

KOREAN GIANT ENTERS TURBINE MANUFACTURE

Hyundai targets United States with 1.65 MW machine

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From next year, the global wind industry will have a new player in the turbine supply market—South Korean industrial giant Hyundai Heavy Industries (HHI). The company, which is the world's largest shipbuilder as well as a major player in the broader power, offshore and industrial sectors, plans to start producing 1.65 MW turbines designed by AMSC Windtec, an Austrian wind turbine design firm owned by American Superconductor Corporation (AMSC). Hyundai will initially target the US market.

Hyundai is ranked as one of the top 500 companies in the world by London's Financial Times newspaper, with reported sales last year totalling \$27 billion. Its entry into the wind market is part of a \$1 billion strategy to expand its renewable energy business, until now limited to solar.

"We view renewable energy as one of Hyundai Heavy Industries' next great growth opportunities," says the company's Young N Kim. "We selected AMSC Windtec based on its ability to create the fastest, most effective pathway for HHI to enter the global wind market." The company hopes to have its first prototype installed and commissioned by mid 2009 and expects to begin shipping turbines to customers by the end of the year.

In addition to the 1.65 MW machine, the agreement with AMSC Windtec will also see Hyundai produce a 2 MW unit. Its sales and marketing rights for both designs extend to dozens of countries, says the company. It will pay an upfront licence fee for each design and subsequent royalty fees for the first several hundred units produced. As with most of its other licence deals, AMSC will supply HHI with core electrical components for the turbines.

A NEW SINOVEL

Since acquiring Austrian wind turbine design firm Windtec less than two years ago, AMSC has inked about a dozen turbine design licence deals with manufacturers from Canada, China, the Czech Republic, India and Taiwan. "At the moment, most of AMSC's revenues are coming from one company, Sinovel," says Jim Ricchiuti, an analyst at investment bank Needham & Company, referring to China's second

largest wind turbine producer. To date, Sinovel has produced turbines based on technology from Germany's Fuhrländer, but is moving on to produce AMSC Windtec technology, reportedly including 3 MW and 5 MW designs. AMSC has received a series of million dollar orders to supply the Chinese firm with core electrical components for its machines.

The American company has been looking for another Sinovel, Ricchiuti says, and Hyundai could just be it. The deal is particularly significant as it could prove the breakthrough into the US market AMSC has long been looking for, he adds. Hyundai would not be making such a significant announcement if it did not have serious plans for the wind market, Ricchiuti points out. "They've got deep pockets, they're a well known company, they view this as a pretty attractive market, and it's related to the business they are in at the moment."

ANOTHER CHINA DEAL

Meanwhile, AMSC has also signed a new licence agreement with another Chinese firm, The XJ Group. It is one of China's largest manufacturers of power equipment and transmission and distribution technologies and will produce a 2 MW wind turbine under the deal for use in its domestic market. Prototypes are expected by the end of 2009, with full domestic manufacturing and sales in 2010.

"The domestic market will be the entry, but the contract enables them to sell the turbines globally," says AMSC's Jason Fredette. "I think they will want to get a foothold in China first, but they are not limited there."

AMSC Windtec will again be paid an upfront licence fee, but expects to supply components in the longer term. "The turbine market is increasingly a game of who can procure the parts, and the best parts at a reasonable price," says Carter Shoop, an analyst with Deutsche Bank. "That's part of the reason why this model has been successful for AMSC."

The American-Austrian company's success in the wind market, if and when the buyers of its licences start producing significant quantities of turbines, may help transform AMSC from a being a perpetual loss maker into a profit making company in the future. The firm reported sales of \$112 million for the year ended March 2008, up more than

100% from \$52 million the previous year. But it still recorded an overall net loss of \$25.4 million, although this is an improvement on the \$34.7 million loss made in fiscal 2006. AMSC is forecasting a net loss of \$13-\$15 million on revenues of \$175-\$185 million for this fiscal year.