

by senior lawyers working for GE. MHI argues that Wilkins' claim as an inventor has been corroborated in documents and in testimony from one of the named inventors of 1985, power engineer Henning Lutze from Germany.

Wilkins' employment status when 1985 was applied for — and whether he was obliged to assign his rights to GE — are crucial. He had been employed by Enron Wind and was kept on by GE in 2002 when it took over Enron Wind. But he left GE shortly before the application was filed, states Charneski, adding: "In fact, it appears that as a former Enron Wind employee who was kept on at GE without a new contract, [Wilkins] did not have an obligation to make an assignment [of his rights to GE]."

Not true says system operator

Denmark hits back at US propaganda

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Electricity sold or exported from Denmark at any one time cannot be said to emanate from any specific source of generation, says Denmark's power system operator, Energinet.dk. For that reason it is impossible to claim that electricity from any particular source is being sold for a specified price. Energinet.dk is responsible for balancing electricity supply and demand in Denmark.

The company's statements were made in response to a report released last month by a Danish right-wing think tank, the Centre for Political Studies (Cepos), in collaboration with the Institute for Energy Research (IER), an American oil and coal lobby group. The report, *Wind Energy – The Case of Denmark*, was released in Denmark to coincide with the inauguration on September 17 of the world's largest offshore wind station, the 209 MW Horns Rev II project (see page 80). As a result, the event was marred by a rash of negative media and press coverage instead of the expected positive reporting.

Days earlier the same Cepos report had been released in the United States, accompanied by the Hamlet-inspired headline, *Something Rotten?* It purported to provide "evidence" that President Barack Obama's reference to Denmark's dependence on wind power for 20% of its electricity was false. The claim emanates from Hugh Sharman, a British engineer resident in Denmark. Although Sharman is unknown outside a small circle of

Enter another Korean giant

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Korean industrial giant Daewoo Shipbuilding & Marine Engineering (DSME) has entered wind turbine manufacturing with its purchase of DeWind, a long-established German line of technology, from Composite Technology Corporation (CTC), an American cable company, for \$49,500 million. DSME becomes the fourth owner of DeWind since 2003, when the original management sold out to British industrial group FKI.

Neither FKI nor DeWind's two subsequent owners followed through on plans to commercialise the DeWind concept after its success in Germany in the mid-1990s. Industry experts say a company of DSME's size is exactly what DeWind needs. "The technology is sound, but they [CTC] haven't been able to ramp up manufacturing and

that's where they have fallen down," says Jeff Chester, a specialist attorney with Kaye Scholer LLP.

"The biggest issue with CTC is just balance sheet strength," says DeWind president Bob Rugh. "If you take an order, what's your ability to fulfil the order? And if you fulfil the order, what's your ability to back the turbines in case there's any kind of issue?" DSME is the second-largest shipbuilder in the world. Parent Daewoo International posted profits of \$125 million in 2008.

Rugh believes DSME's purchase of an established turbine concept puts it ahead of the curve of Korean companies entering the wind power space, including Hyundai and Samsung, which have licensed designs or are starting from scratch. The current DeWind turbine line ranges from 1.25 MW to 2.2 MW and DSME also picks up a research and development division in Lübeck, Germany, and a new Texas assembly line, established in partnership with Teco-Westinghouse, a household name in the US power industry (*WINDPOWER MONTHLY*, October 2007).

wind power opponents, IER describes him as a "prominent Danish-based wind power consultant". Sharman claims that Danish wind power covers less than 10% of national demand, with the remainder exported, often for free.

Cepos adopted this claim as its own, publishing it under the title: *Wind Energy Does Not Benefit Denmark's CO2 Account*. The think tank's director, Martin Ågerup, further explains that wind power is unnecessary because coal is available "for thousands of years". At the IER's invitation, he and Sharman formed an "expert delegation" to the US to "explain to the American public what in reality is happening in Denmark".

According to Cepos, wind power meets 9.7% of Danish demand and the remainder is exported for "very low prices — often completely free". From Energinet.dk, Søren Klinge says it is impossible to know what proportions of wind and coal generation are being exported. Furthermore, it is incorrect to claim that electricity is exported for free. When electricity supply exceeds demand in Denmark, Danish market prices drop to zero and power is exported to the country where prices are highest. The revenue is shared equally between Denmark and the recipient.

COAL EXPORTS

Over the course of a year, Denmark exports electricity for no more than 80 out of 8760 hours, says Klinge. The few hours of surplus electricity are not just the result of high winds,

but also because Denmark's combined heat and power plants continue to produce electricity to provide heat, even when the electricity is not required. Furthermore, with high electricity prices in neighbouring countries over the past five years, Denmark's coal plants have elected to continue producing power at maximum output to enable them to reap export revenues. The negative aspect of that policy is that Denmark's CO2 emissions have increased significantly.

Trade of electricity in Scandinavia makes good sense, says Denmark's wind turbine owners association in response to the Cepos report. Hydro power reservoirs in Norway and Sweden function as natural storage for wind power, using windy days to save water that can be released for later use. "When wind turbines produce, the most ineffective and dirty power generation is pushed out of the market. At the same time, consumers benefit from lower prices. This is just as intended in a free market," says the association.

"Unfortunately, some of the power plants continue producing and that is what causes the surplus generation that Cepos gives wind turbines alone the blame for," says association director Asbjørn Bjerre. He adds that while consumers benefit from lower market prices in windy periods, wind turbine owners suffer. In 2008, more than half the wind turbines in Denmark received, on average, DKK 14/MWh (€1.89/MWh) less for their output than other producers, he points out.