

Germany's alternative energy fiasco

Foggy Germany, with little sun, has five times the solar energy capacity of Spain

by Emily Backus

When Chancellor Angela Merkel's new coalition finally emerges with a government program, it will likely cut back the aggressive subsidies that have fueled rocketing solar and wind production, turning the country into a goliath of renewable energy.

Germany's *'Energiewende'* (Energy Turn-around) is under fire for penalizing consumers, imperiling utilities, undermining energy security and failing to reduce greenhouse gas emissions.

"The *Energiewende* is a total disaster," said Justus Haucap, Director of the Düsseldorf Institute for Competition Economics (DICE) and member of Germany's Monopolies Commission.

Energy policy is among program points being hammered out in Berlin.

The energy policy is being discussed in Berlin. "No agreement has been reached, but in the future support for renewable energies will be market based," said Haucap.

The German Monopolies Commission in September called for ditching the current system of feed-in tariffs, which guarantees fixed incentives to renewable energy producers along with grid priority, forcing grid operators to use renewables before conventional sources.

In November The European Commission announced new guidelines to change this unsustainable state of affairs.

According to Haucap, German policies have triggered an mad rush to invest: "about 35% of solar panels worldwide today are in Germany... five times as many as Spain."

Since 2010, the year it passed a comprehensive strategy for developing renewable energy sources through 2050, energy production from these sources has risen from 17% to 23% of the total; Peter Altmaier, the Minister for the Environment, is very proud of this achievement, the ultimate goal of which is to make renewables account for 35 percent of power generation by 2020 and 80 percent by 2050. And the Japanese nuclear accident in Fukushima has accelerated the process: all German nuclear plants will be phased out by 2022.

Altmaier credits feed-in tariffs for the plummeting cost of solar energy production, from 32-43 cents per kilowatt-hour to 11-16 cents, but the feed-in tariffs are paid for through a surcharge on consumers' electricity bills, which will go up to 6.2-6.3 cents per kilowatt hour in 2014, a 73 percent increase over 2012. In Europe, only Denmark and Cyprus have costlier electricity bills.

Craig Morris of Renewables International argues electricity is still only a tiny fraction of average household budgets - about 2.34% - and the incentive quota added on to the light bill is negligible. The ballooning supply of renewables has slashed wholesale electricity price and energy producers are having to close down production. According to Bloomberg data cited by the Economist, the yawning gap between average wholesale and residential electricity prices stands at 38 euros versus 238 euros per MWh.

On a sunny day in June, wholesale spot prices even plunged to negative 100 euros per megawatt hour, meaning excess supply endangered grid stability and producers had to pay for it to be taken up.

"A nightmare" according to Werner Wenning, the chairman of the supervisory board of Germany's biggest utility E.ON, whose stock price has more than halved in three years.

Another leading utility company RWE lost 60 percent of its conventional energy profits in

just 12 months and EnBW has said earnings from conventional electricity generation will fall by 80% between 2012 and 2020.

The utilities' travails and their dwindling market capitalization have led to worries over future energy security and financing for new infrastructure, like power storage facilities and massive grid extensions to carry power from the North Sea down to Germany's industrial centers in the south. In the meantime wind turbines off the northern island of Borkum already spin disconnected, driven by diesel generators to prevent corrosion.

Renewables have also tended to undercut the more efficient fossil fuels - gas and black coal - leaving dirtier brown coal to prosper.

The reason for this is that erratic sun and wind mean renewables are mainly available during day-time peaks, variable periods of demand previously served by gas and black coal plants, by and large more versatile than brown coal or nuclear plants that are designed to run at full force all the time. Thus Germany's emissions of six greenhouse gases, including CO₂, rose by 1.6% in 2012 over 2011

According to Haucap, German renewables have also helped make polluting cheap by contributing to a glut of European Union carbon emission credits just as demand slackened due to the continent's economic woes. Carbon tax costs collapsed as the price of coal fell too, making burning brown coal much more profitable than gas. "Coal and gas fired power plants have been gradually driven out of the market," Wening underlined.

In September Germany's Monopolies Commission has ordered that feed-in tariffs be replaced by a quota system similar to the one used in Sweden's where the government sets the percentage of energy that must be generated by renewables, but it's up to the power producers to decide which sources are cost-effective. The European Commission now recommends



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feed-in premiums for energy producers rather than an incentive, these being appropriate to sustain fledgling technologies while those approaching maturity from now on will have to contend with the market.

EU environment ministers on November 8 voted to freeze 900 million CO₂ allowance quotas in the 2014-2020 period to mop up supply.

Many hope that German energy policy will be the next shoe to drop. **E**

☒ The wind farms north of the island of Borkum in Germany are now disconnected from the grid and are being run on diesel to avoid rusting up.

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