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The reality of wind power and green-collar jobs in Spain

Sometimes, two stories come along which starkly contradict each other. A perfect example is the reporting of Spain's green credentials. The country is often held up as an example to laggards across the EU of how to invest in renewable energy. Take, for example, a piece in the Times last week, headlined "Spanish windmills tilt country towards cleaner, greener energy".

According to this, 30% of Spain's energy in January and February came from wind and hydro power, thanks to wet and windy weather, and the figure for the year as a whole is expected to be nearer 30% than 20%. For comparison, "carbon" energy (presumably coal- and gas-fired stations) accounted for 14.3% and nuclear 20.9%. Where the other 35% of energy came from is anyone's guess: no figures are given. Crucially, the actual contributions of hydro and wind power are not given, but the likelihood is that the bulk of the 30% was hydro power.

Although great strides may well have been made in the last few years, it is difficult to reconcile these figures with those for Spain in 2005 taken from the EU energy portal (www.energy.eu). This gives a figure of 8.7% as the contribution of renewables: pretty much the EU average, and with a target of 20% by 2020. And as for carbon dioxide emissions, Spain is projected in 2010 still to be nearly 24% above its 2012 Kyoto target.

Another view of this situation was given by Dr Gabriel Calzada, Associate Professor of Economics at King Juan Carlos University during the Heartland Institute's climate change conference in New York last week. In contrast to the Times article, the title was "Spain's new energy economy: Boom and bust of the Spanish renewable miracle".

According to his figures, Spain has *increased* its emissions by 40% since signing the Kyoto protocol. And yet, in contrast to the government estimate in 2004 that emissions permits would cost Spanish companies no more than 85 million euros annually, the real cost is now estimated at between 3 billion (government statement) and 15 billion euros (Price Waterhouse Coopers).

As for renewable energy, the rapid growth of wind power is not surprising. For the first 15 years, a subsidy of 90% over the market price has been payable, reducing to 80% thereafter. And for solar, in which Spain is also seen as a leader, subsidies have amounted to 575% of the market price for 25 years, then declining to "only" 460%. With returns of 12 to 20%, the take up has been understandably high (indeed, there have been waiting lists).

The result is that installed wind capacity is just over 10% of the total for the country, although it is unclear whether this is theoretical or makes allowance for a

realistic efficiency factor. The buoyant market has created around 50,000 jobs, but these are nearly all for installing new capacity and so do not provide long term employment. And they come at a cost: a renewables subsidy of 2.6bn euros in 2007, with about one third of the total going to the solar sector, which represents only 0.7% of installed capacity and about half the total number of jobs.

The costs are such that the government has now had to reduce the subsidy for solar power by 30% and cap the amount of new capacity to be installed. This softening of support resulted in 10,000 job losses. Further reductions of subsidies put 40,000 more green jobs at risk. Energy prices are rising to cover losses in the distribution industry, and generators have announced the cancellation of 4.5bn euros of annual investment because they also pay an effective subsidy for renewable energy through the controlled price to the consumer.

So, with Kyoto emissions targets almost certain to be significantly overshot and the bubble of green-collar jobs now burst, the Spanish government must be wondering how it managed to waste so much money for so little reward. It is difficult to see an economic recovery in Europe (or the USA) being led by a boom in long-term green-collar jobs.

Shell gets back to basics

The reality of renewable power generation has also dawned on Shell. Several newspapers have carried the story that the company is stopping its investments in wind and solar power because they are simply uneconomic. Last year, it pulled out of a partnership with E.ON to build the 1,000 MW (when the wind blows at the right strength) Thames Array off-shore project.

Environmentalists will argue that such decisions are wrong, because they believe that the future lies with such clean technologies. To compound the offence, Shell is investing more in biofuels, which have been criticised because of the relatively low carbon saving they make and their distorting effect on food prices.

However, doing projects which are not commercially viable is not generally good business. Businesses have to look after their profitability and their shareholders first. In so doing, they are often highly innovative and take significant risks with technologies which give no payback for many years, moving away from renewables does not just mean the company is playing safe. Shell is changing tack for a reason, and that reason is that it sees no prospects of wind power becoming commercially viable for the foreseeable future.

Over the last decade or so, wind turbines have become more efficient, and wind is the renewable power source which needs the lowest subsidy to compete. But Shell does not see a continuation of the trend to the point where wind power will be economically viable without a subsidy. The situation for solar power (as the figures from Spain show well) is much further away from being economically competitive.

Even if wind (and eventually, solar) power become serious options, their intermittency remains a major problem until cheap, high capacity storage is available. In these circumstances, an energy company such as Shell is understandably getting back to basics and pursuing routes where it sees more potential. Biofuels is one of these.

True, this sector also has problems at present and requires subsidies to keep it viable. But the scope for major developments over the next few years is much greater. The first company which can convert waste biomass into a range of energy-dense fuels in a way which is potentially cost-effective has an important first mover advantage in what could be a large sector of the future transport fuels market.

It may turn out that Shell has backed the wrong horse in this particular case. Other companies may make a breakthrough in low-cost photovoltaics, or in some other area. But the point is that there will be a range of options being pursued by companies which all think they can be winners. Some of them will succeed, some will fail; the market will decide. This is a much better way of harnessing creative potential than single-mindedly focussing on just wind and solar power. Objective, hard-headed decision making will give the best results in the long term.

There will be no newsletter on 27th March. The next edition is due on 3rd April.

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