The Common Agricultural Policy and the Environmental Challenge-New Tasks for Public Administrations?

Maastricht, 14-15 May 2001

Ms. Mariàngels Pérez Latorre
Deputy Head of Unit
Promotion of Renewable Energy Sources and Demand Management
Directorate General for Energy and Transport
European Commission

Mariàngels Pérez Latorre, economist, is Deputy Head of Unit for the "Promotion of the New and Renewable Energy Sources and the Demand Management" in the Directorate General for Energy and Transport (DG TREN) of the European Commission. From January 1995 to December 1999 she was Head of Sector for "New and Renewable Energy Sources" in the former the Directorate General for Energy. Before entering the European Commission in 1985, she managed a Pilot Centre for the Development of Renewable Energy Sources in Girona (Spain).

"The contribution of bio-energy to meeting Renewable Energy Sources European Union objectives"

Summary

The Community Strategy and Action Plan on Renewable Energy Sources, adopted in 1998, aims to double the part of RES in overall gross inland energy consumption from 6% to 12% by year 2010. Bio-energy is the main sector contributing to the achievement of this target and producing biomass for bio-energy is one of the main challenges in implementing the Strategy and Action Plan.

As bio-energy is the only renewable energy that should be produced, contrary to wind, solar or hydro, agriculture and forestry sectors are key sectors in developing the bio-energy market. Community Research programmes have fostered technical improvements over the last years. New developments both in energy crops and bio-energy technologies show that reliable and cost effective solutions are available and examples of bio-energy installations around Europe open wider opportunities for farmers and energy producers.

"The contribution of bio-energy to meeting Renewable Energy Sources European Union objectives"

Ladies and gentlemen:

It is a great pleasure to be here today and to take part in an event which is not only very timely for agricultural policy, but which will also make a contribution to European energy policy. I should therefore very much like to thank the organisers of the meeting and, especially Mr. Pezaros and his collaborators.

I am particularly pleased to be invited to introduce the Community strategy to promote and develop renewable energy sources in the Union and the role to be played by bio-energy within this strategy.

I should like to use my allocated time to focus on:

- **First, recent EU policy initiatives, the implementation of which could have rather far-reaching implications for the subjects being discussed here today.**

- **Second, the role of bio-energy in the EU action plan on renewable energy sources.**

- **Third, main outcomes of bio-energy projects so far supported by Community programmes.**

Firstly, you may be aware that the European Commission has adopted a Green Paper on the Security of Energy Supply, launching

an open debate that will hopefully result in a range of measures to be applied at Community level.

The main conclusions of the Green Paper are:

- **The increasing EU energy dependency that, if nothing is done, will rise from the current 50% to 70% by 2020.**

- **The rather low diversification of the EU energy supply system.**

- **The rather modest efforts made hitherto in reducing energy consumption resulting in higher Green House Gases emissions jeopardising the Kyoto protocol commitment to reduce GHG emissions of 8% compared to 1990 levels by 2008-2010.**

The last conclusion leads me to the second EU initiative: The European Climate Change Programme that is currently being developed by the European Commission.

The ECCP will make a comprehensive review of measures and action taken to address Climate Change challenges. Six Working Group:

have been created in order to analyse suitable short-term action to be undertaken from now to 2010.

- **Flexible mechanisms**
- **Energy supply**
- **Energy consumption**
- **Transport**

- **Industry**
- **Research**

Stakeholders participating in the respective Working Groups will report by June 2001 to the Steering Committee. The purpose is to evaluate the emissions reduction potential in each sector and to propose policies and measures to effectively realise such potential.

Why introduce these initiatives? For two reasons: the first one, because developing Renewable Energy Sources is an essential feature of the EU Security of Energy Supply Green Paper. The second one is that the emissions reduction potential of renewable energy sources amounts to almost half of the total potential in the energy sector, if we reach the objective proposed by the Commission in its Strategy and Action Plan for 2010, namely to double the overall RES share.

The Community Strategy for renewable energy sources was put forward in the Commission's White Paper ”ENERGY FOR THE FUTURE: RENEWABLE ENERGY SOURCES”, in November 1997. This strategy was endorsed by the European Parliament in a EP resolution in May 1998 and by Member States' ministers in a Council Resolution in June 1998. The White Paper, with its Action Plan and Campaign for Take-off, are now being implemented. A first progress report was adopted by the Commission last February and sent to the Union's institutions for discussion.

The Community Strategy for Renewable Energy Sources aims to implement an Action Plan of co-ordinated measures designed to

achieve a proposed target of doubling the share of renewable energies in gross domestic energy consumption in the European Union by 2010, from the present 6% to 12%. Also included in the White Paper is a promotional action to foster market penetration, the "Campaign for Take-Off" for the period 2000-2003.

The Renewable energy Action Plan also aims at providing fair market opportunities for renewable energies without excessive financial burdens. In the context of the Internal Electricity Market it proposes better and fairer access to the grid for electricity generated from renewable energy sources; fiscal and financial measures; new bio-energy initiatives for transport, heat and electricity, such as the promotion of bio-fuels, bio-gas and bio-mass; and improved building regulations to promote the use of renewable energy sources and energy efficiency.

The Action Plan promotes reinforcement of the "renewables" component of other EU policies. It includes investigation of opportunities for modifications in favour of renewable energy sources to the Common Agricultural Policy, to the Structural Funds, and to the State Aid Guidelines.

Finally, the Action Plan includes support measures, such as targeted promotion using various EU programmes, including the Fifth RTD Framework Programme and ALTENER.

Nevertheless, the overall objective of the White Paper, increasing the contribution of RES to 12% by 2010, can be achieved only with a large contribution from biomass use. For that reason, the biomass part of the Community Strategy has a particular weight. It will cover a wide range of selected applications in all three demand areas - heat, electricity and transport.

Biomass is a widespread resource as it includes, in addition to woody biomass and the residues of the wood-working industry, energy crops, agricultural residues and agro-food effluents, and manure as well as the organic fraction of municipal solid waste, separated household waste and sewage sludge.

Biomass resources and energy crops are subject to environmental considerations such as: biodiversity, CO^2 sinks, forestry and intensive agriculture production schemes, etc.

We can assume that, concerning the production and use of biomass for energy purposes:

- **There will always be competition with food.**
- **There will be increased competition with traditional and new products from biomass as, packages, chemicals, polymers and other biomass, mainly wood, based industry.**
- **There will be increased cost for the resource.**
- **There will be increased and better profitability for secondary biomass, residues and organic waste.**

Those constraints are, in a positive way, challenges in developing the use of biomass for energy. In fact, energy from biomass is versatile in that it can produce electricity, heat, or transport fuel as appropriate, and unlike electricity it can be stored simply, and, usually economically. In addition, production units can range from small scale up to multi-megawatt size.

Heat and power installations - solid biofuels

Heat production is among the most promising areas within the biomass sector, and combined heat and power (CHP) using biomass has the greatest potential in volume among all renewable energies. Consequently, a campaign to promote and support decentralised biopower installations throughout the European Union is essential. Such installations could range in scale from a few hundred kW to multi-MW and combine different technologies, as appropriate to local circumstances, including fuel switching. Wherever possible, use should be made of opportunities for rationalisation through regional and local level implementation.

The estimated contribution of biomass in combined heat and power plants, as outlined in the White Paper, could be 26 Mtoe by 2010. This corresponds typically to an overall installed capacity of approximately 20 GWe or 60 GWth.

Presently the most important market for bioenergy in the EU is the low temperature heat market. The greater contribution of biomass

comes from domestic heating. Heating techniques and "typical" use should, however, are of sure different from country to country. Examples of comprehensive biomass production and use schemes, from the farmers right through to installers and users do exist in Europe, but mainly in northern countries.

More than 85% of all dwellings in the E.U. are being heated by single house systems. Depending on the country oil, natural gas or electricity dominates. In countries where forestry traditionally plays a role, products form forestry have been used to heat houses for centuries. However, the number of houses heated with wood is decreasing constantly. It is important to reverse this trend with the introduction of modern, efficient wood furnaces (logwood, woodchip, pellet systems).

Technologies for domestic heating with wood have seen a major breakthrough in the last two decades. Emissions dropped dramatically and, at the same time, efficiency was enhanced from around 50-55% to more than 90%. The conditions exist in order to change the image of domestic heating with wood from the perception of an outdated practice to that of a high tech, ecological lifestyle.

District heating (with or without co-generation) provides a opportunities to supply low temperature heat, but due to high investment costs (grids for distributing the heat) it needs financial support. It is better developed in those countries where relevant

support schemes exist and the climate conditions appropriate (Austria, Denmark, Finland, Sweden).

In many countries, where district heating is not substantially developed, dwellings are heated through central heating systems, mainly with natural gas. In areas outside district heating and natural gas distribution, biomass-based central heating systems could be developed. A significant potential exists for micro-CHP biomass units for large buildings (hotels, hospitals, office blocks, prisons etc) as well as block units.

Biogas Installations - gaseous fuels

The exploitation of biogas has an important environmental benefit, since it consists largely of methane, a gas with a large greenhouse impact if released rather tan burnt. In the last 10 years efforts in certain E.U. countries have focused on developing large centralised biogas plans. During the last few years many small farm plants have also been developed in certain areas of the Union. It is expected that a market will develop for both options. In the White Paper it was estimated that the contribution which could be made by biogas exploitation from livestock production, agro-industrial effluents, sewage treatment and landfill by 2010 is 15 Mtoe.

The Community Research Programme also support development of other new technologies as, for instance, in large-scale plants:

- **Co-utilisation technologies. In order to demonstrate gas clean-up to natural gas quality, projects in Italy, Austria and Netherlands have been supported.**

- **Gasification, Integrated Gasification Combustion-Cycles (IGCC) and pyrolysis technologies. Projects are ongoing in UK, Italy, Netherlands, Spain, Sweden, etc.**

Transport fuels - liquid biofuels

Liquid biofuels are currently finding competition difficult, given the relatively low oil prices, but a breakthrough is particularly desirable. The White Paper estimates that the market for liquid biofuels could be in the order of 18 Mtoe per year in 2010.

Two main biofuel technologies are particularly mature: biodiesel and bioethanol. In both cases European markets include as yet only a few countries - France, Austria, Finland, Germany, Greece and Italy for biodiesel, and -Sweden, Italy and Spain for bioethanol.

New capacities are emerging in both sub-sectors around Europe. Production costs are expected to decrease, nevertheless, as far as external costs derived from fossil fuels are no internalised, detaxation of biofuels will be needed.

An emerging sector, still at research stage, is fuels cells and the production of hydrogen from biomass and energy crops. This issue will be a priority within the next Research Community Programme.

I presume that technical details concerning the all sub-sectors I have referred to will be analysed during the various sessions today.

I do not believe that the main message I've tried to deliver to you is nor pessimistic, nor optimistic. But just realistic: There is not a unique solution, energy supply should be diversified. Renewable energy sources can and should play a role in the short term if we want to move towards a sustainable energy system, meeting both energy and environmental goals. In this context, developing biomass for energy is of paramount importance and benefits will be in terms of environment preservation, industrial and agricultural development and employment.

Thank you very much for your kind attention.