

## Energy Co2 : Renewable Energy

### Benefits and Risks of Eco-Energy

**Demand for electricity is growing, market prices are favorable, and concern about a lack of energy independence is growing. Does this mean a green light for investment in renewables?**



Wind turbines are becoming increasingly cost-efficient generators of electricity

Many experts in Europe and North America answer with a confident "yes" and urge a greater corporate concentration on renewables, such as wind, solar, biomass, and geothermal energy.

"Given the fact that the world markets are so highly dependent on fossil fuels and that the costs of these are rising, for both economies and consumers, the outlook for renewables looks promising," says Claudia Kempfert who heads of the energy department at the German Institute for Economic Research.

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Meanwhile, industrializing countries, such as India and China, will also turn to renewable energies to satisfy their burgeoning energy requirements. The World Energy Council predicts that by 2010, the volume of global investment in renewable energies will have reached 625 billion US dollars and could rise to 1.9 trillion by 2020.

Wind power currently offers the greatest potential in terms of success, growth, and competition. Since the 1990s, the costs of building wind power stations and producing wind energy have fallen considerably. The cost of wind-generated electricity is already comparable to that of electricity from traditional sources. The German government predicts that by 2015, wind power will be cheaper to buy than electricity produced by conventional means.

#### Wind power speeding-up

The global demand for wind energy is growing. According to the Global Wind Energy Council (GWEC), 2005 was another record year for the sector. With the installation of almost 12,000 megawatts (MW), the year saw a 43.4 percent increase in annual additions to the global market, up from 8,200 MW in the previous year.

Again, the Far East represents a particularly exciting growth region. The

Chinese market, for example, grew significantly in 2005 in anticipation of the country's new Renewable Energy Law, which came into force on in January 2006. "As a result, nearly 500 MW of new capacity was installed in 2005, more than double the 2004 figure," says Li Junfeng of the Chinese Renewable Energy Industry Association (CREIA).

"Renewable energies are one of the main opportunities opened up by the need to tackle climate change," says Bozena Jankowska, Team Head of Sustainability Research at London-based RCM investment company, a subsidiary of Allianz Global Investors. "Wind energy is currently the largest and most competitive renewable energy market."

In light of such growth, it is not only small and medium-sized energy producers who are investing in green energy, but also large institutional investors.

### **Renewable economies of scale**

In December 2005 Allianz Group made a significant investment in a wind farm project in Sicily, only five months after announcing its pledge to invest 300-500 million euros in renewable energies over the next five years. "Investments like this one in renewable energies, especially in wind, offer attractive yields with an acceptable risk profile," explains Thomas Pütter, one of the managing directors of Allianz Alternative Assets Holding. Due to the potential of wind energy in Europe, Allianz Global Investors CEO Joachim Faber says more investments in wind are on the horizon.

Allianz Group is not the only "big player" that has leaped into the renewable energy game. US industrial giant General Electric (GE) and their Energy Financial Services (EFS) unit recently bought a wind farm in Germany, and have other wind and solar projects in the United States and Europe in the works.

"The renewables space has really heated up and I hope it will account for 20 to 30 percent of our investment in five years," says EFS president J. Alex Urquhart about the future of his unit's multi-billion-dollar portfolio.

### **Lingering questions**

Along with wind energy, the global market for solar energy is also undergoing considerable growth. In 2005 German solar energy company Solarworld increased its consolidated profit by 182 percent to 52 million euros, boosting share prices by 500 percent. Some experts, however, urge caution, noting that the success of these industries often depends on favorable political situations and state support that are by no means guaranteed.

"The overall picture confirms that the right political framework is crucial to sustain the growth of renewable power around the world and to open new markets," says Arthouros Zervos, chairman of the Global Wind Energy Council.

In addition to unstable political situations, some experts believe that weak markets and competitive positions still present substantial risk factors for renewable energy. "Companies have to pay attention to ongoing cost competitiveness of renewables against conventional energy sources, e.g., coal, gas, oil, nuclear, and hydro," reminds Bozena Jankowska of RCM.

### **Realistic but radical**

Some companies, like RWE Power AG, Germany's largest producer of conventional electricity, are looking closely before they leap. The

company plans to invest 650 million euros to expand regenerative energies, but only if they prove financially viable.

"We will only concentrate on the technologies which are already competitive or realistically have the potential to compete with fossil fuels in the foreseeable future," says Gerd Jäger, RWE board member. "Renewable energies will have their place in the energy portfolio. But even if they represent 20 percent of total energy produced in Germany by 2020, the other 80 percent still has to come from fossil fuels or nuclear energy."

### **Fossil fuels bound to remain important**

Although they are finite resources, it is clear that fossil fuels will continue to play an important role in global energy supply. The "action plan" that the G8 group of industrialized nations will discuss at their July World Economic Summit in St. Petersburg (Russia) will address global energy security by recommending substantial investments in energy production, mostly from conventional sources, such as oil and gas.

Some concerned individuals, such as Paul Dickinson of the Carbon Disclosure Project, are nonetheless determined to find a bigger future role for renewables. Dickinson: "We are looking for realistic but radical and lasting changes made by investors and corporations to meet the climate change challenge."

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