



## **Swedish Green Certificate Plans Could Halt Wind**

by Søren Krohn Vice President, European Wind Energy Association

Wind power development in Sweden could grind to a halt until at least 2008, according to an official government report on the introduction of tradable green certificates for renewables. The Swedish renewables association SERO calls the proposal "a catastrophe for wind power and small hydropower", and has formed a coalition with other renewables associations to lobby against it.

Last October the Swedish government released a report from an expert committee which examined replacing the existing investment and operating support for renewables with a green certificate scheme. The report included a draft law to be introduced in 2003, and a worldwide survey of similar working and proposed schemes.

The proposed Swedish system for green certificates is very similar to the Danish scheme recently put on ice after massive criticism during a public hearing. The Swedish draft sets a target for increasing the electricity supply from renewables by 10 TWh during 2003-2010. This is much less than the indicative target in the new EU renewable electricity directive, however a fact already criticised strongly by Swedish environmental organisations.

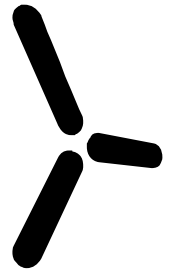
Electricity consumers will be obliged to purchase certificates from qualifying renewables for 6.4% of their electricity consumption by 2003, and 15.3% by 2010. Large energy intensive industries are exempted. Consumers who do not comply with the obligation pay a fine per missing certificate of 150% of the average volume weighted certificate price over the past year. The fine cannot exceed 200 SEK/MWh during the period up to 2008.

Unlike the purchase of certificates the fine is not tax deductible as a cost, however, so the effective certificate price ceiling will be 277.77 SEK/MWh, given a marginal tax rate of 28% (wrongly calculated as 256 SEK/MWh in the report). There is a price floor of 60 SEK/MWh for 2003. The price floor decreases to 20 SEK/MWh for 2007 and disappears thereafter. Existing wind turbines which have produced less than 25,000 full load hours will receive transitional support of 150 SEK/MWh during 2003, decreasing to 60 SEK/MWh by 2007.

New Swedish wind turbines and small-scale hydro are currently more expensive than the use of biomass fuel in existing conventional coal-fired boilers. The report therefore expects that the majority of new renewable capacity will come through substitution of biomass for coal in existing power stations, at least until 2008. Certificate prices are expected to hover around 60 SEK/MWh initially, since fuel substitution requires very little investment. Present support for wind energy is around 320 SEK/MWh, so a drop to 60 SEK/MWh will halt wind energy development, according to the Swedish Association of Wind Power Equipment Suppliers.

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The report is very optimistic about potential international green certificate trading, and mentions the Danish (now scrapped) green certificates as likely substitutes for Swedish ones. Dutch green certificates are also viewed as comparable, a curious observation since the Dutch system is not market based, and certificates have a price fixed by the government. The potential impact of an international certificate trade on the Swedish system is not analysed, nor does the report examine the inherent risks to investors. There is a suggestion that additional development aid may be available to new Swedish offshore wind plant, but no detail is given.

Commenting on the report, the Danish Wind Industry Association said: "Since the same basic flaws which led to the political collapse of the Danish certificate scheme are present in the Swedish scheme, we expect the Swedish system to be put on ice, at least until a potential EU-wide system has been properly analysed and discussed."