

The 21st century battle for energy

Christian Kjaer, CEO of the European Wind Energy Association discusses the current state of the industry and puts forward his blueprint for the future...



In March this year, 27 EU Heads of State unanimously agreed that 20% of our energy consumption must come from renewable energy sources by 2020. This action signals that decision-makers of Europe now understand the urgency of the looming energy and climate crisis. Now the ambitions must be turned into fast and effective legislation and implementation. A progressive and ambitious legal framework would effectively turn the challenges of high fuel prices, increased imports and climate change into tremendous opportunities for European economies, businesses and citizens.

The electricity sector represents over one third of total EU energy demand. This means that 14 years from now more than one third of the power we consume will come from renewable energy sources such as wind power if we are to reach the target. This share is up from 15% today. Excluding large hydro, for which there is little scope for expansion, the share of electricity produced from renewable energy sources will have to increase five-fold.

Wind power is one of several renewable energy sources that will deliver us on the path towards energy independence, and it is leading the way. Currently wind energy supplies 3% of EU electricity. If the Spring Council decision is followed up by fast and effective legislation, wind power will meet 12 to 16% of Europe's power demand in 2020.

Precedents already exist for the widespread deployment of wind energy in Europe. In some of our larger Member States such as Germany and Spain, currently seven to 8% of electricity is supplied by wind energy. Denmark today derives more than 20% its total electricity needs from wind energy. According to the World Economic Forum, Denmark is the fourth most competitive economy in the world. There is no contradiction between economic growth and

deploying wind energy – on the contrary.

An energy shift is needed

The days of taking energy supply for granted are long gone. Conventional energy resources are finite and stocks are quickly running out. But the defining moment is not when the oil, gas and coal resources are depleted, but rather when global production peaks. It is at this point that we will no longer be able to afford ignoring the alternatives.

European Member States, much like most countries in the world, are importing an ever larger share of energy at unpredictable, and steadily increasing, prices. Dependence on imported energy, which at the moment hovers around 50%, is predicted to rise to 70% by 2030. Such an increase would be accompanied by an equal increase in the EU's vulnerability to supply cuts or higher prices resulting from international crises. Clearly such a position must be avoided.

The European Commission has calculated that for every \$20 increase in the price of oil, the cost of Europe's gas imports alone rises by €15 billion annually. As such, the tripling of oil prices from \$20 to \$60, as has happened over the last few years, adds €30 billion annually to Europe's gas import



bill. By comparison, the value of wind turbines installed in Europe in 2006 was approximately €9 billion.

Looked at in this light, our choice is between continuing the increasing transfer of wealth from Europe to energy-exporting countries, or further invest in our own progressive, environmentally responsible, efficient, world-leading renewable technologies. The European Wind Energy Association contends that the choice is clear.

Renewables and wind energy in particular are not only needed for reasons of security of supply and environment reasons: Europe should bet on wind power to secure the future welfare and prosperity of its citizens. Even though wind energy today meets only 3% of the EU's electricity demand, 30% of all power capacity installed in the EU over the past five years has been wind. Hence, the wind power industry is already the second largest contributor – after gas – to economic activity, technology development and employment in power manufacturing.

Furthermore, over the coming two decades Europe will witness the largest turnover in electricity generating capacity it has ever experienced. We are at a defining moment in

time. We must use this opportunity to make a radical shift in the structure of our energy supply.

Wind energy is booming

So the challenges that lie ahead on the road to energy security are clear, and wind power is already leading the charge in Europe. 2006 was another record year: global demand for wind power capacity grew by 32%, following an increase in the market of more than 40% in 2005. The value of wind turbines sold globally last year was €18 billion, with European turbine manufacturers controlling 75% of this rapidly growing market.

By 2010, wind power will prevent CO₂ emissions equivalent to one third of the EU's Kyoto commitment. Given the current climate and energy supply situation, I am convinced that in the near future wind energy will provide the same amount of power as conventional power sources do today. Clear political signals combined with effective legislation and implementation would enable wind power to meet more than a quarter of our power demand 25 years from now. Once achieved, Europe's renewable energy mix will be an example for the world to follow. We must remember that wind energy is only one of the 10 - 15

renewable energy technologies available today that together can respond effectively to energy and climate challenges.

The dramatic growth of wind power capacity is equally reflected in terms of public popularity. 2007 began with an important confirmation: the latest Eurobarometer opinion survey confirms that there is overwhelming support for wind power from the European public. At least 71% of EU citizens are "very positive" about the use of wind power in their country. This makes wind the second most popular energy source after solar across the 27 Member States.

In the 20th century the fight for energy was won by the regions and countries of the world that either hosted or controlled fuel resources. I am convinced that the battle for energy in the 21st century will be won by those countries and regions of the world that follow a strategy of developing, deploying and exporting renewable energy technology to a world that, a few years from now, cannot afford to live without it. With the 20% binding target, Europe has taken the first step to ensuring that we will be players in this battle. The implementation of effective legislation and progressive policies will ensure that we are both players and leaders, within and beyond our borders. ■