

10 Renewable Energy Myths

REVEALED



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By EnergyBusinessDaily.com

The debate between renewable energy versus conventional energy carries many myths. Let's debunk them...

MYTH 1: SOLAR POWER IS TOO EXPENSIVE TO BE OF MUCH USE.



Today's bulky and expensive solar panels capture only 10 per cent or so of the sun's

energy, but rapid innovation is making the next generation of panels thinner and lighter, they capture more energy, and cost a fraction of what have in the past. First Solar, the largest manufacturer of thin panels, claims its products will generate electricity in sunny countries as cheaply as large power stations by 2012.

MYTH 2: WIND POWER IS UNRELIABLE.



During part of 2008 wind provided almost 40 per cent of Spain's power. Areas of northern Germany generate more electricity from wind than they require to meet their needs. Northern Scotland could easily

generate 10 or even 15 per cent of the UK's

needs for electricity at a cost that would match today's fossil fuel prices.

MYTH 3: MARINE ENERGY IS A LOST CAUSE.

Designing and building machines that can survive the unforgiving



conditions of ocean waters has been difficult and past decades have produced repeated disappointments. In 2008, however, Britain installed the first tidal turbine to be successfully connected to the UK electricity grid in Strangford Lough, Northern Ireland, and a group of large-scale wave power generators was installed 5 km off the coast of Portugal.

MYTH 4: NUCLEAR POWER IS CHEAPER THAN OTHER LOW-CARBON SOURCES OF ELECTRICITY.

The new nuclear power station on the island of Olkiluoto in western Finland is an obvious example of the



expensive and unpredictable cost of nuclear plants. Electricity production was due to start in 2008, but the power station will not

start generating until 2012. The impact on the cost of the project has been striking. When the contracts were signed, the plant was supposed to cost 3 billion Euros. But the cost will probably be more than double. A new plant in Normandy appears to be experiencing related problems. In the US, power companies are declining nuclear projects over fears over unmanageable costs.

MYTH 5: ELECTRIC CARS ARE SLOW AND UGLY.



We are very close to developing electric cars that match the performance of conventional vehicles. The Tesla electric sports car amazes all those who

experience its drive. With a price tag of more than \$100,000, the Tesla creates a luxury market for the electric car. The Tesla has demonstrated that electric cars can be sexy.

MYTH 6: BIOFUELS ARE ALWAYS DESTRUCTIVE TO THE ENVIRONMENT.



Many believe that making motor fuel from food is a disaster. It causes hunger and increases the rate of forest loss, as farmers have wanted extra land on which to grow their crops.

However the failure of the first generation of biofuels doesn't mean we should reject the use of biological materials completely.

Soon we will be capable of turning agricultural wastes into liquid fuels by splitting cellulose, the most abundant molecule in plants and trees, into simple hydrocarbons.

MYTH 7: CLIMATE CHANGE MEANS WE NEED MORE ORGANIC AGRICULTURE.

Most studies show that yields under organic cultivation are over half what can be realized



elsewhere. Unless this figure is greatly increased, the world cannot feed its people and produce huge amounts of cellulose for fuels if large acreages are converted to organic cultivation.

MYTH 8: ZERO CARBON HOMES ARE THE BEST WAY OF DEALING WITH GREENHOUSE GAS EMISSIONS FROM BUILDINGS.

Buildings are responsible for about half the world's emissions, and domestic housing is the most important single source of



greenhouse gases. But making a building genuinely zero carbon is extremely expensive, and just focusing on the about 1 per cent of the housing stock that is constructed each year has no effect on the remaining 99 percent. In Germany a

mixture of subsidies, cheap loans, and marketing is succeeding in getting hundreds of thousands of older properties eco-renovated each year to very impressive standards and at reasonable cost.

MYTH 9: THE MOST EFFICIENT POWER STATIONS ARE BIG.



New types of tiny combined heat and power plants can turn around half the energy in fuel into electricity, almost matching the efficiency of huge generators. These are now small enough to be easily installed in ordinary homes. Not only will they generate electricity but the surplus heat can be used

to heat the house, meaning that all the energy in gas is productively used. Some types of air conditioning can even use the heat to power its chillers in summer.

MYTH 10: ALL PROPOSED SOLUTIONS TO CLIMATE CHANGE NEED TO BE HI-TECH.

More advanced countries are preoccupied with creating hi-tech solutions to reducing greenhouse gas emissions. Many of these are expensive and may create as many problems as they solve. Nuclear power is a good example. It may be cheaper and more effective to look for simple solutions that reduce emissions, or even extract existing carbon dioxide from the air.



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