

Considering Report No. 2068/TTr-BCT of March 11, 2011, of the Ministry of Industry and Trade and opinions of various ministries and sectors on the national master plan for power development in the 2011- 2020 period, with considerations to 2030,

DECIDES:

Article 1. To approve the national master plan for power development in the 2011-2020 period, with considerations to 2030 (Power Master Plan VII), with the following principal contents:

1. Development viewpoints:

a/ To develop the electricity sector in conformity with the national socio-economic development strategy, ensuring adequate supply of electricity for the national economy and social life;

b/ To effectively utilize domestic energy resources for electricity development in combination with the rational import of electricity and fuel, diversification of primary energy sources for electricity production, conservation of fuel and energy security for the future;

c/ To incrementally improve the quality of electricity for provision of electricity services of increasing quality. To apply electricity sale prices under the market mechanism, aiming to encourage investment in the development of the electricity sector; to encourage electricity conservation;

d/ To develop electricity along with protecting natural resources and the environment, and ensuring national sustainable development;

Part II. OTHER DOCUMENTS

THE PRIME MINISTER

Decision No. 1208/QĐ-TTg of July 21, 2011, approving the national master plan for power development in the 2011-2020 period, with considerations to 2030

THE PRIME MINISTER

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

Pursuant to the December 14, 2004 Electricity Law;

e/ To step by step form and develop a competitive electricity market, diversifying modes of electricity investment and trading. The State shall only monopolize the electricity transmission grid in order to ensure security of the national energy system;

f/ To develop the electricity sector on the basis of rational and efficient use of primary energy resources of each region; to further step up rural electrification, ensure adequate, uninterrupted and safe supply of electricity in all regions nationwide.

2. Objectives:

a/ General objectives:

To efficiently use domestic energy resources in combination with the import of primary energy for electricity production; to adequately supply electricity of increasing quality and at reasonable prices for socio-economic development; to ensure the national energy security;

b/ Specific objectives:

- To supply adequate electricity for the domestic demand, with produced and imported electricity reaching 194- 210 billion kWh by 2015; 330- 362 billion kWh by 2020; and 695- 834 billion kWh by 2030;

- To prioritize the development of renewable energy sources for electricity production, raising the rate of electricity produced from these energy sources from 3.5% of total electricity output in 2010 to 4.5% by 2020 and 6% by 2030;

- To reduce the electricity elasticity coefficient/GDP from the current average of 2.0 to 1.5 by 2015 and 1.0 by 2020;

- To accelerate the program on electrification

in rural and mountainous areas, ensuring that by 2020 most of rural households will have access to electricity.

3. The national master plan on electricity development:

a/ Master plan for development of electricity sources:

- Development orientations:

To develop electricity sources in the following orientations:

+ To develop a balanced capacity of power sources in each region: northern, central and southern, ensuring the reliability of electricity supply in each regional electricity system so as to reduce transmission losses, share reserve capacity of sources and efficiently exploit hydropower plants in all seasons;

+ To rationally develop regional power centers nationwide, aiming to ensure reliable electricity supply on site and reduce technical losses on the national electricity system as well as to ensure the economics of projects, contributing to the socio-economic development in each region and the whole country;

+ To develop new electricity sources in couple with intensive investment, technological renewal of operating power plants, meeting environmental standards; to use modern technologies for new power plants;

+ To diversify forms of investment in the development of electricity sources, aiming to boost competition and improve economic efficiency.

- The master plan for development of electricity sources:

+ To prioritize quick development of

electricity sources from renewable energy (wind energy, solar energy, biomass energy, etc.), and incrementally raise the proportion of electricity produced from renewable energy sources:

- To raise the total wind electricity output from the current negligible levels to around 1,000 MW by 2020 and 6,200 MW by 2030; and increase the proportion of electrical energy produced from wind power from 0.7% in 2020 to 2.4% in 2030;

- To develop biomass electricity simultaneously with electricity generation in sugar mills, with a total output of around 500 MW by 2020, then 2,000 MW by 2030; to raise the output ratio of this electricity source from 0.6% by 2020 to 1.1% by 2030;

- + To prioritize development of hydropower sources, particularly projects of multiple purposes: flood control, water supply and electricity production; raising the hydropower output from the current 9,200 MW to 17,400 MW by 2020.

- + To study and put pumped-storage hydropower plants into operation in conformity with the development of the electricity system, aiming to raise the operational efficiency of the system: By 2020, the total pumped-storage hydropower output will reach 1,800 MW, which will be raised to 5,700 MW by 2030;

- + To develop a rational number of thermo-power plants suitable to the supply capacity and distribution of fuel sources:

- Natural gas-fired thermo-electricity: By 2020, the natural gas-fired electricity output will reach around 10,400 MW, generating 66 billion kWh, accounting for 20% of electricity production, which is oriented to rise to about 11,300 MW, generating 73.1 billion kWh of

electricity, accounting for 10.5% of the electricity output.

- Eastern South Vietnam: To ensure a stable gas supply for power plants in Ba Ria, Phu My and Nhon Trach.

- Western South Vietnam: To expeditiously carry gas from Block B ashore in 2015 for supply to power plants in the O Mon power center with a total capacity of about 2,850 MW, bringing the total capacity of gas-fired power plants in the region to 4,350 MW by 2016, which will annually consume about 6.5 billion cubic meters of gas to produce 31.5 billion kWh of electricity.

- Central region: It is expected that after 2020, a 1,350-MW power plant will be developed, consuming around 1.3 billion cubic meters of gas/year.

- Coal-fired thermo-electricity: To tap to the utmost domestic coal resources for development of thermo-power plants, prioritizing the use of domestic coal for thermo-power plants in the North. By 2020, the total coal-fired thermo-electricity capacity will approximate 36,000 MW, generating some 156 billion kWh (accounting for 46.8% of electricity production) and consuming 67.3 million tons of coal. By 2030, the total coal-fired thermo-electricity capacity will be about 75,000 MW, generating some 394 billion kWh (accounting for 56.4% of electricity production) and consuming 171 million tons of coal. Due to limited domestic coal resources, thermo-power plants operated by imported coal should be built and operated from 2015.

- + To develop nuclear power plants to ensure stable electricity supply in the future when domestic primary energy sources are exhausted:

To put Vietnam's first nuclear power generation unit into operation in 2020; by 2030, the nuclear power capacity will reach 10,700 MW, generating about 70.5 billion kWh (accounting for 10.1% of electricity production);

+ To develop power plants operated by liquefied natural gas (LNG), aiming to diversify fuel sources for electricity production, ensuring security in electricity and gas supply. By 2020, the LNG-fired electricity capacity will approximate 2,000 MW, which is expected to rise to about 6,000 MW in 2030;

+ Export and import of electricity: To efficiently exchange electrical energy with regional countries, ensuring the interests of parties involved, intensifying the exchange to maintain the safety of the system, stepping up the import of electricity from potential regions of hydropower, primarily Laos, then Cambodia and China. It is expected that the imported electricity capacity will approximate 2,200 MW by 2020 and 7,000 MW by 2030.

- Structure of electricity sources:

· By 2020: The total capacity of power plants will approximate 75,000 MW, of which hydropower will account for 23.1%; pumped storage hydropower, 2.4%; coal-fired thermo-power, 46%; gas-fired thermo-power, 16.5% (including 2.6% for LNG); renewable energy-using electricity, 5.6%; nuclear power, 1.3%, and imported electricity, 3.1%.

Produced and imported electricity will approximate 330 billion kWh, of which hydropower will account for 19.6%; coal-fired thermo-power, 46.8%; gas-fired thermo-power, 24% (including 4% for LNG); renewable energy-using electricity, 4.5%; nuclear power,

2.1%, and imported electricity, 3%;

· Orientations to 2030: The total capacity of power plants will approximate 146,800 MW, of which hydropower will account for 11.8%; pumped-storage hydropower, 3.9%; coal-fired thermo-power, 51.6%; gas-fired thermo-power, 11.8% (including 4.1% for LNG); renewable energy-using electricity, 9.4%; nuclear electricity, 6.6% and imported electricity, 4.9%.

Electricity output in 2030 will be 695 billion kWh, of which hydropower will represent 9.3%; coal-fired thermo-power, 56.4%; gas-fired thermo-power, 14.4% (including 3.9% for LNG); renewable energy-using electricity sources, 6%; nuclear power, 10.1%, and imported electricity, 3.8%.

The list and schedule of operation of electricity source projects is provided in Appendices I, II and III to this Decision (*not printed herein*).

b/ Master plan for development of the electricity grid:

- Criteria for formulation of a master plan for development of the electricity grid:

+ The electricity transmission grid to be invested will reach reliability standard N-1 for major equipment and satisfy the quality standards set in the Regulation on electricity transmission grids;

+ The electricity grid will be developed according to technical standards applied by regional countries, ensuring connectivity and synchronism between electricity systems of Vietnam and regional countries;

+ The electricity transmission grid must have reserves, be simple and flexible, and ensure electricity quality (voltage, frequency) supplied

for power load;

+ Appropriate transmission voltages will be selected on the basis of transmission capacity and distance.

- Development orientations:

+ To develop electricity transmission grids in synchronism with operation schedules of power plants to achieve investment effectiveness of the whole system;

+ To develop electricity transmission grids in conformity with the sector's development strategy, power development master plan and other local master plans;

+ To develop 220 kV and 500 kV transmission grids in order to raise electricity supply reliability and reduce electricity losses, and ensure easy mobilization of electricity sources in the rainy and dry seasons and under all modes of operation of the electricity market;

+ To develop 220 kV and 110 kV grids and perfect regional electricity networks with a view to raising reliability and stability of electricity supply, minimizing electricity losses and facilitating the transformation of medium-voltage grids into 22 kV grids and rural electrification;

+ To develop electricity transmission lines with reserves for long-term development in the future, using multi-circuit and multi-voltage poles on a single line for saving land. For cities and major load centers, electricity grid maps must have greater reserves and flexibility; to modernize and incrementally lay underground electricity grids in cities and towns, limiting adverse impacts on landscape and environment;

+ To step by step modernize electricity grids, renovate and upgrade switching, protection and

automation devices of electricity grids; to study the use of FACTS and SVC devices for raising the transmission limits; to gradually modernize the control system;

+ To study the application of "Smart Grid" technology, creating interactivity between electricity-using households, electrical appliances and electricity grids for the most effective exploitation of the supply ability, aiming to reduce costs in grid development and raise the safety of electricity supply.

- Master plan for development of the electricity grid:

+ Master plan for development of ultra-high voltage transmission grids:

· The 500 kV voltage is the major ultra-high voltage transmission level in Vietnam;

· To examine the possibility of developing voltages of 750 kV and 1,000 kV or DC transmission in the post 2020 period;

· The 500 kV grid will be used for transmitting electricity from power centers and major power plants to major load centers in each region and for exchanging electricity among regions in order to ensure optimum operation of the electricity system.

+ Master plan for development of 220 kV transmission grids:

· Transformer stations with 2 or 3 transformers; to consider development of 4-transformer stations, GIS transformer stations and underground ones in major cities;

· Newly built transmission lines must use at least double circuits; lines from major electricity sources, 500/220 kV transformer stations must be designed with at least double circuits, using phase separation conductors.

Table 1. Volume of transmission grid to be built in each period

Item	Unit	2011-15	2016-20	2021-25	2026-30
500 kV station	MVA	17,100	26,750	24,400	20,400
220 kV station	MVA	35,863	39,063	42,775	53,250
500 kV line	Km	3,833	4,539	2,234	2,724
220 kV line	Km	10,637	5,305	5,552	5,020

+ Master plan for development of 110 kV electricity grids and distribution grids:

- To develop 110 kV electricity grids and distribution grids in synchronism with electricity transmission grids in order to raise electricity supply reliability and meet the quality standards set in the Regulations on electricity distribution grids;

- To apply modern technologies in order to raise the quality of electricity distribution grids, incrementally laying underground electricity grids in cities and towns to limit impacts on landscape and environment. To apply modern technological solutions in the investment and operation management to reduce electricity losses and eventually build smart grids and smart communities with a view to reducing electricity losses and increasing electricity conservation.

The list and schedule of new investment projects on electricity transmission grids are provided in Appendices IV and V to this Decision (*not printed herein*).

c/ Connection to electricity grids of regional countries:

- To implement the programs on electricity

grid cooperation and connections with ASEAN countries and Great Mekong Sub-Region (GMS) countries;

- Connection to Laos grids:

+ Northern Lao region: By 220 kV and 500 kV voltages toward Thanh Hoa, Nho Quan (Ninh Binh province) and Son La;

+ Central and southern Lao regions: By 220 kV and 500 kV voltages toward Thach My (Quang Nam) and Pleiku (Gia Lai).

- Connection to Cambodia's grids:

+ Connection for electricity trading with Cambodia through 220 kV and 500 kV voltages, depending on capacity.

- Connection to China's grids:

+ To maintain the import of electricity by 110 kV and 220 kV voltages;

+ To study the import by 500 kV voltage or DC voltage with a total imported volume of about 2,000 ÷ 3,000 MW.

d/ Supply of electricity to rural mountainous areas and islands:

- Objectives:

+ To make new investments with the national electricity grid or local electricity sources (small

and micro hydropower plants; solar power and wind power in combination with diesel power plants) to supply electricity to rural areas. By 2015, 100% communes and 98.6% of rural households will have access to electricity. By 2020, most rural households will be supplied with electricity;

+ To renovate and upgrade rural electricity grids to set technical standards, aiming to ensure efficient supply of electricity with assured quality for needs of production development and daily life in rural areas.

- Viewpoints on development of electricity in rural and mountainous areas:

+ To step up rural electrification in order to accelerate agricultural and rural industrialization and modernization;

+ To use new and renewable energy sources for supplying electricity to deep-lying, remote, border and island areas. To adopt favorable management and investment mechanisms for the maintenance and development of electricity sources in these areas;

+ To enhance control of rural electricity prices to ensure the implementation of electricity price policies issued by the Government.

- Master plan for electricity supply in rural areas:

+ During 2011- 2015:

· To invest for expansion of the national electricity grid to supply electricity for 500,000 rural households;

· To supply electricity from renewable energy sources for about 377,000 rural households.

+ During 2016-2020:

· To invest in new electricity supply from the national electricity grid for 200,000 rural households;

· To supply electricity from renewable energy sources for some 231,000 rural households.

e/ Total investment capital:

The total investment capital for the whole electricity sector through 2020 is estimated at VND 929.7 trillion (equivalent to USD 48.8 billion or USD 4.88 billion per year on average). In the 2021- 2030 period, the total investment capital is estimated at VND 1,429.3 trillion (equivalent to USD 75 billion). In the 2011-2030 period, the investment capital will approximate VND 2,359 trillion (equivalent to USD 123.8 billion), of which:

- Investment in electricity sources: The 2011-2020 period requires VND 619.3 trillion, accounting for 66.6% of the total investment capital; while the 2021-2030 period needs VND 935.3 trillion, accounting for 65.5%.

- Investment in electricity grids: The 2011-2020 period requires VND 210.4 trillion, accounting for 33.4% of the total investment capital; and the 2021- 2030 period needs VND 494 trillion, accounting for 34.5%.

4. Solutions for implementation of the master plan

a/ Solutions for assuring electricity supply security:

- The Electricity Vietnam (EVN), Vietnam Oil and Gas Group (PetroVietnam) and Vietnam National Coal- Mineral Industries Holding Corporation (Vinacomin) shall assume the prime responsibility for developing electricity sources; the National Electricity Transmission

Corporation shall assume the prime responsibility for assuring the development of the national transmission system;

- To actively seek additional sources of gas to existing ones which will decrease and be exhausted in the coming period. To speed up negotiations with other countries for conclusion of stable and long-term contracts on import of coal for thermo-power plants;

- To speed up the development of the nuclear energy industry and the building of nuclear power plants. To coordinate with other countries and international organizations in developing the use of nuclear energy, incrementally master the technology and develop nuclear power for peaceful purposes;

- To adopt policies on financial incentives and expand international cooperation to intensify exploration work for increasing coal, gas and renewable energy deposits and exploitation capability, ensuring security in the supply of fuel for electricity production.

b/ Solutions for creating investment capital for development of the electricity sector:

- To incrementally raise the capability for mobilization of finance from enterprises in the electricity sector through such solutions as improving the operational efficiency and efficacy of enterprises in the electricity sector, ensuring capital accumulation and ratio of own capital for development investment as required by domestic and international financial institutions. Eventually, the main source of funding electricity works will be capital accumulated by enterprises;

- To develop economic groups and corporations operating in the electricity sector

with high financial ratings in order to reduce costs of raising capital for electricity projects, which will be able to raise capital without the Government's guarantee;

- To raise further capital through issuing bonds at home and abroad for investment in electricity works, applying the measure of converting domestic savings into investment in infrastructure. At the initial stage, the State shall guarantee the issue of bonds for key and urgent electricity projects;

- To enter into domestic and foreign joint ventures to attract domestic and foreign investors into the development of electricity projects;

- To equitize enterprises in the electricity sector in which the State does not need to hold 100% capital;

- To further attract foreign direct investment (FDI) in developing electricity projects. To prioritize FDI projects for which payments can be made in VND or in barter without the Government's guarantee;

- To further attract funds from overseas, including preferential official development assistance capital, non-preferential official development assistance capital, commercial overseas loans, etc.

c/ Solutions regarding electricity prices:

- To apply electricity sale prices under the State-regulated market mechanism, ensuring harmonious combination between the political-economic-social objectives of the State and the production-business-financial autonomy objectives of enterprises in the electricity sector. Electricity sale prices should stimulate electricity development, create a favorable

environment for attracting investment and encouraging competition at the stages of production, transmission, distribution and use of electricity;

- Electricity sale prices must ensure recovery of costs and reasonable profits (investment for expanded production) to ensure that financial autonomy of enterprises in the electricity sector;

- To improve and perfect the current electricity price tariff toward:

+ Making adjustments to electricity sale prices according to changes in fuel prices, exchange rates and structure of electricity production;

+ Gradually reducing and eventually eliminating cross offsetting among customer groups and among regions; studying the application of different seasonal and regional electricity sale price tariffs;

+ Supplementing a two-component electricity price tariff: capacity price and electricity price, first of all applying it to major electricity users.

- Electricity sale prices should take into account the particularities of regions and regional inhabitants: border, island, rural area, mountainous area, etc., with necessary price subsidies and tax subsidies in order to reduce the gap in electricity consumption, socio-economic development and urbanization among regions and segments of the population, between mountainous and delta regions and between rural and urban areas;

- Electricity prices will be incrementally adjusted to achieve the long-term marginal cost of the electricity system by 2020, equivalent to 8- 9 US cents/kWh, ensuring sustainable

development of the electricity sector and meeting the demand for electricity system development;

- The pricing of electricity must aim to preserve energy and avoid waste of non-renewable energy sources, encourage the rational use of various types of energy and the use of domestic energy, reducing reliance on imported energy.

d/ Solutions for renovating management and raising effectiveness of electricity activities:

- To study and apply appropriate management models in the electricity sector to raise productivity, speed up investment in electricity projects; to raise reliability in the operation of the electricity system;

- To restructure the electricity sector in order to step by step form a healthy competitive electricity market on the basis of electricity supply security, aiming to reduce costs and raise efficiency in electricity production and business activities, make price signals public and transparent to attract investment and develop a sustainable electricity sector.

e/ Environmental protection solutions:

- To implement the law on assessment of environmental impacts of projects and assessment of strategic environment of master plans;

- To consolidate environmental management organizations of state management agencies in charge of environment and enterprises in the electricity sector;

- To fully perform environmental monitoring and observation, measurement and management of environmental criteria; to inspect and

examine the implementation of regulations on environmental protection by electricity enterprises:

- To effectively implement the electricity conservation program and raise efficacy in the areas of production, transmission, distribution and use of electricity;

- To combine electricity sector development with environmental protection:

- + The State shall adopt policies on investment and tax supports for development of forms of energy with minimal environmental impacts, contributing to environmental improvement: new and renewable energies; use of agricultural waste and forestry and urban wastes to generate electricity,...

- + To strictly manage electricity generation technologies in environmental aspects. Selected technologies must be advanced and highly performance and low environmental impacts;

- To adopt mechanisms to attract investment capital for environmental protection from all economic sectors, particularly financial assistance from overseas for environmental protection;

- To formulate financial regulations on the electricity sector's environment, fully and correctly accounting environmental expenses in investment and production costs;

- To encourage cooperation between large electricity production and consumption enterprises and foreign countries in the implementation of clean development mechanism (CDM) in the form of developing new and renewable energies; raising the efficiency of energy use and energy conservation projects.

f/ Solutions and policies for scientific and technological development:

- To complete, modernize and innovate electricity equipment and technologies to develop energy for the immediate and long-term future;

- To determine appropriate models and roadmaps for electricity source technologies and grids, ensuring stable and suitable development under Vietnam's conditions of natural resource potential and investment capability, affordable price and environmental protection;

- New energy facilities must be built with modern technologies suitable to Vietnam's economic conditions; to incrementally upgrade and renovate existing facilities to ensure technical, economic and environmental standards;

- To combine new modern technologies with improving existing ones to raise efficiency and energy saving;

- To encourage the use of new technologies at thermo-power plants: Spraying combustion chamber, boiling bed, above-limit steam parameters, cycle of mixed-gas turbine; waste treatment, etc. in order to raise environmental protection efficiency;

- To renovate and upgrade electricity transmission and distribution grids in order to reduce losses and ensure safety and reliability;

- To modernize moderation, operation, communication, control and automation systems to serve the moderation of domestic electricity grids and regional connection;

- To step by step apply recommended and compulsory measures to renew technologies and equipment of power-intensive industries

(steel, cement and chemicals); to limit and eventually ban the import of used and low-efficient equipment in electricity production and use.

g/ Human resource development solutions:

- Human resource training: To develop specialized electricity schools, striving to build a number of them up to international standards; to develop uniform standard curricula on specialized disciplines;

- To concentrate on training human resources for key activities in the areas of electricity production, transmission and distribution. To attach importance to vocational training for skilled technicians and operators fully capable of mastering and expertly handling modern technical equipment and technologies. To organize retraining for technical and managerial staff, gradually raising the training quality to regional and world levels;

- To renovate the curriculum on training of human resources in the electricity sector, diversify forms of training and training linked with actual production; to attach importance to the recruitment of scientific and managerial staff for overseas training in spearhead fields. To organize additional training and in-advance training in missing or weak sectors, particularly nuclear power and new energies. To work out satisfactory treatment mechanisms to attract quality human resources;

- To organize, restructure and reorganize production models in a scientific and rational manner to ensure effective labor use and high productivity.

h/ To build and develop the electrical engineering industry and localization.

- To increase investment in, and diversify sources of capital, attract foreign countries' participation in the research, design and manufacture of equipment and parts for the electricity sector. Electrical equipment- and accessory productions establishments strive to turn out products of international standards.

- To form a number of electrical equipment research, designing and manufacturing complexes with the core being domestic mechanical manufacturing enterprises;

- To build modern centers for electrical equipment repair and maintenance to be able to repair and verify electrical equipment;

- To renew and modernize existing electrical engineering plants, to expand joint ventures and build new factories, creating electrical equipment manufacturing zones, striving for the domestic manufacturing of most electricity grid, transmission and distribution equipment instead of import and 50-60% of equipment for coal-operated thermo-power plants by 2020, and 60-70% of equipment for coal-operated thermo-power plants and 40- 50% of equipment for nuclear power plants by 2030.

i/ Solutions for electricity conservation:

- To enhance the communication, dissemination and implementation of the Law on Energy Conservation, aiming to raise energy use efficiency in general and electricity consumption in particular in production, business and household consumption;

- To widely implement, and increase the effectiveness of, the national target program on electricity conservation for saving 5- 8% and by 2020 and 8-10% of total electricity consumption.

Article 2. Tasks of concerned ministries, sectors, localities and units

1. The Ministry of Industry and Trade shall:

a/ Periodically inspect and urge investors and contractors assigned to implement projects on the master plan's lists and concerned units to promptly direct and solve problems in the course of investment and construction with a view to strictly keeping to the approved schedule of projects and achieving their investment effectiveness. To report on delayed projects to the Prime Minister for consideration and handling;

b/ Strictly monitor the electricity supply-demand, progress of implementation of electricity source and grid projects in order to decide and adjust the schedules of projects in the approved master plan or consider and report to the Prime Minister for permission to add new projects to the master plan or remove unnecessary projects from the master plan in accordance with the practical requirements of socio-economic development in each period;

c/ Direct the formulation, appraisal and approval of plans on locations, detailed plans of thermal-power centers, and plans on hydropower on rivers. Direct the development or import of gas and new coal resources for electricity production, industry and other essential demands;

d/ Publicize lists of projects in the approved plans and select investors for projects for submission to the Prime Minister for approval; to assume the prime responsibility for formulation and submission to the Prime Minister for approval of mechanisms to select

investors for developing new electricity sources and mechanisms for implementation management to ensure the project investment, construction and operation in accordance with the approved schedule;

e/ Organize open international biddings to select investors for electricity source projects to be implemented in BOT form. In case of necessity to appoint contractors, the Ministry of Industry and Trade shall assume the prime responsibility for, and coordinate with concerned ministries in, considering and submitting them to the Prime Minister for decision;

f/ Formulate plans for raising capital for electricity development and report them to the Prime Minister in October 2011;

g/ Study and submit to the Prime Minister a plan on development of smart grids in December 2011;

h/ Assume the prime responsibility for, and coordinate with concerned ministries, sectors and localities in, formulating mechanisms and policies to encourage development investment in projects on new and renewable energies, and the national target program on development of renewable energy;

i/ Assume the prime responsibility for, and coordinate with ministries and sectors in, negotiating on and concluding electricity cooperation and exchange agreements with neighboring countries and Vietnam's participation in the connected electricity systems among the countries in the Mekong sub-region;

j/ Direct and urge localities and investors to

properly implement rural electricity development projects according to approved plans and schedules;

k/ Complete the necessary conditions (legal, technical infrastructure) for the formation and operation of a competitive electricity market;

l/ Assume the prime responsibility for formulation and submission to the Prime Minister for approval of programs on research, manufacture and localization of, equipment for coal- operated thermo-power plants, hydropower and nuclear power plants;

m/ Develop mechanisms for development of the energy market, balance the use of primary energy sources for electricity production, prioritize domestic coal and gas resources for electricity projects;

n/ Assume the prime responsibility for, and coordinate with ministries, sectors and localities in, implementing the 2011-2015 program on electricity saving;

o/ Draft a decision on establishment of the State Steering Committee for the national master plan for power development and submit it to the Prime Minister for approval.

2. The Ministry of Planning and Investment shall:

a/ Formulate mechanisms and policies to attract foreign investment, ODA capital and private investment capital for synchronous, balanced and sustainable development of the electricity sector;

b/ Assume the prime responsibility for, and coordinate with the Ministry of Industry and

Trade in, registering, arranging and additionally allocating adequate budget funds for the formulation and publicity of the master plan.

3. The Ministry of Finance shall assume the prime responsibility for, and coordinate with concerned ministries and sectors in, formulating financial mechanisms and capital mechanisms for investment in the development of the electricity sector under the approved master plan; and coordinate with the Ministry of Industry and Trade in formulating policies on electricity prices under the market mechanism.

4. The State Bank of Vietnam shall assume the prime responsibility for, and coordinate with concerned ministries and sectors in, formulating appropriate mechanisms and policies to enhance the capacity of banks to ensure adequate supply of funds for electricity projects under the approved master plan.

5. Vietnam Electricity (EVN) shall:

a/ Invest in, and put into operation the assigned electricity source projects and electricity transmission projects according to the approved schedules. Take responsibility for the purchase of electricity from electricity sources, import of electricity, and management and operation of electricity transmission grids and distribution grids in order to properly perform its key role in ensuring the national electricity supply;

b/ Draw up plans on locations and detailed plans for coal-fired thermo-electricity centers as assigned to it in the master plan, and submit them to the Ministry of Industry and Trade for approval;

c/ Assume the prime responsibility for investment and construction of infrastructure facilities of thermo-electricity centers of which the Electricity Vietnam will partially invest in electricity source projects;

d/ Apply solutions for further reducing electricity losses, implement the programs on electricity conservation in production, transmission and distribution for sustainable development;

e/ Assign the National Electricity Transmission Corporation to invest in 500 kV and 220 kV electricity transmission grid projects in Electricity Master Plan VII.

6. The Vietnam Oil and Gas Group (PetroVietnam) shall:

a/ Invest in and operate the assigned electricity source projects according to the approved schedules;

b/ Develop and operate new oil and gas fields in synchronism with the schedule of putting into operation the power plants and ensure adequate supply of gas for these plants approved in the master plan. Assume the prime responsibility for formulating a plan on import of liquefied natural gas for electricity generation in conformity to the schedule of development of power plants in the master plan, and submit it to the Ministry of Industry and Trade for approval.

7. The Vietnam National Coal Mineral Industries Holding Corporation (Vinacomin) shall:

a/ Invest in and operate the assigned electricity source projects according to the

approved schedule;

b/ Invest in the exploitation of new coal mines, acting as a coordinator for in the import of coal to properly perform its key role in ensuring the supply of coal for electricity production and other demands of the national economy.

8. Provincial-level People's Committees shall:

a/ Arrange land areas in their local land use planning for electricity source and electricity transmission grid works approved in this master plan and electricity distribution grid works approved in local electricity development plans;

b/ Assume the prime responsibility for, and closely coordinate with investors in, ground clearance, compensation, population relocation and resettlement for electricity source and grid projects according to the approved schedule.

Article 3. This Decision takes effect on the date of its signing.

Ministers, heads of ministerial-level agencies, chairmen of provincial-level People's Committees, the Members' Councils, chairmen of the Members' Councils, directors-general of Vietnam Electricity, Vietnam Oil and Gas Group, Vietnam National Coal- Mineral Industries Holding Corporation and concerned agencies shall implement this Decision.-

Prime Minister
NGUYEN TAN DUNG