

ELEMENTS FOR A NATIONAL POLICY PROMOTING THE BIOFUELS

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Abstract The offensive of the biofuels on the biofuel market is strongly stimulated by ecological, economic, demographic considerations, which remain viable on long and very long term. The biomass – raw matter for biofuels is a regenerable source, alternative to the fossil resources of raw energy, which are exhaustible in time, without geopolitical implications and thus without price fluctuations, typical to the primary combustibles.

The impact with the environment of the production and consume of biofuels is reduced as compared with the fossil combustibles. The important research – development potential in the whole world facilitates the large approach of all aspects regarding the culture of biomass, combustible production, car engine performances, acquirement and valorization of secondary products resulting from processing the biomass.

Key words: biofuels, policy, durable development, biomass, investments.

1. INTERNATIONAL EXPERIENCE FOR PROMOTING BIOFUELS

The experience of many countries is relevant in the promotion of biofuels, the success of the actions being conditioned by the elaboration of certain national and regional policies sustaining the continuous positive trend of the biofuel uses.

The European Union:

- Action programme in the energy field: ALTENER, SYNERGY, SURE, ETAP, INTELLIGENT ENERGY FOR EUROPE;
- Frame Research Programme 6 in the Energy field for the promotion of the regenerable energy sources; [1]
- The Strategy for Biofuels (based on the action plan regarding the biomass since December 2005) adopted by the European Commission in February 2006, Strategy aiming to increase the production of biofuel out of agricultural raw materials, to reduce the emissions with Hothouse effect and the dependence on imports of oil and gases from Russia by the 25 Nations and to create new work places. The object of the strategy consists in the significant increase of the contribution of the non-polluting energy resources. The EU proposes, in the following 20 years, to ensure herself half of the necessary energy from resources giving off reduced emissions in the atmosphere. [2]

Germany:

- Tax annulment for biofuels until 2008;
- Subventions for the development of the technologies, adoption of the conventional installations when working the bio-mass;
- Encouraging the acquirement of secondary products for Chemistry.

Italy:

- Elimination of the taxes for biodiesel

France:

- Triplation of the biomass contribution to the necessary of energy for transport from 2% to 6% in 2010.

Netherlands:

- He entire quantity of energy of the country shall come from regenerable resources, including from biomass, in 2050.

USA:

- Credits and stimulants for the production of energy from biomass;
- Launching the “bio-refinery” concept and the co-financing of the investment funds by the Government.

China:

- Promoting the “trigeneration” concept by the gaseification of the biomass (for cooking, heating and power generation).

Australia:

- Extending the biomass plantations to 31 mil. Hectares in the following 50 years, acquiring Bioethanol and

Methanol.

The objectives of the described policies may also generate objectives for the national policy of valorisation of the biomass in Romania.

2. THE OPPORTUNITY OF A POLICY TO VALORISE THE BIOMASS IN ROMANIA

There are many arguments in favour of a national policy for the promotion of the biofuels, for example:

- The existence of a great quantity of biomass non-valorised at the moment. The quantity of organic mass from Romania is over the planetary average (30.4 tones organic mass/ year/inhabitant), going up to aprox. 61 tones /inhabitant. But 60% of it is under the form of micro-organisms, i.e. 732 million tones and only 486 million tones may represent the reserves from which to get food and the potential for energy [3]

The more recent researches made in Romania show that, as an average, the natural and antropic ecosystems may offer this year around 190 million tones of extractable, regenerable biomass, without provoking any disturbances in the ecosystems [4].

The quantity of biomass is not uniformly distributed on the Romanian territory (it is smaller in the areas of dry steppe from Dobrodja, Moldavia and South Romania – except for the river meadow zones) and is more abundant in the Danube Meadow and in the hill and mountain zones. (fig.1)



Figure 1

The distribution of the biomass in the Romanian space (original estimations by soundings made in the latter 10 years) Univ.Prof.Dr.Eng.. Mihai Berca – USAMV Bucharest

As a future member of the EU, Romania must comply with the requirements regarding the valorisation of the regenerable resources of energy, especially biomass, which may be found in great quantities on the territory of the country. In 2007, Romania must register a biomass quota of 2% of the total consume of combustible, quota which, must go up to 5.75% in 2010, according to the Directive of the Combustibles 2003/30/EC of the European Parliament regarding the promotion of the biofuel consume.

- The main countries with agricultural potential which interest the production of combustibles in Europe are: France, Germany, Poland and Romania, these countries must do the policy of the combustibles in Europe;
- Deficient energetic balance, the existence of certain complicated geo-political situations when acquiring the primary energy sources;
- Unused agricultural land (20-40%). After the Romania's joining the EU, a surface of 2.7 mill. hectares must remain outside the cereal cultures;
- The existence of the air pollution phenomenon in the Romanian cities, the increase of the vehicle park shall maintain this phenomenon;
- The national research – development potential might be used for the valorisation of the biomass, the promotion of the oleaginous plants, with sugar content, the fast-growing forests;
- The increasing interest of the foreign companies to produce and process oleaginous plants or with sugar content on the Romanian territory may represent a favourable premise for the success of the national policy by transforming the interest into an investment programme.

3. PROGRAMMES – SUPPORT OF THE POLICY

The programmes must observe the following requirements:

- valorising, for an economic and ecological purpose, first of all of the biomass wastes (from agriculture, forestry, agricultural farms);
- valorising of the agricultural lands by cultures destined to produce biofuels;
- contributing to the deficient energetic balance of Romania.

3.1 The economic programme

This gives perspective to the whole policy, it is the development link of the national economy, it articulates with the district policies, overtakes the EU Directives in the field and motivates the interested persons to invest and act in the field. The economic programme refers to different types of biomass or types of products made following this logic:

- Drawing up the business offer so as to interest, to attract investors;
- Investments in the valorisation of the biomass: agricultural cultures, fast growing forests, energy production, biofuels, raw materials;
- Consolidating the valorisation sector of the biomass in the sense of the maximization of the economic effects according to the requests cost – benefit, cost-eco-efficiency;

3.2 The programme for attracting investors

It is decisive for the success of the policy. At the world level, the competition for attracting the capital for the new investments (the capital also means the contribution of technology, management, market for the products) se is under the sign of a harsh competition.

The investors and the national capital are very important especially for the constellation of IMM's gravitating in the space of the biofuels (agricultural cultures, waste collection, marketing channels, transport, processing, depositing, analysis and certification, packing, selling, adapting the diesel engines, investments, research-development activity, staff preparation, and so on. At the world level, there is a large category of instruments meant to attract investors.

USA

- Reducing the customs duties for biofuels;
- Credits in favourable conditions granted to the farmers for the introduction of biomass on the uncultivated plots of land (fallow);
- Subsidising the activities of the small ethanol producers.

France:

- Tax exemption. Compensation of TGAP (general tax on polluting activities) since 2005.

Germany:

- Tax exemption.

China:

- Tax exemption on land;
- Collaboration in the research – development activity, including of the upper education centres;

Sweden:

- Offering land in the residential areas for the foreign investors;
- Adapting the local education network according to the investors' needs of personnel.

For the Romanian deciders, the logical scheme for attracting foreigners is generally known; in short it contains two instrument packages:

a) Legal and political:

- classification of the property right on the land;
- political stability and compliance with the laws.

b) Fiscal and financial facilities:

- Subventions, tax reductions, concessions in favourable conditions;
- Credits with interests subsidised for the incorporation and functioning of the IMM;
- Reduce tariffs for the deposit of the raw materials and finished products in the State deposits;
- Eliminating the customs duties when settling the price of the biofuels.

3.3 The ecological programme

It ensures the valorisation of the regenerable resources as an alternative to the fossil energy resources.

The main actions receive:

- Cultures of fast growing kinds of trees on lands taken out of the agricultural circuit. The exploitation of these artificial forests according to the sustainable development principle;
- Bringing certain vegetal wastes into the economic circuit, which, thus, are polluting the environment;
- Compelling the owners of mechanical saws (12,000 installed in the mountain zone of Romania) to valorise their sawdust resulting from the exploitation and work of the logs;
- Getting as sub-products certain fertilizers (compost, slime etc.) contributing to the improvement of the soil quality of the agricultural lands;
- Compelling the energy generating and supplying companies to get certain energy quotas resulting from regenerable resources type biomass.

3.4 The programme of the research – development activity

It must be taken into account the support of the biofuel development, this integrating to the characteristics of the knowledge society. The proposed actions:

- Facilitating the contracts between the potential and real investors and the research – development sector from Romania for the valorisation of the Romanian researches;
- Facilitating the collaborations type JOINT-VENTURE with foreign reference companies (with or without investments in Romania) to broaden and diversify the research-development activity and to valorise the results;
- Promoting the research – development activity in the field of biomass valorisation in the research centres of the upper education institutions. Integrating this activity in the international information and knowledge fluxes.

4. CONCLUSIONS

The presented elements that are to be inserted in an official policy of the biofuel promotion impose to mainly take into account:

- The existent biomass potential, exceeding the needs of the countries, and the possibility to extend this potential;
- The inner market favourable to the biofuels;
- In the countries with agricultural potential from the EU, they got to the industrialization of the biomass and it was created a market of the biofuels with a strongly positive dynamics. Thus, the results of the researches and investigations made in the latter 15-25 years become concrete;
- It is real the foreign investors' interest to get biomass and to process in Romania in the interest of the inner market and the markets from the EU;
- The non-integration of the Romania in the biomass valorisation flux takes out of the circuit its own research – development potential; it does not stimulate the apparition of new work places and contributes to the maintenance of the energetic dependence of the Romania on the import of oil products and natural gases.

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