THE PRIME MINISTER OF GOVERNMENT

No: 1855/QD-TTg

SOCIALIST REPUBLIC OF VIET NAM

Independence - Freedom - Happiness

Ha Noi, day 27 month 12 year 2007

DECISION

Approving Vietnam's national energy development Strategy up to 2020, with 2050 vision

THE PRIME MINISTER

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

Pursuant to the Political Bureau's Resolution No. 18-NQ/TW of October 25, 2007, setting Vietnam's energy development strategy orientations up to 2020, with a vision toward 2050;

At the proposal of the Ministry of Industry and Trade (in Official Letter No. 4167/BCT-NLDK of December 19, 2007),

DECIDES:

Article 1.- To approve Vietnam's national energy development strategy up to 2020, with 2050 vision, with the following principal contents:

1. Development viewpoints:

a/ To quickly and sustainably develop energy in close association with the national socio-economic development strategy, in parallel with diversifying energy sources and applying energy-saving technologies, which is considered a key task throughout the process of national industrialization and modernization.

b/ To develop national energy in line with the trend of international integration, efficiently use domestic resources and rationally exploit and use foreign resources, establish national energy security in the open conditions, effectively enter into regional and global cooperation combined with firmly preserving national security and developing an independent and self-reliant economy.

c/ To step by step develop an energy market, diversify forms of ownership and methods of business and strive to satisfy to the utmost consumer interests. To accelerate the abolition of subsidization and monopoly, striving to put an end to the pursuit of social policies through energy prices.

d/ To synchronously and rationally develop the system of electricity, petroleum, coal, and new and renewable energies, paying attention to the development of clean energies and prioritizing the development of new and renewable energies. To rationally distribute the energy system across regions and areas; to balance exploration, exploitation and processing stages; and to synchronously develop service and recycling systems.

e/ To apply achievements of the knowledge-based economy in order to raise energy trading efficiency. To attach importance to investment in energy conservation so as to reduce the wastage.

f/ To develop energy in close association with preserving the ecological environment, ensuring sustainable energy development.

2. Development objectives

a/ Overall objectives:

In order to contribute to successfully fulfilling the tasks set in the Party's socio-economic development strategy, the overall objectives of the national energy development strategy up to 2020, with 2050 vision, are to assure national energy security, contributing to firmly maintaining security and defense and developing an independent and self-reliant economy; to supply adequate high-quality energy for socio-economic development; to exploit and use domestic energy resources in a rational and efficient manner; to diversify forms of investment and business in the energy domain, and develop an energy market conducive to fair competition; to boost the development of new and renewable energies, bio-energy and nuclear power in order to meet the requirements of socio-economic development, especially in deep-lying, remote and border areas and offshore islands; and developing the energy sector in a quick, efficient and sustainable manner in association with environmental protection.

b/ Specific objectives:

- To strive to supply adequate energy for socio-economic development, including about 47.5 49.5 million TOE (ton of oil equivalent) of primary energy by 2010, about 100 110 million TOE by 2020, 110 120 million TOE by 2025 and 310-320 million TOE by 2050.
- To evaluate more accurately the reserves of primary energy (coal, petroleum, hydropower and uranium). To expand cooperation with other countries in the region and world in conducting overseas survey, exploration and exploitation of coal, petroleum and other forms of energy so as to make up for deficient amounts in the country.
- To develop electricity sources and grids, to meet electricity demands for socio-economic development, by 2010, the supply reliability of electricity sources will reach 99.7%; and electricity grids will reach n-1 standard.
- To develop oil refineries, step by step satisfy domestic demands for oil products, and increase the total capacity of oil refineries to 25-30 million tons of crude oil by 2020.
- To raise the level of national strategic petrol and oil reserves to the equivalent of 45 days of average consumption by 2010, 60 days by 2020 and 90 days by 2025.
- To strive to increase the proportion of new and renewable energies to about 3% of the total amount of commercial primary energy by 2010; about 5% by 2020 and 11% by 2050.
- To complete the program on rural and mountainous energy. To increase the rate of rural households using commercial energy for cooking to 50% by 2010 and 80% by 2020. By 2010, 95% of rural households will be supplied with electricity and by 2020, almost all rural households will be supplied with electricity.
- To formulate long-term environmental objectives and standards in conformity with regional and world environmental standards and the country's economic conditions. To control and mitigate environmental pollution in energy-related activities; by 2015, all energy facilities will reach

environmental standards.

- To strongly switch the operation of the electricity, coal and petroleum industries after the competitive market mechanism regulated by the State. To form a competitive electricity retail market in the post-2022 period; to form coal and petroleum trading markets in the period from now to 2015.
- To actively prepare necessary and synchronous conditions for the commission of the first nuclear power generator by 2020, then quickly raise the proportion of nuclear power in the national energy structure. By 2050, nuclear power will account for about 15-20% of the total national commercial energy consumption volume.
- To intensify international cooperation in the energy domain. To strive to connect to the regional electricity grids (of a voltage of up to 500 kV) in 2010-2015, and to connect to the regional natural gas system in 2015-2020.
- 3. Development orientations:
- a/ Orientations for development of the electricity industry:
- To ensure adequate supply of electricity for national socio-economic development. To prioritize the rational construction of hydropower plants while developing coal- and natural gas-fired thermalpower plants. To encourage the development of electricity sources using new and renewable energy.
- To develop the electricity industry in the direction of diversifying ownership forms. The Vietnam Electricity Group (EVN) shall assume the prime responsibility for developing electricity sources and national transmission systems. To publicize a list of investment projects on electricity generation and distribution calling for domestic and foreign economic sectors to invest in.
- To diversify forms of investment in the development of electricity sources and distribution networks.
- To continue applying on a trial basis and expanding the equitization of power plants and distribution units.
- To separate public-utility activities from production and business activities. To subsidize electricity activities in remote and deep-lying areas.
- To expand international cooperation and integration.
- To step by step form and develop an electricity market in Vietnam.
- To research into the development of nuclear power plants.
- To ensure sustainable development and minimize adverse impacts on the environment.
- b/ Orientations on development of coal industry:
- To accelerate the survey and assessment of coal reserves at the depth of 300 meters or more underground and conduct deep surveys at the depth of between 400 and 1,000 meters underground in Quang Ninh coalfields.
- To encourage localities where exist coalfields to make investment in the exploitation and exploitation of coal to meet local demands.
- To mobilize funding sources to survey and evaluate coal reserves in the Red River delta and study the exploitability.
- To develop coal industry in a stable and sustainable manner, meeting coal demands of the national economy; to ensure a stable coal market for domestic consumption and rational volumes for export.
- To develop coal industry in close association with socio-economic development, tourism, defense, security and protection of biological environment.
- To encourage economic sectors to invest in coal exploitation, sorting and distribution. To work out a roadmap for equitization of coal companies, striving to form a coal market.
- c/ Orientations for the development of petroleum industry
- To clearly distinguish the state management function from the production and business management function of management and production and business agencies of petroleum industry. To concentrate the state management of petroleum on a single agency.
- To formulate legal grounds for petroleum activities, paying special attention to midstream and downstream activities, including important tasks of economic and technical management in the natural gas sector such as licensing of gas transportation and distribution, approval of gas prices, transport and distribution charges and issuance of technical regulations.
- To encourage and speed up petroleum survey and exploration activities; to build a transparent and effective system for supervising and assigning contracts on exploration lots; to periodically revise financial terms so as to make petroleum exploration and development investment activities in Vietnam competitive with those in other countries.
- To prioritize the development, exploitation and use of natural gas. To encourage and provide incentives for investors who invest in the exploration and exploitation of gas fields, especially those with limited reserves. To diversify the forms of investment and cooperation in the construction of gas-fired power plants for sale of electricity to the national grids.
- To adopt policies to encourage foreign investors to apply high technologies in exploiting oil and gas fields with limited reserves.
- Policies on petroleum processing:
- + To encourage foreign investors to participate in joint ventures contributing capital to building oil refineries and petrochemical plants and allow them to participate in the product distribution market with a certain market share.
- + To attract petroleum product-trading companies to enter into joint ventures developing oil refineries so as to link production with consumption and regulate profits between production and business activities.
- The State encourages and protects overseas petroleum survey, exploration and exploitation activities carried out by Vietnamese enterprises.

d/ Orientations for the development of new and renewable energies:

- Regarding survey and planning: New and renewable energies have not yet been adequately evaluated, therefore, it is necessary to elaborate plans on, and make proper investment in, conducting surveys in order to obtain additional data for planning and zoning areas with these energies and preparing investment and exploitation plans. To establish specialized organizations of various economic sectors to conduct surveys and elaborate plannings and plans. To carry out communication, research, trial production and expansion of new and renewable energies nationwide.
- To carry out communication on the use of new and renewable energy sources in deep-lying, remote and mountainous areas and islands. To formulate a managerial mechanism for maintaining and developing electricity sources in these areas.
- To integrate the use of new and renewable energies into the energy conservation program and other national target programs such as those on rural electrification, aforestation, hunger eradication and poverty alleviation, clean water, integrated fish pond-livestock pen-home garden model, etc.
- To encourage enterprises to build in places where conditions permit appropriate establishments for manufacturing, assembling and repairing equipment and facilities fuelled by new energy such as water boilers, small-sized hydropower equipment, wind-operated engines and biogas digesters. To cooperate with, and purchase technologies from, developed countries in order to assembly hi-tech equipment such as solar cells, wind-operated equipment, etc, then strive to assemble and manufacture these equipment at home.
- To support investment in programs on survey and research into new and renewable energies, trial production of new and renewable energy products and development of models of use of new and renewable energies; to offer tax incentives for the import of equipment and new technologies and the manufacture and distribution of equipment; to protect copyright of authors of valuable inventions and technical renovations.
- To allow domestic and foreign individuals and economic organizations to coordinate with one another in making investment in the exploitation of new and renewable energy sources on the basis of mutual benefits.

4. Policies

a/ Policy on assurance of national energy security:

To prioritize the implementation of the policy on assurance of national energy security towards synchronous development of various energy sources; to exploit and use domestic energy sources in an economical manner; to reduce dependence on imported petroleum products; to export a rational quantity of coal (in the immediate future, to reduce annual coal exports); to connect to the regional energy systems; to expand petrol and oil reserves; and to combine energy security with assurance of defense and national security.

b/ Policy on energy prices

The policy on energy prices is considered a breakthrough policy aiming to quickly abolish monopoly and subsidization in energy production and consumption. Energy prices should be determined under the market mechanism. The State shall regulate energy prices through tax policies and other management tools.

c/ Policy on investment in the development of new and renewable energy sources, bio-energy and nuclear power

To prioritize the development of new energy, renewable energy, bio-energy and nuclear power. To encourage overseas investment to seek for energy sources; to adopt policies to ensure equality among economic sectors participating in energy development.

d/ Policy on economical and efficient use of energy

The policy on encouraging the economical and efficient use of energy must identify specific conservation requirements on sectors which consume a large volume of energy; to encourage the application of energy-saving equipment and technologies.

e/ Policy on environmental protection

The policy on environmental protection aims to ensure the harmony between energy exploitation and use with environmental management; to apply advanced environmental standards in an appropriate manner.

5. Implementation solutions

a/ Solutions on development investment

- To perfect the organization and management of the Vietnam Electricity Group, the Vietnam Coal and Mineral Group and the Vietnam Petroleum Group after the model of industrial-commercial-financial group conducting multiple business lines at home and abroad and plays the key role in energy development investment.
- To consider and expand the exploration and exploitation of primary energy in offshore sea areas and the overlapping areas between Vietnam and some regional countries.
- To further boost international cooperation in the energy domain; to prioritize cooperation with neighboring countries (Laos, Cambodia and China); to efficiently use energy sources exploited from foreign countries.
- To publicize a list of investment projects; to encourages domestic and foreign economic sectors to invest in the energy domain.

b/ Solutions on financial mechanisms

- To increase investment from the state budget for energy projects in rural and mountainous areas and islands so as to contribute to economic development and hunger eradication and poverty alleviation in these areas; to study the establishment of an energy development fund to provide support for investment in the development of new and renewable energies and the implementation of public-utility projects.
- To prioritize the allocation of concessional credits from the development support fund, ODA capital and other foreign bilateral loans for energy projects such as those on the exploration and development of new and renewable energies and bio-energy.

c/ Solutions on human resource development

- To concentrate efforts on training and raising professional qualifications of managers, technicians and skilled workers; to focus on training human resources for sectors in which human resources remain insufficient in quantity or poor in quality, especially the sub-sectors of new and

renewable energy, bio-energy, oil refinery, petrochemistry and nuclear power.

- To accelerate scientific research into and application of new technologies, especially in the domain of petroleum and coal survey and exploration; to re-organize scientific and technological research and training establishments into specialized ones; to develop scientific-technological potential together with the application and renovation of foreign technologies, then striving to create new technologies in the energy domain
- To accelerate the application of energy-saving solutions; to enhance coordination between authorities, the Fatherland Front and mass associations in encouraging people to use energy in an economical and efficient manner while ensuring environmental protection.

d/ Solution on organizational mechanisms

- To re-structure the energy sector so as to step by step form a competitive energy market on the basis of assuring socio-political stability.
- To promulgate new legal documents at the same time with revising and improving current ones in order to switch the operation of energy enterprises after the market mechanism; to abolish enterprise monopoly.

Article 2.- Tasks of ministries, branches and concerned units

- 1. The Ministry of Industry and Trade:
- To take responsibility for managing and directing the implementation of this Strategy.
- To direct the elaboration of plannings on development of the energy sectors and sub-sectors of electricity, coal and petroleum in each socio-economic development period.
- To direct the assessment and updating of energy demands so as to work out an appropriate program on development of energy facilities, meeting national energy demands. In case of big changes in energy demand and supply, it is necessary to calculate and propose adjustments to that program.
- To study and propose according to its competence mechanisms and policies for the implementation of this strategy as prescribed by the Government.
- 2. The Ministry of Natural Resources and Environment:

To direct the coordination among concerned ministries and branches in conducting survey into and exploration of reserves of energy resources.

3. The Ministry of Finance, the Ministry of Planning and Investment and the State Bank of Vietnam:

To coordinate with one another in studying, perfecting and promulgating mechanisms on mobilization and efficient use of capital for investment in energy development.

4. The Ministry of Science and Technology:

To coordinate with the Ministry of Industry and Trade in directing the implementation of programs on promoting scientific and technological activities in the energy domain in the direction of encouraging the acquisition and application of advanced and energy-saving technologies in the world

5. The Ministry of Education and Training:

To assume the prime responsibility for, and coordinate with the Ministry of Industry and Trade and the Ministry of Labor, War Invalids and Social Affairs in, directing the elaboration of programs on, and organizing, the training of technicians, managers and skilled workers, especially in the domain of power energy, so to meet the requirements on human resources for the energy sector's development.

6. Ministries, branches, localities, and concerned enterprises, organizations and individuals shall, within their functions and tasks, properly implement this Strategy in accordance with regulations.

Article 3.- This Decision takes effect 15 days after its publication in "CONG BAO."

Article 4.- Ministers, heads of ministerial-level agencies, heads of government-attached agencies, presidents of provincial/municipal People's Committees and concerned units and individuals shall implement this Decision.

THE PRIME MINISTER OF GOVERNMENT
PRIME MINISTER
(Đã ký)

Nguyen Tan Dung