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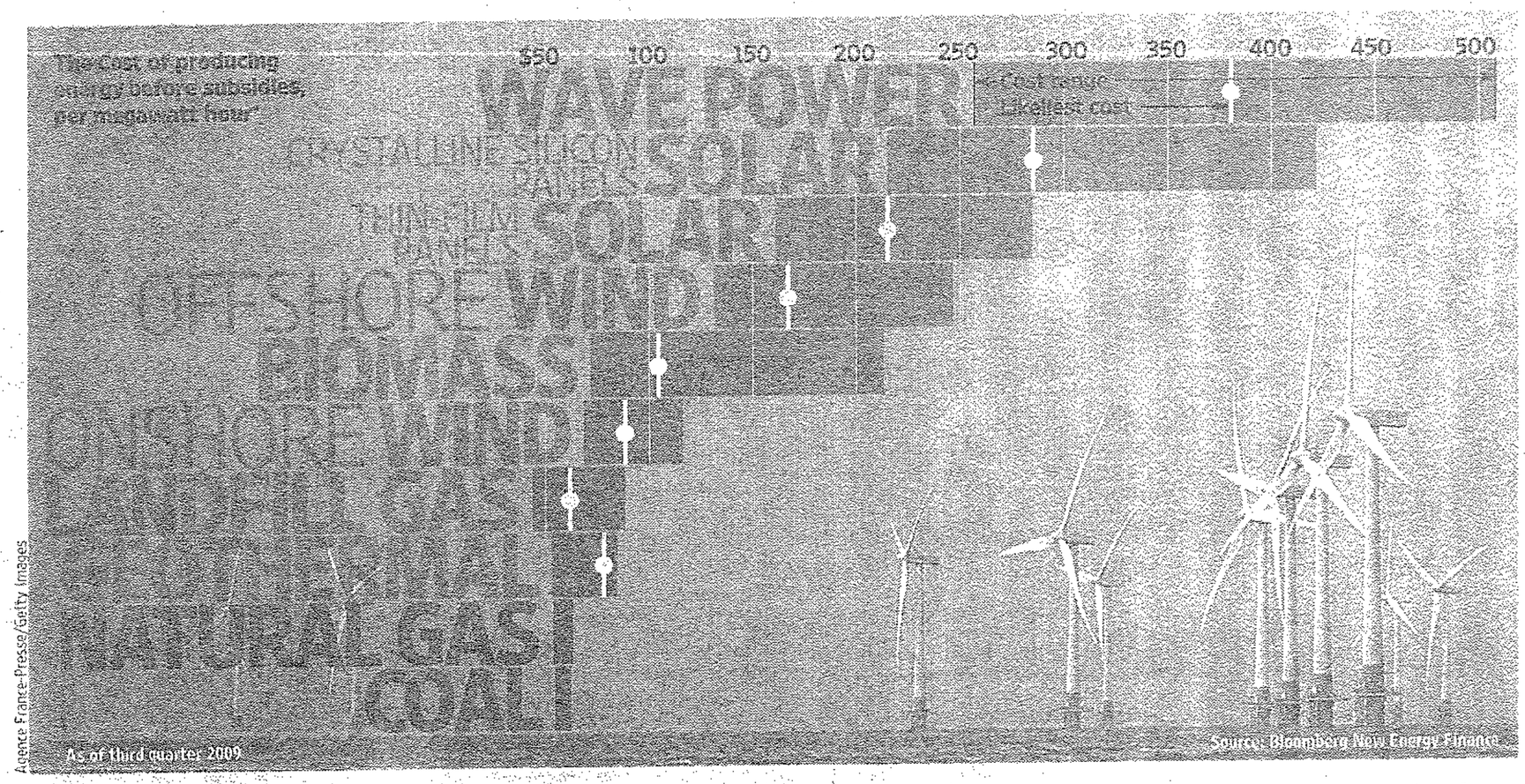
Clean Energy Sources: Sun, Wind and Subsidies

As Governments Increase Spending and Support for Renewable Power, Even Fans Wonder If Aid Could Be More Efficient



In frigid water four miles off England's east coast, a floating crane is installing the last of 48 wind turbines. The 40-story-tall pinwheels are driven by two plentiful resources: ocean breezes and public funds.

Government subsidies are turning renewable energy into big business. Although fossil fuels remain by far the dominant energy source and generate big profits, in some markets government price supports are making renewable power a less-risky corporate bet than conventional fuels.

Wind farms "have a better return on investment than coal plants," says Anders Eldrup, chief executive of Dong Energy, a company based in Denmark that is shutting down coal-fired power plants and building wind farms, including this one in the U.K., called Gunfleet Sands. But that is true only in places with hefty subsidies, he says. "Without that, they wouldn't work."

POWER SHIFT

By Jeffrey Ball

Critics say subsidies of any kind waste taxpayer dollars. But even fans of renewable energy worry this public largesse is costing too much. They say renewable energy deserves subsidies to help it mature to the point where it can compete against fossil fuel. But they are concerned that society, in its haste to roll out wind turbines, solar panels and other forms of clean power, is spending billions of dollars without spurring as much renewable energy as it could. The recession has worsened the waste, they say, as governments increase subsidies to meet renewable-energy targets and create "green" jobs.

Some renewable-energy subsidies have been "enormously wasteful," says Michael Liebreich, chief executive of Bloomberg New Energy Finance, a London-based research firm. "As you get more and more renewable energy, the state is setting energy prices," he says. "That worries me enormously."

Common government practice today, especially in Europe, is to guarantee renewable-energy providers that they can sell their power for more than the normal electricity rate—often several times more. To trim costs, some governments are experimenting with parsing out subsidies, auction-style, to whichever renewable-energy firms are willing to accept the least aid.

Virtually all energy is subsidized. Fossil fuels, which provide about 80% of total global energy, have enjoyed favorable tax breaks and other incentives for decades. The International Energy Agency estimates that fossil-fuel subsidies in developing countries—government money to reduce the price of energy—totaled $310 billion in 2007, the most recent year for which the IEA has statistics. Last fall, the Group of 20 leading economies called for phasing out fossil-fuel subsidies world-wide.

Yet for every unit of energy renewable energy produces, it is often subsidized more heavily than fossil fuel. Government spending and price supports accounted for about one-third of the roughly $145 billion invested world-wide in clean energy in 2009, New Energy Finance estimates. Though renewable energy gets fewer subsidy dollars than the IEA says fossil fuels receive, the price supports are covering a larger portion of renewable energy firms' costs.

Many in the renewable-energy industry say it is high time they got that extra help. The industry needs the "economies of scale that make this a viable and effective source of electricity," says Robert Beisner, vice president for the U.S. unit of SolarWorld, a solar-panel maker. It is planning to expand its U.S. factories to feed global demand driven by incentives.

The company is based in Germany, which has more solar panels in use than any other country despite often-overcast skies. That is because Germany offered a sweet deal: a "feed-in tariff." It guarantees renewable-energy producers an above-market price for their power and that they can sell the power into the electrical grid at that price for 20 years.

Many countries have adopted feed-in tariffs; some are as much as five times the wholesale price of power. The governments typically reduce the rate by a few percentage points yearly. But the cost of renewable energy is falling far more quickly than that; the lifetime cost of producing some types of solar power fell 50% during 2009; most other renewable technologies fell 10%, New Energy Finance says. Moreover, once a renewable-energy producer has locked in a rate for a particular project, it gets that rate for the full life of the subsidy.

The upshot, analysts say: A feed-in tariff can guarantee a renewable-energy producer rising profits that can top 20%, far more than most conventional energy projects.

In Germany, renewable energy from projects that qualified for feed-in tariffs between 2004 and 2008 will cost consumers €122.3 billion (about $175 billion) between 2008 and 2030—46% more than the same amount conventional energy would cost, New Energy Finance predicts. In Spain, renewable energy from projects started under the country's feed-in tariff between 2006 and late 2008 will cost €53 billion over the Spanish tariff's 25-year life, the firm projects, a 75% premium over the likely cost of the same amount of conventional power.

The U.S. is a potentially massive renewable-energy market. It has windy plains, sunny deserts and areas rich in other renewable resources, such as wood. But it has lower rates of renewable-energy production than much of Europe, largely because the U.S. has smaller subsidies.

Now, as part of the Obama administration's stimulus plan, renewable-energy producers are eligible for cash grants totaling 30% of the cost of projects they this year—however high those costs go.

Before the stimulus, the government subsidized renewable-energy producers with tax credits. But financial institutions typically partnered with small renewable-energy firms and took a cut of the government money, reducing the amount left to fund projects.

So the temporary cash grant is more efficient, says Jason Grumet, president of the Bipartisan Policy Center, a Washington think tank. Still, he says, even the grant program is "probably providing a much greater subsidy than particular projects require."

The Obama administration says renewable-energy companies face a strong market pressure to minimize their costs: They have to compete with falling natural-gas prices. "What we're seeing is the market price keeping the capital cost of these projects down," says Matthew Rogers, the Energy Department official overseeing energy spending under the stimulus plan.

Some governments are experimenting with trimming subsidies by auctioning them to the lowest bidder. California and China have dabbled with this approach. But those auctions remain the exception rather than the rule. More often, renewable-energy subsidies are rising. A case in point is the London Array, a U.K. project that, if built, would be the biggest single offshore wind farm in the world.

It would sit off the coast of London, in the Thames Estuary, the same water body where Dong Energy is finishing the Gunfleet Sands wind farm. As the recession set in, companies involved in the project, including Dong, told the U.K. government they needed more aid. Early last year, the government agreed to increase the subsidy developers will get for all new offshore wind farms in the U.K.

Dong plans to start offshore construction on the project next year. Says the company's Mr. Eldrup: "The government listened to us."

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