

**DECISION No. 177/2007/QĐ-TTg OF NOVEMBER 20, 2007,  
APPROVING THE SCHEME ON DEVELOPMENT OF BIOFUEL  
UP TO 2015, WITH A VISION TO 2025**

THE PRIME MINISTER

*Pursuant to the December 25, 2001 Law on Organization of the Government;  
At the proposal of the Minister of Industry and Trade,*

**DECIDES:**

**Article 1.-** To approve the scheme on development of biofuels up to 2015, with a vision to 2025 (below referred to as the scheme for short) with the following principal contents:

**I. OBJECTIVES**

1. General objectives:

To develop biofuel, a new and renewable energy, for use as an alternative to partially replace conventional fossil fuels, contributing to assuring energy security and environmental protection.

2. Specific objectives for each period:

a/ From now to 2010:

- To formulate a system of mechanisms, policies and legal documents in order to create a legal setting for attracting investment in and encouraging industrial-scale production and use of biofuels. To raise public awareness about the important role and great benefits of biofuels.

- To map out a schedule for use of biofuels as an alternative to partially replace fossil fuels currently used for transportation and other industries, and formulate a pilot model of biofuel distribution in some provinces and cities;

- To research into, approach and master technologies for producing biofuels from biomass and appropriate blending technologies, and solve the question of raising the efficiency of conversion of biomass into fuel;

- To plan and develop raw material areas for production of alcohol, vegetable oil and animal fat (sugar cane, cassava, maize, oil-bearing plants, recovered animal fat, etc.) for biofuel production.

- To train human resources to initially satisfy the biofuel development need;
- By 2010, to develop various models of trial production and use of biofuels with a total annual output of 100,000 tons of E5 and 50,000 tons of B5 in order to satisfy 0.4% of the whole country's gasoline and oil demand:
- To approach and master the technology for producing seedling of high-yield plants for biofuel production.

b/ During 2011-2015:

- To research into, master and produce materials and additives for biofuel production;
- To develop the production and extensive use of biofuels as an alternative to conventional fossil fuels. To expand biofuel production establishments and the network of distribution of biofuels for transportation and other industries;
- To develop raw material areas under planning, put raw-material plant varieties of high yield and pest resistance into mass production, thus ensuring sufficient supply of biomass materials to be converted into biofuel;
- To successfully apply modern fermentation technologies in order to diversify raw material sources to be use in the process of converting biomass into biofuel;
- To build and develop biofuel production and using establishments nationwide. By 2015, the out put of ethanol and vegetable oil will reach 250,000 tons (enough for blending 5 million tons of E5 and B5), satisfying 1% of the whole country's gasoline and oil demand;
- To train a pool of specialists in major domains related to biofuel production and technical workers to satisfy the need for human resources for biofuel development.

c/ Vision to 2025:

The biofuel production technology applied in Vietnam will attain the world's advanced level. The ethanol and vegetable oil output will reach 1.8 million tons, satisfying some 5% of the whole country's gasoline and oil demand.

## **II. MAIN TASKS**

1. Conducting scientific research and technological development (R-D), deploying trial production of products to serve biofuel development:

-To study, elaborate and promulgate mechanisms, policies and legal documents concerning scientific research, technological development, transfer, production and use of biofuel, including: Investment promotion policies and mechanisms to promote scientific research, technology transfer and production development; the system of

technical standards and regulations and the schedule of application (Vietnam standards and technical regulations applicable to production and use of E5 and B5, compulsory environmental requirements, and the schedule of application to biofuel users in the direction of encouraging extensive use of biofuels);

- To approach and master the technology for blending gasoline, condensate, naphtha petroleum diesel with ethanol, hidiesel and additives to produce gasoline E5 (95% petroleum gasoline and 5% ethanol) and diesel oil B5 (95% petroleum diesel and 5% biodiesel), and put into operation blending facilities wlrh an annual output of 100,000 tons of E5 and 50,000 tons of B5. To develop a network of product distributors and sellers throughout the country, especially in big cities such as Hanoi, Ho Chi Minh City, Da Nang;

- To approach and master the modern technology for the production of ethanol from different biomass sources: production and use of highly effective enzyme systems in the conversion of raw materials, anti-contamination antibiotics, microorganisms capable of polystromatic fermentation and yielding high efficiency, energy-conserving continuous fermentation systems (with circulation of enzymes and boiling water, recovery of excessive vapor, etc.). To master the modern and high-performance technology for the production of standard ethanol for biofuel production. To develop synchronously alcohol production establishments of medium and large sizes to supply sufficient ethanol for blending E5;

- To conduct scientific research and technological development, and organize the production and consumption of biodiesel from standard-quality vegetable oil and animal fat, which is to be blended with petroleum diesel into diesel B5. To develop biofuel production establishments of various sizes suitable to raw material areas and sources, in order to ensure suffient supply of biodiesel for blending B5;

- To plan and develop raw material areas for the production of alcohol, vegetable oil and animal fat (sugar cane, cassava, maize, oil-bearing plants, recovered animal fat, etc.) in the direction of fully tapping existing land areas and at the same time efficiently using land areas in each locality, and promoting the advantages of each raw material area. To select and create new sugar cane, cassava, maize, rice and oil-bearing plant varieties with fairly high yields compared with those grown around the world and suitable to planned land areas, especially arid and degenerated land which cannot be used for growing human food crops;

- To conduct scientific research, technological development and production of necessary additives and chemicals for use in blending biofuels with conventional fossil gasoline and

oil into fuel blends which satisfy fuel quality standards and environmental safety requirements.

## 2. Founding and developing the biofuel production industry:

- To establish and encourage enterprises of all economic sectors to invest in researching into, transferring, receiving and applying technologies to biofuel production; to efficiently apply new technical and technological advances to producing and trading in biofuel production and providing services related to biofuel products;

- To form and strongly develop the biofuel production industry, and build an open market favorable for promoting enterprises' investment in projects on production and trading of and provision of services related to biofuel products.

## 3. Building biofuel development potential:

### a/ Human resources training:

- To send specialized scientific and technological personnel to countries with a developed biofuel production industry to attend short-term professional training courses of between 6 and 12 months;

- To train at home technological engineers specialized in the technology for biofuel production from the stage of biomass production to the stage of conversion of biomass into fuels under the scheme:

- To train technical workers who are highly skilled in biofuel production technology for the implementation of the scheme in enterprises and localities;

- To train managerial officers of ministries, branches and enterprises in knowledge about and state management capacity with regard to biofuel development and application.

### b/ Building material and technical foundations and modernizing machinery and equipment:

- To make intensive investment in upgrading the system of agencies engaged in scientific research and technological development related to biofuels; to additionally supply modern machinery and equipment and modernize material and technical foundations for existing laboratories so that they are able to approach and receive technologies for producing commercial biofuels from biomass;

- To invest in and put into operation a number of advanced laboratories capable of efficiently facilitating research into biofuel raw materials, production and blending technologies, giving special priority to researches into basic techniques for the purpose of quickly creating products and producing biofuels on an industrial scale;

- To establish and operate online a national database on biofuels in order to promptly and adequately supply and exchange the latest basic information on biofuel production equipment and technology to concerned units and individuals.

#### 4. International cooperation:

- To take the initiative in receiving, mastering and transferring technical and technological advances and new scientific achievements related to biofuel production in the world so as to quickly, vigorously and sustainably develop Vietnam's biofuel production industry;

- To organize the implementation of around 20 schemes and projects on international cooperation with foreign scientific and technological organizations, foreign scientists and technologists in conducting research into, producing and using biofuels in Vietnam.

### **III. MAJOR SOLUTIONS**

1. Stepping up the application of research results to practical production, promoting technology transfer and creating an investment environment favorable for the development of biofuel production:

- To step up the implementation of projects on basic research, applied research and research and development (R-D) to absorb and master technologies for producing biofuels and necessary additive chemicals, and projects on trial production, international cooperation, technology transfer and industrial-scale production of various biofuels;

- To encourage the application of scientific research and technological development results to production, boost domestic technology transfer and import of technologies from developed countries for producing biofuels and additive chemicals used in fuel blending in order to promote biofuel production and consumption;

- To create an open market favorable for biofuel development, step up the establishment of enterprises of all economic sectors and encourage them to invest in biofuel production. The State shall adopt preferential policies on credit, tax and land use rights for enterprises which invest in the development of biofuel production.

2. Increasing investment and diversifying funding sources for the effective implementation of the scheme:

-The total fund for implementation of the scheme's contents shall be determined on the basis of the fund of each specific component project, subject or task approved by a competent authority. Annually, the State shall increasingly allocate state budget funds for the scheme implementation. To increase investment capital and diversify investment capital sources from enterprises, organizations and individuals at home and abroad,

official development assistance, foreign direct investment capital and other international cooperation capital sources for biofuel development in Vietnam;

- The total state budget fund for the implementation of the scheme in nine years (2007-2015) is estimated at around VND 259.2 billion (VND 28.8 billion per year on average). This funding source shall be used only for basic research applied research scientific research and technological development, research for technological improvement and renewal in order to increase biofuel output, quality and competitiveness, produce on a trial basis biofuel products support projects on transfer of technologies for industrial-scale production of biofuels; development of material and technical foundations, additional supply of machinery and equipment; training of human resources; international cooperation and some other related activities under the scheme;

- Investment capital for development of the biofuel production industry shall be provided by enterprises.

3. Intensifying the building of material and technical foundations and training of human resources to satisfy the biofuel development need:

- To step up the building of material and technical foundations, supply more modern machinery and equipment for laboratories and agencies engaged in biofuel research, application and development;

- To actively implement the planning on and apply synchronous solutions to developing biomass material areas in a sustainable manner at all stages from seedling preparation to application of farming techniques and production of biomass to be supplied to biofuel production establishments; at the same time, incorporate in the planning new biofuel production establishment engaged in processing, trading in and providing services related to biofuels of high quality and competitiveness, thus satisfying market demand;

- To intensify the training of human resources with high technological qualifications for the biofuel production industry, including training, supplementary training and retraining of technological bachelors, engineers and technicians; to raise management capacity to satisfy the need for sustainable development of Vietnam's biofuel production industry.

4. Perfecting the system of mechanisms, policies and legal documents for biofuel development:

- To renew tax mechanisms and policies, provide concessional loans and land use rights to enterprises, organizations and individuals at home and abroad in order to encourage and create favourable conditions for them to invest in developing biofuel production in Vietnam. In the 2007-2015 period, to classify investment in biofuel production as a

domain eligible for special investment incentives. Biofuel production enterprises are entitled to income tax exemption or reduction for biofuel products according to the Government's Decree No. 24/2007/ND-CP of February 14, 2007, detailing the implementation of the Law on Enterprise Income Tax. They are entitled to the highest land rent and land use incentives for 20 years. Raw materials, components, machinery and equipment to be used in scientific research and technological development for biofuel production are exempted from import tax. Raw materials, components, machinery and equipment used for biofuel production are eligible for the lowest import tax rate;

- Pending the formulation of a system of Vietnam technical standards and regulations applicable to biofuel raw materials, additives and products, enterprises are encouraged to announce by themselves institutional standards on the basis of reference to G7 countries' standards;

- To step up the formulation and promulgation of mechanisms and policies to attract investment and encourage talented personnel to take part in scientific research, technological development for biofuel production, and sustainable production and consumption of biofuels. In the 2007-2015 period, new graduates recruited to work in biofuel production establishments and biofuel research agencies will be given priority in being selected to attend professional training programs at home or abroad;

- To promote and support the research into and hybridization of new microorganism species and industrial plant varieties (including also genetically modified species and plant varieties) and improve the process of industrial-scale cultivation to be applied to production of high-quality raw materials in large quantities to satisfy the need for development of Vietnam's biofuel production industry;

- To step up the strict and adequate enforcement of regulations on intellectual property, including protection of copyright and industrial property rights to microorganisms, plant varieties, technological processes, machinery, equipment, etc., involved in the biofuel production technology.

5. Expanding and promoting international cooperation on study of biofuel development experience:

- To intensify bilateral cooperation and expand multilateral cooperation with countries with a developed biofuel industry as well as foreign organizations and individuals with biofuel development potential in order to learn their experience in biofuel development;

- To take the initiative in formulating and implementing international cooperation programs and projects in order to make use of the international community's assistance in

terms of experience, knowledge, finance and equipment, and attract investment for development of biofuel production and consumption in Vietnam.

#### 6. Raising public awareness about biofuel development:

To step up communication and popularization efforts to make the public aware of the important role, great socio-economic benefits and environmental protection effect of biofuel in sustainable development. To widely propagate information on the building and development of a biofuel market and the use of biofuels in Vietnam.

### **IV. ORGANIZATION OF IMPLEMENTATION**

#### 1. The Ministry of Industry and Trade shall:

- Assume the prime responsibility for, and coordinate with concerned ministries, branches, organizations and individuals in, organizing the efficient and timely implementation of the scheme, annually reporting it to the Prime Minister; assume the prime responsibility for organizing a review conference by the end of 2010 to assess results of the first three years' implementation of the scheme and draw experience for the implementation of the scheme in the 2011-2015 period;
- Assume the prime responsibility for working out long-term and annual state budget plans for implementation of the scheme, then submit them to the Ministry of Planning and Investment and the Ministry of Finance for synthesis and submission to the Prime Minister for approval;
- Assume the prime responsibility for, drawing up a list of biofuel projects eligible for investment incentives and formulating a mechanism for applying these incentives;
- Assume the prime responsibility for, and coordinate with the Ministry of Foreign Affairs and the Ministry of Science and Technology in organizing international cooperation in biofuel development;
- Assume the prime responsibility for, and coordinate with the provincial/municipal People's Committees in, setting up a system of supply and distribution of biofuel products;
- Assume the prime responsibility for, and coordinate with concerned ministries, branches and localities in, popularizing knowledge to the public about the role and benefits of biofuels to the country's sustainable development;
- The Minister of Industry and Trade shall set up an inter-branch coordinating commission to organize the implementation of the scheme on development of biofuels up to 2015, with a vision to 2025. This commission will be headed by a leader of the Ministry of Industry and Trade. The composition and operating regulation of the inter-branch

coordinating commission and its assistance office will be decided commission by the Minister of Industry and Trade.

2. The Ministry of Agriculture and Rural Development shall:

- Assume the prime responsibility for, and coordinate with the Ministry of Industry and Trade and the Ministry of Planning and Investment in, elaborating the planning on development of raw material areas for the biofuel industry;

- Assume the prime responsibility for, and coordinate with the Ministry of Planning and Investment and the Ministry of Finance in, formulating and organizing the application of policies on incentives and supports for production of biomass materials for biofuel production.

3. The Ministry of Science and Technology shall:

- Based on its own functions, tasks, power and state management scope, coordinate with Ministry of Industry and Trade in organizing efficient implementation of the scheme's contents related to scientific research and development of the biofuel production technology;

- Assume the prime responsibility for, and coordinate with the Ministry of Industry and Trade and concerned ministries and branches in, formulating and promulgating or submitting to competent authorities for promulgation mechanisms and preferential policies for scientific research and technological development for biofuel production; legal documents on intellectual property (protection of industrial property rights and copyright), technical standards and regulations applicable to this domain.

4. The Ministry of Planning and the Ministry of Finance shall:

- Incorporate the allocation of funds and provide guidance on the use of funds in annual and long-term funding plans for the effective and timely implementation of the scheme's contents and tasks;

- Assume the prime responsibility for, and coordinate with the Ministry of Industry and Trade and concerned ministries and branches in, formulating and promulgating or submitting to competent authorities for promulgation mechanisms and policies on tax and investment incentives, a list of biofuel production objects eligible for investment incentives, and mechanisms for application of preferential policies.

5. The Ministry of Education and Training shall:

Assume the prime responsibility for, and coordinate with the Ministry of Industry and Trade and concerned ministries and branches in, organizing the training of human resources to satisfy the biofuel development need.

6. Ministries, branches, localities, enterprises, organizations and individuals that wish to take part in implementing the scheme's contents and tasks shall register with the Ministry of Industry and Trade for consideration and permission.

**Article 2.** - This Decision takes effect 15 days after its publication in CONG BAO."

**Article 3.**- The Minister of Industry and Trade, ministers, heads of ministerial - level agencies, heads of government-attached agencies, presidents of provincial/municipal People's Committees, and concerned organizations and individuals shall implement this Decision.

*For the Prime Minister*

*Deputy Prime Minister*

**HOANG TRUNG HAI**