

**Address delivered by Alexander Müller,  
State Secretary at the Federal Ministry of  
Consumer Protection, Food and Agriculture**

on the occasion of "**Renewables 2004 – Tag der  
Biomasse**"

in Bonn on 3 June 2004

Topic: **Bioenergy in Germany – The concept of the  
Federal Government**

Check against delivery!

Dear Bärbel Höhn!

Ladies and Gentlemen!

The American researcher and inventor John R. Pierce once said: "**Technology or Perish!**".

Today you might say: "**Innovation or Perish**".

The debates about the finiteness of our mineral oil reserves, the greenhouse climate and, last but not least, the issue of the just access to fossil fuels show that we will reach the limits of energy supply in the foreseeable future.

We need innovative alternatives for the future!

Concerning the **sources** as well as the **use** of energy.

The "Renewables 2004" prove that **renewable energies** provide important alternatives to fossil resources.

The range of their options for application is wide:

...

Whether we are talking about **new fuels, heat generation** or about the use of renewable resources in the **chemical and manufacturing** industries.

I am convinced that the topic of renewable energies is a matter of special concern to us in Europe above all.

And what's more: I believe that the promotion of renewable energies **and biomass in particular** is crucial for the future viability of Europe.

Why?

Because we have **specific geographical and geological conditions in Europe**: we do not have a wealth of fossil fuels such as the Gulf region, for example. We will not be able to cover our energy requirements with solar energy alone because the solar cells will never deliver the same high performance here than in the desert.

Yet, what we have is **fertile soils, productive farming** and thus the best preconditions for the cultivation of renewable raw materials.

**We are a blessed region on the premise "Make use of what grows"!**

Add to this: we have the required know-how, engineers and research centres to make the new

technologies suitable for everyday use and applicable in a wide variety of ways.

Hence, the opportunities offered especially by biomass represent an issue of innovation and of the future for us Europeans.

This does not mean that we should all do our own thing. **The point is to shape energy production efficiently in a globalized world.**

For precisely this reason, globalization also means to **organize energy production in a decentralized manner** so as to use the strengths of individual regions, in fact. For one thing is clear: our future energy supply cannot be based on mineral oil alone. We need alternatives. **A mix of energies from different sources.**

This is what "Technology or Perish" signifies in the 21<sup>st</sup> century. And I say this expressly in view of the fact that bioenergies make an indispensable contribution to reducing greenhouse gas emissions today. In 2002, the substitution of fossil energies prevented 17.5 million tonnes of CO<sub>2</sub> emissions in Germany alone. And there is a good probability that this share will double by 2010.

"Innovate, don't perish"!

Ladies and Gentlemen,

Bioenergy has yet another advantage: it offers security: it regrows rapidly. It is accessible at any time. And it is relatively unaffected by weather influences.

This makes bioenergy a planning factor for long-term policies and development.

**Energy from biomass** is of pre-eminent importance among the renewable energies.

The organizers were quite right to name today's event "the day of biomass".

In Germany, around **62%** of the renewable energies generated **in 2003** was derived from biomass. Hence, biomass is far ahead of hydro-electric power and wind power with 18% and 16% respectively.

And yet, bioenergy contributes, in total, only around 2% to the energy supply in Germany.

One thing is for sure: **the bioenergy potential in Germany has not nearly been exhausted:**

- Conservative calculations assume that **bioenergy could cover up to around 10% of Germany's energy supply.**

- The latest forecasts even predict that energy from biomass could provide **14% of the entire primary energy consumption by 2030.**

Ladies and Gentlemen,

According to all forecasts energy requirements will substantially increase in the years to come. Hence, the demand for biomass will also rise. In many fields:

**In heat and electricity production, for instance:**

Especially wood plays a major role here. There are still opportunities for development in this sector. Only the energy use **of utility and waste wood has been largely exhausted** so far.

It should be noted that the actual **timber utilization for non-energetic use and energy recovery** only amounts to one third of the annual timber increments. Incidentally, the use of domestic timber for sustainable energy supply contributes far more to value-added and job creation than fuel oil and natural gas boilers with the same power.

**Biogas** is another important field for bioenergy use.

After suitable purification and reconcentration biogas can be used in the same market segment as natural gas.

**Since 1999 biogas production** has more than doubled from around **850 to around 2000 plants now**. Most of the plants were set up on agricultural holdings.

The farmers benefit from these plants in many ways:

- in electric power generation.
- yet, the waste heat can be used as well (e.g. for heating purposes, chilling of milk).

Ladies and Gentlemen,

This places us right into the heart of renewable raw materials. Where they are produced. **In the farming sector.**

Over 90% of raw materials for bioenergy production come from the farming sector today.

To be specific: last year already renewable raw materials were produced on around 850,000 ha or 8.5% of the arable land in Germany.

On numerous farms, farmers are also energy producers at the same time - and their efforts are crowned with success!

One can safely say that the favourite **vision of Bärbel Höhn**, North Rhine-Westphalia's Agriculture Minister, **of farmers as oil sheikhs** has already materialized today.

In 2002 already, sales proceeds of

- around Euro 450 million in **electricity generation**,
- around Euro 400 million in **biodiesel** and



- around Euro 280 million in **biogenic fuels**, wood especially, were obtained in the energy sector.

A sum of around Euro 1.3 billion was invested in the bioenergy sector in 2002.

The bioenergy sector achieved a total turnover (proceeds plus investments) of around Euro 2.4 billion. 50,000 jobs.

Bioenergies strengthen value-added agriculture in rural areas and also create sustainable jobs there.

Alongside electricity and heat generation, new **biofuels in transportation** will substantially assist us in realizing our ambitious goals in climate and transport policies.

Especially promising in this sector are the so-called "**BTL fuels**" or "**sunfuels**".

This is also a highly innovative field for the car industry.

Many manufacturers realized a long time ago that this could generate a type of fuel that can be used with existing engines. And in contrast to hydrogen

propulsion, BTL fuels do not require a completely new petrol station system.

BTL fuels have various advantages: They have a large production potential since

- all types of organic waste materials and by-products
- as well as energy crops specifically cultivated for this purpose are usable.

In the **fuels** sector, bioenergy is a vision that has already turned into reality today.

The **EU** has given further impetus to bioenergy use by issuing the **Energy Tax Directive**. Accordingly, all Member States can exempt the biogenic content in fuels from mineral oil tax for up to 100%.

**Germany has already implemented these requirements.** An amendment to the **Mineral Oil Tax Act** took effect in January this year. The tax exemption for biofuels has since then also applied to biogenic mixtures with fossil fuels and for biogas as a fuel.

On the basis of these decisions

- **3 bioethanol plants** are currently being built in the East of Germany;

- the mineral oil industry has announced that it will incorporate biodiesel in conventional diesel fuels in the form of ETBE to petrol.

There can be no doubt: the energy issue can only be solved in various ways. **However, our target must be to secure mobility.** Mobility for everybody, in fact. If we only rely on the Earth's oil deposits, mobility will become a luxury good in the not too distant future. The hysteria over the oil prices that has flared up again demonstrates this point.

**Individual mobility- only for the rich?**

**This is not what we want!**

We assume that **fuel cell technology** will become a truly viable solution for the future one day. But bioenergy is the only alternative until then. And even if **hydrogen-propelled cars** should drive through our streets one day, we will still require primary energy. Where should this energy come from?

**I dare say: From our fields, of course.**

Ladies and Gentlemen,

Fuel use is just one example of the diverse effects and opportunities offered by biomass. Biomass is becoming increasingly important as the basis of raw and building materials in the car industry and also in other industrial sectors. This is a highly innovative sector that creates locational advantages and new jobs.

Here are some examples:

The current market share of **14,000 t of natural fibre-strengthened materials** could be expanded many times over, with a potential of 45,000 t alone in automobile manufacturing (only natural fibres such as flax and hemp, without wood-pulp).

Today already a German car manufacturer produces **fifty component parts**, wholly or in part, from renewable raw materials. This corresponds to a weight content of 30 kg per vehicle after all.

**Also non-structural parts** such as door linings **and** trunk linings are already being used in the automobile industry.

**Currently under development are structural components from renewable raw materials** such as natural fibre-strengthened instrument panels. The replacement of glass fibres by plant fibres could save up to 15% of weight in car manufacturing and exert positive effects on energy consumption, CO<sub>2</sub> emissions and the environment.

Ladies and Gentlemen,

All of these examples show how diverse the options for applying bioenergy are. Yet, they also indicate how much potential there is!

**One thing is clear: if you want to be at the cutting edge here, you have to pin your hopes on research and create incentives.**

The Federal Consumer Protection Ministry promotes **research, development and demonstration** through its **Renewable Resources Program** that has been equipped with **Euro 19.5 million in 2004.**

Most funds by far are being dedicated to the product line of bioenergy among the 8 sponsored product lines. This absorbed around **25%** last year.

**The program focuses on:**

- the further development of technologies for the use of solid bioenergy sources such as wood, straw and whole crops, for instance,
- new technologies for biogas production and use, e.g. dry fermentation or the use of biogas in the fuel cell,
- technology development for the production of synthetic fuels (BtL) from biomass,
- innovative projects with integrated use concepts (e.g. simultaneous use of heat and electricity).

Ladies and Gentlemen,

All of these examples show: **Biomass is the future.**

It is worthwhile to bet on the production of renewable resources.

The Federal Government supports all those who press ahead with this technology:

- through innovative **research**,
- and, of course, also those who ensure the supply of renewable raw materials: the **farmers**.

**Bioenergy and biomass, in particular, represent a major component in our political target system:**

- for our **target of environmental conservation** with a view to a sustainable, resource-conserving type of farming,
- our **global target of climate protection** within the scope of the commitments we entered into by signing the Kyoto protocol,
- the **target of energy supply** with the prospect of a way out of the dependency on scarce, non-renewable resources. We want exactly the opposite: more autonomy and security!
- the **value-added target** for those engaged in the production and processing of renewable resources:
- the **target of innovation** in terms of the methods to produce bioenergy as well as its use in industry through new engines and machinery,
- our target to create **new jobs** with bioenergy as a future technology.

After all, we want to be a **reliable partner for the so-called developing countries in energy policy.**

We need **more equal access** to energy worldwide.

Ladies and Gentlemen,

**Energy policy must be a global policy in the 21<sup>st</sup> century.** I am therefore delighted that so many experts and guests from abroad have come to Bonn.  
**Innovation requires a constant flow of information and honest exchange of experience.**

I wish the Conference productive presentations and interesting debates with many new insights and contacts.