

**Ministerial Round Table on
“Policies for Renewable Energy
Market Development”**

Bonn, 3rd June, 2004

Ministers, Chairmen, Ladies and Gentlemen,

Thank you for this opportunity to address my viewpoints on the need for proactive visionary policies for renewable energy development.

The fact that this is taking place in Germany - a country whose renewable energy policies every day show how much renewables really can achieve when the correct policies are in place - is a special honour.

With long term political planning and clear target settings the share of competitive, clean and renewable energy continues to increase. At the same time a growth industry with increasing exports and over 40,000 employees in Germany alone has been developed in a period of time of a little more than 10 years.

This is a good story that can be repeated worldwide if the political visions and political will are present.

I will get back to this - but first a brief introduction to Vestas and wind energy

Personally, I have had the opportunity to be involved in the development of wind energy and the wind power industry for over 17 years. I joined Vestas in 1987 – at that time we installed Europe's largest wind farm, with a capacity of 13MW consisting mainly of 75 kW to 225 kW turbines.

Since then the capacity of each turbine has increased almost 20 times, the cost per kWh has decreased with 70-80% and today we are installing wind power plants with a capacity of several hundreds of MW.

This is a tremendous technological achievement and as an industry we are committed to continue this technological development to reduce cost per kWh for years to come.

The merits of wind energy are many.

Wind power plants take little time to install and can therefore quickly be established whenever the need for energy arises. The operating costs are low and do not fluctuate like oil and gas prices. In addition, these plants generate no pollution.

Today, energy produced by wind power plants is fully comparable to energy stemming from conventional power plants, and the energy production from well-sited wind power plants is competitive with – and can be controlled in the same way as – conventional power plants.

This means that today, wind power plants are a competitive alternative to conventional power plants if compared on equal terms. Furthermore, considerations for the environment and supply reliability make wind power a natural choice for covering the growth in global energy consumption.

With this brief introduction to wind, I would now like to highlight some of the achievements within the development of renewable energy.

We need renewables. They are safe, they are clean and sustainable. They secure indigenous energy supply, they conserve conventional fuels and they have no fuel costs.

The use of renewables reduces consumption as well as dependency on conventional fuels and helps put energy supply closer to where it is needed.

Renewable energy policies are of huge importance as they move us closer to energy independence and they facilitate the development of the renewable industry as indeed conventional energy policies have facilitated the fossil and nuclear industries.

Let us look at what renewable energy policies have achieved in Europe - using wind as an example.

In 2003, wind powered 19 million households in Europe and supplied 2.4 per cent of EU's power consumption.

75 per cent of the globally installed capacity of wind power is located in EU – why is that?

You probably know the answer. It is very simple. The development has been achieved based on national policies formed by people like yourselves.

Strong and stable renewable policies with clear target settings in primarily Germany, Spain and Denmark along with visionary policies and targets from the EU, strong public support and – a lot of work from the Industry side – has formed the basis for the development of wind energy up till today.

Denmark being one of the pioneers has today over 20% of its power production from renewables and the Danish government is now examining further use of wind power together with Combined Heat and Power plants.

Such project - if realised - will shield the consumer from large hikes in gas and fossil fuel prices by using wind power for heating when there is an overload on the grid.

Another example of a newer vision for renewables is the policy that has been put in place by the United Kingdom. The UK has set a target of 15% renewables by 2015 to be reached by re-examining all possibilities within the energy supply arena. We believe in this vision, and today we have currently 2 manufacturing facilities in the UK.

As a very positive effect the wind power industry in Europe has more than 70,000 employees. With the growth perspectives this number will increase substantially in the future. Windforce 12 predicts 200,000 in Europe alone in 2020.

Policy works when it is made in the right way.

Let me now address three important key points' competitiveness of renewables, emissions trading and security of supply.

I will illustrate my points using wind power as the example as I know this best.

We are often asked the question: Can wind compete?

The answer is yes. Wind can compete on a level playing field.

You may ask, why are support systems needed if wind is competitive. Wind is competitive on a level playing field. Large subsidies are given to fossil and nuclear generation. If the true cost of power generation, which includes also environmental costs such as pollution are included, then wind does not need support.

However, wind can not currently survive in a supported market without support itself. The same is true of the other renewables which each should be considered on its merits and encouraged to develop and grow.

No energy technology has ever been developed without support. Wind power and other renewables are further challenged by the fact that we enter the market at a time when markets are being liberalised. That was not the case when oil, gas, nuclear and coal technologies were introduced.

Another vital aspect to address is the idea that emissions trading should replace direct support for renewables.

I believe that emissions trading may be an efficient tool for reducing emissions of green house gases on the condition that they result in the conversion of conventional power stations to for example wind power plants.

However emission trading in its current form is not sufficient to solve the problems between the polluting energy production and clean sustainable technologies, as it does not reflect the true external costs involved.

The price of a ton of CO₂ will never equal the external costs of conventional power generation.

What is needed is clear non-negotiable goals for clean, sustainable energy production, and a support system for renewables that reflect the savings in external cost in comparison to the polluting energy production. Part of this support system could well be an emission

trading system. However, such system will have to be an international system.

Wind power and renewable energy benefits beyond greenhouse gas reductions, in terms of energy supply, technology development, employment, regional development, sustainable development and health.

Let me now say a few words on security of supply.

Renewable energies are national resources, which reduce import dependency, and put responsibility for energy procurement and supply at national level. The importance of control and sufficient national resources is increasingly important.

Renewables are sustainable and can limit the risk of a supply crunch in the future. No fuel price risk is attached to renewables. In comparison, oil is trading at 40 dollars per barrel and is very volatile.

Unless we change direction in our energy choices now, we will continue to be at the mercy of volatile,

unpredictable oil and gas prices and imports from potentially unstable regions of the world.

Coming back to the precondition regarding access to grid – the European and “global” grid must be extended taking into consideration both the opportunities and constraints coming from integration of more renewables.

Let us revert to the issue of the need for proactive visionary policies for renewable energy development in the future.

The history in the wind industry shows that long term political planning – minimum 10 years – preferably 20 years - is necessary for the development of a competitive renewable energy production.

No citizens will tolerate a lack of energy or high energy prices for very long. Stability is a key word.

Having said that, there is no doubt that we need proactive and visionary policies for renewable energy development going forward.

A stable investment structure is needed to secure investor confidence and bank-ability of renewable energy projects.

Best practice for policies involves long term support systems with clear mandatory targets as well as a stable pricing and permitting system.

Proof of this is exactly Germany, Spain and Denmark.

As I mentioned earlier the policy works if it is right.

With the right policy I am convinced the renewable power industry will continue to develop more cost efficient technologies. For wind power solutions Vestas has an aim of reducing cost per kWh with 3 to 5% annually as an average.

With this in mind it is realistic that wind power and renewable energy over time will become one of the

world's significant energy sources and one of the answers to the world's increasing demands for competitive, clean and renewable energy.

Thank you very much.

Svend Sigaard

President and CEO

Vestas Wind Systems A/S