

Background information on EWEA's latest report 'The Economics of Wind Energy'

Financial and economic concerns are currently at the forefront of many minds. The European Wind Energy Association's (EWEA) new report, 'The Economics of Wind Energy', sheds light on the financial and economic aspects of wind energy. Over 122 pages, it provides a comprehensive insight into both microeconomic and macroeconomic aspects of wind energy production.

The report shows that wind energy has developed to become fully competitive with other conventional power technologies. It also shows that wind energy can become a valuable component in the electricity supply of Europe and other continents in the years ahead, if energy policy makers apply a consistent and comprehensive economic analysis of the costs, benefits and risks associated with the different available power generation technologies.

Wind power reduces fuel and carbon price risk

One of the most important economic benefits of wind power is that it reduces the exposure of our economies to fuel and carbon price risk. This benefit is so sizable that it could easily justify a larger share of wind energy in most European countries, even if wind were more expensive per kWh than other forms of power generation.

This risk reduction from wind energy is currently not accounted for by standard methods for calculating the cost of energy, which have been used by public authorities for more than a century. Quite the contrary, current calculation methods favour the use of high-risk options for power generation. In a situation where the industrialised world is becoming ever more dependent on importing fuel from politically unstable areas at unpredictable and higher prices, this aspect merits immediate attention.

Accounting for external cost and benefits

As is demonstrated in the publication, markets will not solve these problems by themselves because markets do not properly value the external effects of power generation. Governments need to correct the market failures arising from external effects because costs and benefits for a household or a firm which buys or sells on the market are different from the cost and benefits to society. It is cheaper for power companies to dump their waste, e.g. in the form of fly ashes, CO₂, nitrous oxides, sulphur oxides and methane for free. The problem is that it creates cost for others, in the form of lung disease, damage from acid rain or global warming, for instance. Similarly, the benefits of using wind energy accrue to the economy and society as a whole, and not to individual market participants (the so-called common goods problem).

Accounting for fuel and carbon price risk

The report provides a systematic framework for the economic dimension of wind energy and the energy policy debate when comparing different power generation technologies. It also puts fuel price risk directly into the analysis of the optimal choice of energy sources for power generation. Adjusting for fuel-price risk when making cost comparisons between various energy technologies is unfortunately very uncommon and the approach is not yet applied at IEA, European Commission or government level. This report proposes a methodology for doing so. The methodology should be expanded to include carbon-price risk as well, especially given the European Union's December 2008 agreement to introduce a real price on carbon pollution (100% auctioning of CO₂ allowances in the power sector) in the EU.