

Wind energy – why businesses should say yes



Wind energy presents environmental and economic advantages over other energy alternatives. The picture of current global energy shows a year on year increase in global demand for wind power, with the potential, through effective legislation, to meet 12-14 per cent of Europe's electricity demand. It is not only to the advantage of businesses and governments to embrace and support renewable energies such as wind power, but imperative in order to mitigate the impacts of climate change.

WIND ENERGY TODAY

The wind energy sector is flourishing. In 2006, global demand for wind power capacity grew by 32 per cent, following an increase in the market of more than 40 per cent in 2005. The value of wind turbines sold last year was €18 billion globally. Wind currently supplies three per cent of EU electricity and could, with effective legislation, meet 12 to 14 per cent of Europe's power demand. Thanks to the now widespread awareness of the environmental effects of traditional energy sources, targets have been put in place to encourage the deployment of renewable energies instead. The EU Heads of States agreed last spring to a 20 per cent binding target for renewable energies by 2020, while current average use in Europe stands at just under seven per cent. Wind energy could be one of the main contributors to meet this ambitious objective.

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In the US in 2006, wind power was second only to gas in terms of new capacity, and the same was true for the seventh year running in the EU, where new wind power installations in 2006 amounted to 7,588 MW, while gas stood at approximately 8,500 MW of electricity-generating capacity. Between 2001 and 2005, 30 per cent of all new capacity installed in the EU was wind power. In that same period, 53 per cent of all new installed electricity-generating capacity in the EU was gas.

AN ENVIRONMENTALLY FRIENDLY SOURCE OF ENERGY

The two technologies of gas and wind, making up over 80 per cent of new electricity-generating capacity in the EU between 2001-2005, complement each other well, both technically and environmentally. Gas is flexible; it can be ramped up and down much faster than other technologies, apart from large hydro. Gas is also far less aggressive to the environment than other conventional power sources. There is a 10 year window to change habits and systems in order to avoid irreversible damage to the world as a result of human-induced climate change. The use of gas can help the EU meet its Kyoto obligations on greenhouse gases (GHGs) and climate change in the

medium term. Gas is an important stepping stone on the way to a future in which energy will come primarily from renewable sources.

Given the climate and energy supply situation, wind energy in the future may well provide the same amount of power as conventional sources do today. By 2010, wind power will save the EU CO₂ emissions equivalent to one-third of its Kyoto commitment.

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FUEL EXPORTERS AND IMPORTERS

The importance of using wind power is not just linked to its green credentials. We are living in a period of energy change. Globally, net exporters of fuel are few, and major new market players, such as India and China, are demanding increasing amounts of energy for their expanding economies. According to the European Commission, dependence on imported oil and gas within the EU, which is currently at 50 per cent, could rise to 70 per cent by 2030.

This reliance on fuel-exporting countries makes importers vulnerable to potential supply cuts or higher prices resulting from international crises. According to the European Commission, every time the oil price goes up by US\$20, the price of Europe's gas imports goes up by US\$15 billion annually, and a quadrupling of oil prices from US\$20 to US\$80 (as we have experienced in the past years) adds €30 billion annually to the gas import bill of the EU. In comparison, the value of wind turbines installed in Europe in 2007 was approximately €9 billion.

As a result of our fuel dependence, vast amounts of money are continually being transferred from the many net importing countries to the few net exporting countries. It would require dramatic decreases in the price of oil, and thereby gas, to limit the effect of this transfer of wealth, and such a decrease is highly unlikely. On the contrary, the financial transfer is likely to increase in the future as the EU production of gas, currently meeting approximately 50 per cent of demand, is expected to fall by 50 per cent over the next 20 years.

It is clear that countries will soon have to reduce their import dependence in order to limit exposure to unpredictable fuel import prices and to curb GHG emissions. The impact of such elements on their economies and the global environment can be limited, in the short, medium and long term, through much needed energy efficiency measures and the deployment of renewables.



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A FINANCIAL ADVANTAGE

While oil and gas prices fluctuate, wind energy, being an indigenous power source, can guarantee security of supply at a predictable cost because the fuel is free. Money spent on wind energy is an investment: it takes a wind turbine two to three months to produce the amount of energy that goes into its manufacture, installation, operation, maintenance and decommissioning after its 20 year lifetime. If the environmental and social costs of power generation were included in electricity prices, wind power would already be cheaper than any other electricity-generating technology. Importers of energy would reap the benefits of putting money to work in their own economies rather than bearing the economic burden of transferring increasing amounts of their citizens' wealth abroad.

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EMPLOYMENT OPPORTUNITIES

Wind, unlike oil reserves, for example, is indigenous to all countries and, when wind power is deployed in a region or area, employment is boosted. The wind power sector currently employs around 64,000 people in Germany, around 21,000 in Denmark and 35,000 in Spain, according to national statistics. There is a wide variety across European countries in the estimated total employment per MW installed. However, the average in Europe is around 12 individuals per MW installed. Employment projections in the wind power sector for 25 member countries of the EU (EU-25) for the year 2020 indicate: 153,400 direct and indirect employees for manufacturing, 27,400 for installation and 16,100 for maintenance. This gives a total estimated employment

for 2020 in Europe of around 200,000. Governments that install more wind power capacity indirectly create jobs, economic activity and expert opportunities.

A BOOST TO THE ECONOMY

As such figures show, the use of wind power is more than compatible with a strong economy. Denmark, for example, gets over 20 per cent of its electricity from wind energy, and according to the World Economic Forum, Denmark is the fourth most competitive economy in the world. Over the coming two decades we will witness the largest turnover in electricity-generating technology the world has ever seen, as new plants are built and older ones cease activity; as new energy markets emerge and other ones evolve. We must use this as an opportunity to change our energy supply structure towards much larger shares of indigenous, renewable resources so we can develop our economies on the basis of known and predictable electricity costs.

PUBLIC OPINION

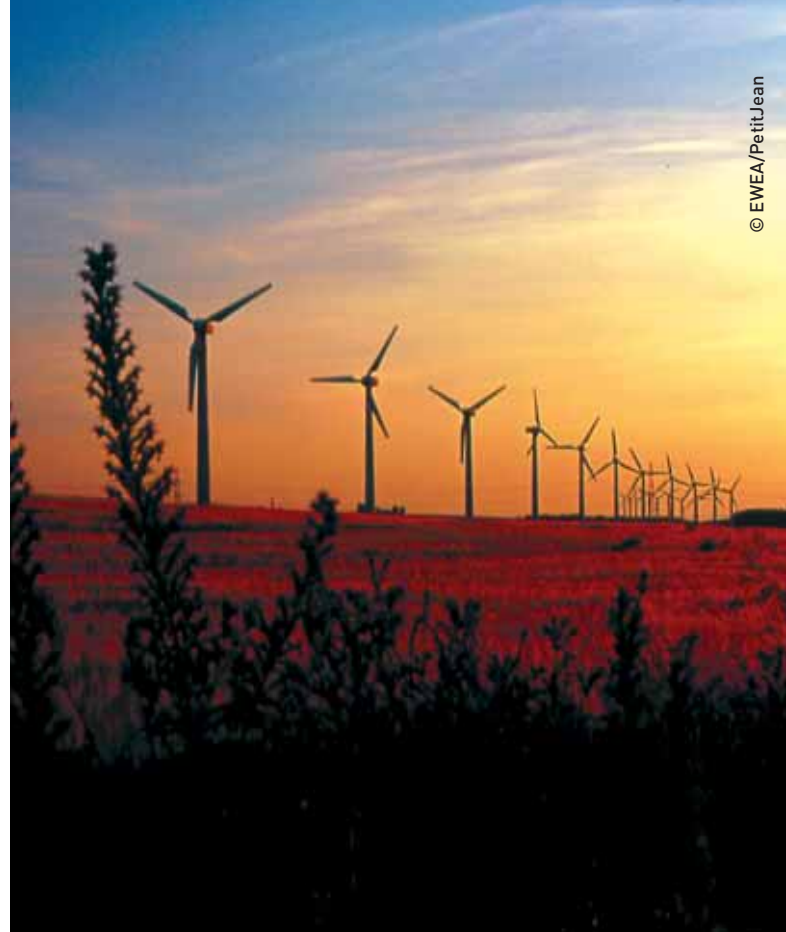
A Eurobarometer opinion survey in early 2007 confirmed overwhelming support for wind power from the European public. Seventy one per cent of EU citizens are "very positive" about the use of wind power in their country. This makes wind the second most popular energy source after solar across the 27 member states. A government or a business that chooses to support wind power will not be making an unpopular choice.

“ Governments that install more wind power capacity indirectly create jobs, economic activity and expert opportunities. ”

A PRESENT AND FUTURE NECESSITY

President Bush declared the United States' oil dependency an "addiction". It is an addiction his country shares with most other nations of the world, and it is not limited to oil. The battle for energy in this century will not be won by following the strategy that proved to be the winning one in the 20th century, ie of either producing fuel or of controlling fuel supplies. It will be won by those regions of the world that have the foresight to act now to cure their addiction to conventional power sources in order to protect their economies and the global climate. It will be won by the regions and governments that excel in developing, deploying and exporting renewable energy technologies, such as wind power, to a world that cannot afford to do without them. It is therefore not merely to the advantage of businesses and governments to embrace and support wind energy, but imperative that they do so. In this way, they can be at the head of the game in making the necessary shift from a reliance on fuel exporters to an indigenous power supply that is constantly renewable and everlasting.

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Author

Christian Kjaer was appointed Chief Executive Officer of EWEA in March 2006. He previously held the post of Policy Director for EWEA having worked on a wide range of policy issues for the association. Christian steers the work of the organisation, drafting EWEA's direction, vision and long term strategy in collaboration with the President and the Executive Committee. He is responsible for ensuring EWEA's political impact and reputation as a trustworthy partner in the policy-making process is sustained. He represents the association in external forums, engages actively with international institutions, key stakeholders and NGOs, EWEA members and the media.

Organisation

The European Wind Energy Association (EWEA) is the voice of the wind industry – actively promoting the utilisation of wind power in Europe and worldwide. Its members are from 40 countries and include over 300 companies, associations and research institutions. The EWEA Secretariat is located in Brussels where it coordinates European policy, communications, research, and analysis. EWEA is a founding member of the European Renewable Energy Council which groups the eight key renewable industry and research associations under one roof, and of the Global Wind Energy Council.

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