.

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

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

PRIME MINISTER

Nguyen Tan Dung