
No. 48/2008/QĐ-BCT

Hanoi, December 19, 2008

DECISION

APPROVING THE PLANNING ON DEVELOPMENT OF THE ELECTRIC
EQUIPMENT-MANUFACTURING INDUSTRY IN THE 2006-2015 PERIOD WITH A
VISION TOWARDS 2025

THE MINISTER OF INDUSTRY AND TRADE

Pursuant to the Government's Decree No. 189/2007/ND-CP of December 27, 2007, on the functions, tasks, powers and organizational structure of the Ministry of Industry and Trade;

Pursuant to the Government's Decree No. 92/2006/ND-CP of September 7, 2006, on the formulation, 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.186/2002/QĐ-TTg of December 26, 2002, approving the strategy on development of Vietnam's mechanical engineering industry till 2010 with a vision towards 2020;

*In furtherance of the Government Office's Official Letter No.3174/VPCP-CN of June 11, 2007, on the assignment by the Prime Minister of the Ministry of Industry (now the Ministry of Industry and Trade) to approve the Planning on development of electric equipment-manufacturing industry in the 2006-2015 period with a vision towards 2025;
At the proposal of the Director of the Heavy Industry Department,*

DECIDES:

Article 1. To approve the Planning on development of the electric equipment-manufacturing industry in the 2006-2015 period with a vision towards 2025 with the following principal contents:

1. Development viewpoints

a/ To develop the electric equipment-manufacturing industry in accordance with the strategy for development of Vietnam's mechanical engineering industry till 2010 with a vision towards 2020 and the national planning on electricity development in the 2006-2015 period with a vision towards 2025 taken into consideration;

b/ To develop the electric equipment-manufacturing industry in a stable and sustainable manner, invest in modern technologies and equipment, reduce the consumption of raw

materials, fuel and energy for the production of environmentally friendly products with high energy use efficiency;

c/ The electric equipment-manufacturing industry must serve socio-economic development in combination with national defense.

2. Development objectives

a/ The industry's production value will increase about 19-20%/year in the up-to-2010 period and about 17-18%/year on average during 2011-2015;

b/ By 2010, to satisfy 60% of the domestic demands for electric wires and transformers in the 2011-2015 period, then over 70% by 2015. To satisfy 55% of the domestic demands for electric motors and some types of common generators by 2015;

c/ By 2015, Vietnam's electric equipment-manufacturing industry will reach the regional advanced standards on technologies to manufacture transformers, generators' electric motors, medium- and high-voltage instruments, electric wires and cables for domestic consumption and export;

d/ The industry's export turnover is projected to reach 18%/year in the 2011-2015 period and 15% in the 2016-2025 period;

e/ By 2025, Vietnam will be capable of manufacturing and supplying complete electric equipment sets for transmission lines and transformer stations.

3. Development orientations

a/ To make new and intensive investment in advanced technologies for the development of the production of products in which Vietnam has an advantage, raising the manufacturing capacity and the competitiveness of products of enterprises; to encourage investment in the production of import substitutes with high economic efficiency and step up export to the region and the world;

b/ To encourage all economic sectors to participate in the industry's development. To diversify forms of investment in research and development, and technology transfer; to enter into joint ventures and association for production, advertisement and sale;

c/ To attach importance to the research into, designing and manufacture of, new and high-quality products;

d/ To enhance the association and coordination among concerned branches and domains, tapping to the utmost various branches' capabilities to support the research into, designing and manufacture of, equipment systems for the power industry.

4. Planning for development in the period up to 2015

a/ Product development planning

- Static electric machines

- + To focus on and prioritize the development of the production of dry transformers of medium voltage and transmission transformers of 110 kV and 220 kV; to encourage investment in the production of industrial rectifiers;
- + In the immediate future, to make in-depth investment in and scale up the production capacity of existing establishments so as to raise capacity of manufacturing transformers of up to 250 MVA and 220kV;
- + To study and receive the transferred technologies for the production of dry transformers in service of the plan to lay underground power grids in urban centers;
- + To complete the construction of high-voltage experiment centers in two key transformer-manufacturing regions being Hanoi and Ho Chi Minh City before 2010;
- + To formulate and apply sets of universal Vietnam standards on transformers, which will be used as grounds for the assessment and mutual recognition between testing and experimenting units nationwide;
- + To attract foreign investment in the manufacture of transmission transformers, special-purpose transformers and industrial rectifiers, to be supplied for the industrial equipment-manufacturing industries;
- + By 2015, to basically satisfy the domestic demands for distribution transformers of uniform national quality standards, trying to meet 50-60% of the demand for 110kV -220kV transformers; and the export value will approximate 30-35% of the industry's production value.

Production planning	Unit of calculation	Annual average (Up to 2010)	Annual average (2011-2015)
500 kV transformers	MVA		2,000 - 2,500
110kV-220kV transformers	MVA	7,000 - 8,000	8,500 – 10,000
Distribution transformers	MVA	40,000 - 50,000	50,000 - 60,000
For export	MVA	12,000- 13,000	20,000 - 25,000

- Rotary electric machines

- +To attach importance to the development of the production of high-capacity motors, high-voltage motors for industrial processing equipment and hydroelectric generators of up to 50MW; to encourage investment in the production of generators consuming renewable energy (wind, solar, geo-thermal, biogas,...);
- + To invest in the expansion and modernization of existing electric motor-manufacturing lines;

+ To invest in technological chains of regional advanced level to produce high-capacity electric motors, special motors, such as magnetic-brake motors, high-efficiency anti-explosion motors;

+ To assemble generators with a higher and higher localization rate for civil and industrial use, hydroelectric generators, wind generators..., then proceed to master the technologies for designing and manufacturing hydroelectric generators of up to 50MW capacity in service of hydroelectric projects;

+ By 2015, to satisfy 55-65% of the domestic demands for motors and about 50% of the domestic demands for some types of generators of 1kV-10kW capacity; the export value will represent 30-40% of the industry's production value.

Production planning	Unit of calculation	Annual average (Up to 2010)	Annual average (2011-2015)
Common-use motors	Piece	300,000-350,000	900,000-1,000,000
Special-purpose big motors	Piece	1,000-1,200	3,000-3,200
Assorted generators	Piece	50,000-55,000	90,000-100,000
Small hydroelectric generators	Piece	10,000-12,000	15,000-17,000
Renewable energy-operated generators	Piece	1,000-1,500	4,500-5,000

- Electric instruments

+ To prioritize investment in the development of the production of electronic meters, to encourage investment in the production of high-voltage electric instruments, counting and metering systems, power-grid safety smart supervisors;

+ To invest in new electric meter-manufacturing factories and in the expansion of existing ones to raise their production capacity with a view to satisfying domestic demands and expanding export markets. To concentrate on production of electronic meters;

+ To invest in the construction of factories producing medium- and high-voltage electric instruments of international standards, bringing into full play domestic resources while making full use of foreign investment;

+ To efficiently tap the mode of commercial franchise, incrementally establishing Vietnamese brands in the production of electric boxes and panels as well as complete equipment sets for transformer stations for domestic and foreign markets;

+ By 2015, to satisfy 60-70% of the domestic demands for electric instruments, the export value will represent 19-20% of the industry's production value.

Production planning	Unit of calculation	Annual average (Up to 2010)	Annual average (2011-2015)
Electric meters and measuring tools	1,000 pieces	4,000-4,500	9,000-10,000
Electric instruments	1,000 pieces	480-550	1,000-1,100
Electric boxes	set	14,000-15,000	35,000-37,000

- Electric wires and cables

+To prioritize investment in the development of the production of electric cables with waterproof, fire-resistant properties suitable to the tropical environment in service of underground running of urban power grids or high-rise projects; to encourage the production of civil-use high-quality electric wires and cables (environmentally friendly and lead-free), export electric wires and cables;

+ To expand and raise the capacity of existing production chains towards raising technological levels and product quality;

+ To fully operate existing medium- and high-voltage insulated cable-production lines in service of underground running of power supply systems in cities, provincial towns and industrial parks;

+ To invest in the large-scale production of common electric wires and cables for civil and industrial use in service of the machine-tool industry, power supply systems in factories, condominiums and cables for mining pits and seagoing vessels.

Production planning	Unit of calculation	Annual average (Up to 2010)	Annual average (2011-2015)
Bare cables	ton	300,000-350,000	350,000-400,000
Insulated cables	ton	250,000-300,000	450,000-500,000
Civil-use electric wires	ton	400,000-450,000	400,000-450,000

- Other electric equipment

+ To encourage the development of the production of transmission line components, especially components for high-voltage transmission lines of up to 220kV, for programs on development of national power grids; to encourage the localization of electric equipment for power plants and renewable energy-exploiting systems;

+ To invest in the expansion and raising of the capacity and product quality of transmission line component-manufacturing establishments. To make selective and economically efficient new investment in technologies to produce transmission line components as import substitutes;

- + To call for foreign investment in the production of before- and after-insulator components on transmission lines;
- + To invest in the expansion or construction of factories producing standard components for electric motors and generators to meet domestic consumption and export demands;
- +To invest in factories producing components for the strongly developing shipbuilding industry;
- + To invest in the development, and participate in the production and supply of a number of equipment for thermoelectric and hydroelectric plants for the materialization of the national planning on electricity development in the 2006-2010 period, taking into account a vision towards 2025, which was approved by the Prime Minister in Decision No. 110/2007/QD-TTgof July 18, 2007;
- + To approach technologies to manufacture mechano-electric equipment for power plants of up to 500 MW with a view to satisfying the domestic demands and proceeding to export them;
- + To study and invest in the phased production of components, then complete sets of equipment for transformer stations, compensation stations, transmission line projects....

b/ Investment capital

- + The total investment capital for the development of the electric equipment-manufacturing industry is estimated at about VND 43 trillion in the 2006-2010 period and about VND 136 trillion in the 2011-2015 period.
- + The investment capital will come largely from domestic sources through combined mobilization from own capital, preferential loan capital (for products enjoying priority and development encouragement), commercial loan capital, enterprise bonds, construction work bonds in addition to foreign investment capital.

Major investment projects are listed in the enclosed Appendix.

5. The Planning's implementation solutions

a/ Market solutions

- To apply non-tariff regulations at the highest level (in conformity with WTO commitments) with a view to restricting import, protecting electric equipment which can be produced at home and creating favorable conditions for small- and medium-sized enterprises to participate in the market;
- To intensify electric equipment investment and market development consultancy; to encourage the purchase of world-famous manufacturing technologies and trade marks.

b/ Investment solutions

- To step up the implementation of projects on the planned list, projects to produce materials of new energy, renewable energy in the spearhead industry;
- To intensify the promotion of, and call for investment in, key projects.

c/ Scientific-technological research, transfer and application solutions

- To build up a system of centers for inspecting electric equipment quality of national standards, proceeding to conformity with international standards;
- To formulate key scientific and technological programs for the development of production of electric equipment; to increase budget for scientific and technological research, provide and guarantee credits for the application of new technologies in the field of electric equipment;
- To encourage all economic sectors to participate in research and innovation and transfer of technical advance; to diversify forms of cooperation and association in conducting research into electric equipment sciences and technologies; to bring into the fullest play the National Fund for Scientific and Technological Development to support scientific and technological activities in the electric equipment-manufacturing industry;
- To make a list of spare parts and components which cannot be produced at home yet or immediate investment in the production thereof is inefficient, to be proposed for import tax exemption or reduction;
- To establish and regularly update the database of the electric equipment-manufacturing industry and its support industries.

d/ Human resource solutions

- To renew the program on training of personnel for the electric equipment industry, diversifying forms of training and linking training to production reality; to attach importance to the recruitment and sending of science workers and managers for training in developed countries, supporting the training of entrepreneurs;
- To formulate satisfactory preferential treatment mechanisms so as to attract high-quality personnel; to promulgate a legal framework for use as a basis for the recruitment and exchange of human resources among enterprises.

e/ Support solutions

- To periodically review, update and adjust the Planning on development of the electric equipment-manufacturing industry in line with the socio-economic development situation in Vietnam and the world;
- To consolidate the organization and modes of operation of professional associations and form product group-based sub-associations.

Article 2. Organization of implementation

1. The Ministry of Industry and Trade shall assume the prime responsibility for, and coordinate with concerned ministries, branches and provincial-level People's Committees in, directing, inspecting and proposing mechanisms and policies on development of the electric equipment-manufacturing industry in accordance with the approved Planning.
2. The Ministries of Planning and Investment; Finance; Science and Technology; Natural Resources and Environment; and Defense shall, according to their respective functions,

coordinate with the Ministry of Industry and Trade in detailing mechanisms and policies on development of the electric equipment-manufacturing industry stated in this Decision for implementation of the Planning.

3. Provincial-level People's Committees shall, based on the approved Planning, create favorable conditions so that the development projects and programs of the electric equipment-manufacturing industry are implemented in synchronism and uniformity with local socio-economic development master plans.

40. Concerned professional associations shall coordinate with relevant ministries and branches in disseminating the Planning in forms of propagating, popularizing and guiding it to electric equipment enterprises nationwide so that the latter work out orientations and plans for production and business development in accordance with the Planning.

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

Article 4. Ministries, ministerial-level agencies, government-attached agencies, provincial-level People's Committees and concerned agencies shall implement this Decision.

MINISTER OF INDUSTRY AND TRADE

Vu Huy Hoang

APPENDIX

LIST OF MAJOR INVESTMENT PROJECTS OF THE ELECTRIC EQUIPMENT-MANUFACTURING INDUSTRY IN THE UP-TO-2015 PERIOD
(To the Ministry of Industry and Trade's Decision No. 48/2008/QD-BCT of December 19, 2008)

No.	Project	Projected location	Projected capacity Piece/year			Projected investment capital (VND billion)			Projected capital source
			2006-2010	2011-2015	2016-2025	2006-2010	2011-2015	2016-2025	
I	Static electric machines					232	1250	1700	
1	Transmission transformer factory	Hanoi	10	30	30	50	200	100	Commercial loan
2	Intensive investment project on Thu Due (transmission) transformer factory	Thu Duc, Ho Chi Minh City	100	0	0	70	0	0	Commercial loan
3	Transmission transformer factory	Hai Phong and Quang Ninh				0	200	200	FDI
4	Dry transformer factory	Da Nang		2,000	5,000	0	100	200	FDI
5	Transmission transformer factory	Cam Pha	50	50	50	112	0	0	Joint venture
6	Special-transformer factory					0	200	200	FDI

7	Transmission transformer factory	Southern Vietnam		100	200	0	300	200	
8	Dry transformer factory	Northern Vietnam		4,000	8,000	0	300	200	FDI
9	Project to manufacture industrial rectifiers	Northern/Central Vietnam		30	50	0	100	200	FDI
10	Project to manufacture industrial rectifiers	Southern Vietnam		30	50	0	100	200	FDI
11	Special-purpose transformer factory project			2,000	3,000	0	150	200	
II	Rotary electric machines					843	1,860	1,750	
1	Modernization of the Mechano-Electric Equipment Manufacturing Company (manufacturing generators of up to 10,000 kW capacity, electric motors of up to 5,000 kW)	Hanoi				45	45	200	Commercial loan
2	Intensive investment in Vietnam-Hungary electric motor-manufacturing company (manufacturing electric motors of up to 2,500 kW)	Hanoi				45	45	100	Enterprise capital
3	Intensive investment project on Unit II of the Mechano-Electric Equipment Manufacturing Company	Le Minh Xuan industrial park. Ho Chi Minh	24,000			150	200	300	Commercial loan

		City							
4	Investment in upgrading Hai Phong Mechano-Electric Equipment Company (manufacturing electric fans, domestic electric appliances)	Hai Phong				30	20	100	Commercial loan
5	Project on LIDICO mechano -electric equipment plant	Ho Chi Minh City				50	0	0	Commercial loan
6	A factory manufacturing and assembling electric motors and generators of up to 2.5 MW	Thuan An, Binh Duong	1,000			123	0	0	Joint venture
7	A factory assembling anti-explosion electric motors of a capacity ranging from 0.75 to 30 kW	Cam Pha	1,000			70	0	0	Joint venture
8	A factory manufacturing small hydroelectric generators of up to 10 MW	Northern Vietnam				150	200	0	FDI
9	Special-purpose electric motors factory	Central Vietnam				100	350	250	FDI
10	Factories assembling big electric machines of up to 300 MW	Southern and Central Vietnam				200	400	200	Commercial loan
11	Wind generator assembling and manufacturing factory	Central Vietnam				100	200	200	FDI

12	Wind generator assembling and manufacturing factory	Southern Vietnam				100	200	200	FDI
13	Mass energy generator-assembling and - manufacturing factory	Southern Vietnam				0	200	200	FDI
III	Electric instruments					750	1,475	1,320	
1	Electric equipment manufacturing plant	Thai Nguyen				50	100	70	Commercial loan
2	Expansion of electricity-metering equipment company, intensive investment (TU, TI 1-phase and 3-phase electric meters of 6-35 kV)	Hanoi				55	45	100	Commercial loan
3	Electronic electricity-controlling and - metering equipment factory	Hanoi	150,000			200	200	100	Commercial loan
4	Electronic electricity-controlling and metering-equipment factory	Sai Dong B, Hanoi	2,500			45	100	100	Commercial loan
5	Intensive investment in Electric Instrument Company I (Electric cutting instrument of 35 kV. electric boxes, panels)	Hanoi				30	30	100	Commercial loan
6	New investment project on electric instrument (breaker, relay)- manufacturing plant	Southeastern Cu Chi industrial park				120	200	150	Joint venture/FDI

7	Mechanical/electronic meters factory	Southeastern Cu Chi industrial park	5,000,00 0			150	100	100	Commercial loan
8	Medium-/high-voltage electric instrument factory	Central Vietnam				0	300	200	FDI
9	Mediun-/high-voltage electric instrument factory	Southern Vietnam				0	200	200	FDI
10	Electric box. panel-manufacturing and assembling factory	Southern Vietnam				100	200	200	Commercial loan
IV	Electric wires, cables and materials					9,235	1,550	800	
1	Automobile electric wire and cable factory (Sumitomo)	Hai Duong				345	0	0	FDI
2	Electric wire and cable, equipment and component factories	Thua Thien Hue. and Binh Dinh	200,000 T			50	100	150	Commercial loan
3	Investment project to modernize CADIVI company	Ho Chi Minh City				90	200	150	Commercial loan
4	Investment project to expand Taya company	Bien Hoa				45	150	100	FDI
5	Electric wire and cable factory	Ha Tinh provincial capital	10,000 tons/yea r			25	0	0	Joint venture/ FDI

6	Medium- and low-voltage cable and communication cable factory	Kim Hoa Binh Xuyen industrial park, Vinh Phuc				80	0	0	Joint venture/FDI
7	Optical cable factory	Quang Minh industrial park, Vinh Phuc				80	0	0	FDI
8	Optical cable factory	Hi-tech park. Ho Chi Minh City				8000	0	0	FDI
9	Electric wire and cable factory	Khanh Hoa industrial park. Da Nang				0	400	0	FDI
10	Project to manufacture electric wires and cables	Quang Chau industrial park, Bac Giang				0	100	0	FDI
11	Underground electric cable factory	Northern Vietnam				150	200	150	Commercial loan
12	Underground electric cable factory	Central Vietnam				100	100	100	Commercial loan
13	Factory manufacturing electric equipment for ships	Central Vietnam				70	100	0	Commercial loan
14	Special electric cable factory	Southern				200	200	150	Commercial

		Vietnam							loan
V	Projects on other electric equipment					2,605	5,130	3,170	Commercial loan
1	Modernization of the Electro-Technical Equipment Corporation	Hanoi				200	100	0	Commercial loan
2	High-voltage electricity experiment centers	Northern, Central and Southern Vietnam				200	300	200	Research and development capital
3	Upgrading electric equipment engineers' training faculties	Hanoi, Ho Chi Minh City				150	300	200	Training capital
4	Construction of electric equipment personnel training centers	Northern, Southern and Central Vietnam				200	400	250	ODA
5	Ship mechano-electric equipment factory	Hai Duong				150	300	200	Commercial loan
6	Aviation mechano-electric equipment factory	Da Nang				100	400	300	FDI
7	Health service mechano-electric equipment factories	Hanoi, Ho Chi Minh City				150	300	200	ODA
8	Southern agro-mechano-electrical	Can Tho				150	300	100	ODA

	equipment center								
9	Forestry mecha no-electric equipment center	Central Highlands				100	200	200	ODA
10	Domestic appliance-export electric equipment factory	Quang Ninh				0	300	200	FDI
11	Civil electric, electro-refrigerating and electronic equipment manufacturing and assembling chains	Viet Hung industrial park, Quang Ninh	500,000			0	200	0	FDI
12	Electric equipment factory	Chan Hung industrial park				80	0	0	FDI
13	Domestic appliance-export electric equipment factory	Vinh Phuc				0	500	200	FDI
14	Electro-refrigerating equipment-manufacturing and -assembling factory	Da Nang industrial park				0	80	0	Joint venture/FDI
15	Special-type battery factory	Binh Xuyen industrial park, Vinh Phuc				80	0	0	FDI
16	Hai Duong chinaware joint-stock company	Hai Duong	1,000 tons/year			50	100	70	Commercial loan
17	Hoang Lien Son chinaware company	Hoang Lien Son	4,000 tons/			50	150	100	Commercial loan

			year						
18	Que Vo chinaware and crystal insulator factory	Que Vo	600 tons/year			100	200	150	Commercial loan
19	Minh Long II chinaware company	Dong Nai	1,500 tons/year			30	0	0	Commercial loan
20	Project on insulator china ware factory	Hue	3 million products / year			35	0	0	Commercial loan
21	Project on insulator chinaware factory	Lam Dong	3,000 tons/year			70	0	0	Commercial loan
22	Civil-use electric and electronic equipment manufacturing and assembling factory	Khanh Hoa industrial park, Da Nang		500,000		50	50	0	FDI
23	Solar battery manufacturing and assembling factory	Central Vietnam				150	200	200	Commercial loan
24	Solar battery manufacturing and assembly factory	Southern Vietnam				150	250	200	Commercial loan
25	Building capacity for EPC bidding for (thermo- and hydro-electric) power	Hanoi				60	100	150	Commercial

	plants								loan
26	Expanding capacity for EPC bidding for high-voltage transformer stations	Ho Chi Minh City				70	100	70	Commercial loan
27	Building capacity for EPC bidding for big industrial mechano-electronic works	Northern Vietnam				80	100	80	Commercial loan
28	Center for research and application of new and clean energy sources					150	200	100	ODA
	Total					13,665	11,265	8,740	