

DANES SELL WIND POWER TO GERMANY

A fledgling green power market finds its feet

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Greenpeace Energy in Germany, a small retailer of green power, is buying increasing amounts of wind energy from neighbouring countries to sell to its 60,000 household and commercial customers. This year it is importing wind power from Denmark that is expected to account for 8-10% of its total sales, forecast to be 200 GWh. In 2006, wind power comprised just 0.1% of the 190 GWh Greenpeace Energy delivered to customers, up from 83 GWh in 2005. The wind fraction last year came from three small Austrian wind plant with a combined capacity of 3.3 MW.

The Danish wind power is being delivered by 32 named turbines with a combined capacity of 37.3 MW spread across several sites. Of their total expected output of 81.5 GWh over 12 months, about 17.5 GWh will go to Greenpeace Energy, which has contracted for 2 MW an hour delivered over the whole year. Austria will supply about 1 GWh.

Greenpeace Energy is buying the wind power from Vindenergi Danmark, a wind power marketing company, for a fixed price, says Niels Dupont of the Danish power trader. Neither company will reveal the price agreed. To cover the roughly 10% of the time when the wind is not blowing, Vindenergi Danmark is supplementing its wind deliveries with hydro power bought from Norway to meet its contractual obligation to supply 2 MW around the clock.

Greenpeace Energy secures its needs by contracting for a specific volume of generating capacity. In 2006, it contracted a peak capacity of 90 MW to meet a peak demand of 45 MW, according to consultancy BET Büro für Energiewirtschaft und technische Planung. BET is responsible for the 2006 report demonstrating that all Greenpeace Energy's sales came from eligible sources.

NO NUCLEAR

Greenpeace Energy was founded as a cooperative in 1999 on the initiative of Greenpeace. The environment group had launched

a green electricity product in Germany explicitly excluding coal and nuclear power for customers wishing to reduce their carbon footprint but not wanting to support nuclear. What Greenpeace found, however, was that no power suppliers could meet its strict supply rules. As a result it set up Greenpeace Energy, which is now one of four independent green power suppliers in Germany. Customers today include schools, churches and public institutions.

German wind power is not available to Greenpeace Energy. For the first 20 operating years of any German wind plant, the country's utilities are obliged to buy the power at rates set by government. Wind power is available from Denmark, however, from the few turbines erected since purchase prices set by government came to an end. For these turbine owners, selling power into Germany provides an opportunity to get more than the Nord-Pool spot market price, currently running at around €0.03/kWh.

All 32 turbines selling power to Germany were brought online between November 2003 and November 2005. Green-

peace Energy aims to support new renewables development so does not buy power from wind turbines erected before 2000. This rules out as potential suppliers the 1500 turbines in Denmark that no longer receive subsidies, but which also sell their power through Vindenergi Danmark.

HYDRO AND SOLAR

The lion's share of Greenpeace Energy's portfolio comes from Austrian and Norwegian hydro power, which will account for 75% of total supplies this year. Biomass and solar generated power, both sourced from Austria, add another 1.5% and wind will account for 10%. The remaining 13.5% consists of the domestic renewable energy generation that all electricity retailers must pay to have in their portfolios under the rules of the German renewable energy law.

The large proportion of cheap hydro power in Greenpeace Energy's mix keeps the overall green energy price at a level that cus-

tomers are prepared to pay. As German environment organisation Deutsche Umwelthilfe points out, with conventional power prices rising, green power is no longer noticeably more expensive than the standard power mix, which includes 30% nuclear power, 26% lignite and 21% cleaner coal. Sometimes green power is cheaper than grey power, a survey by consumer information services company Verivox has revealed. In Leipzig, a family pays €69.44 a month under a standard tariff to local energy company Stadtwerke Leipzig for 3,500 kWh a year. Greenpeace Energy customers pay €1.90 a month less than that.

Greenpeace Energy sells power to household customers for €0.199/kWh plus a monthly standing charge of €9.50. In its price breakdown for 2007, the company says the price of the electricity alone is €0.062/kWh. Network usage and other charges account for another 30% of the total price, which together with 19% value added tax make up the remaining 40% of the end price.

Denmark's repowering fiasco

Call for a more rational approach

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Denmark's incentive program for replacement of older wind turbines with new has been declared a fiasco by the Danish association of wind turbine owners. In the run up to a major parliamentary debate on Denmark's new national energy strategy, the association is calling for a €0.016/kWh production incentive for electricity from all newly installed wind turbines for the equivalent of 12,000 hours of full load operation, which is about six years. The incentive to date has only been available if new turbines were replacing old units with rated capacities of up to 450 kW.

The association points out that half way through Denmark's five-year repowering program there is little indication that the goal for 175 MW of old turbines to be replaced with 350 MW of new will be reached before the end of 2009, as planned. Association director Asbjørn Bjerre argues that the program is unnecessary. Market forces already ensure that old turbines are taken down when it makes sense to do so, he says. "In many cases it is an unnecessary waste of resources to take down good, well functioning wind turbines before time," adds Bjerre.

As the repowering incentive operates today, it is effectively being used to buy operat-



Niels Dupont: *The price is confidential*