

Electricity market's policy instruments not a good combination

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While they may have similar environmental aims, the Swedish electricity market's two policy instruments -- tradable green certificates and carbon emissions allowances -- are not easy bedfellows. Although straightforward at first glance, the green certificate system turns out, on closer inspection, to be highly complicated and extremely obscure in terms of its effects, especially when combined with carbon emissions allowances. Such is the opinion of Anna Widerberg, economics researcher at the University of Gothenburg, in her recently presented thesis on how the two policy instruments together affect the Swedish electricity market.

The Swedish electricity market features two policy instruments: tradable green certificates and [carbon emissions](#) allowances. Introduced in 2003, the green certificates aim to support the development and expansion of electricity production from [renewable energy sources](#). Under this system all electricity suppliers must buy a specific [quota](#) of green certificates relative to the amount of electricity they supply. This, in turn, provides electricity producers with an income from the certificates they sell. Trading in carbon emissions allowances, on the other hand, has affected all companies with [carbon dioxide emissions](#) since 2008, including electricity production from non-renewable energy sources, and aims to reduce all carbon emissions. Emissions allowances are allocated to the various companies on the basis of Sweden's national emissions cap.

In other words, Sweden operates two completely different policy instruments with similar aims that together impact on the Swedish

electricity market. In her research Widerberg has studied how they work together and come to the conclusion that this particular combination is not effective.

"A higher price for carbon emissions allowances leads to a reduction in [electricity production](#) from both renewable and non-renewable energy sources," says Widerberg. "What's more, it's fairly difficult to actually work out the results needed to make decisions, and especially difficult to predict what will happen when changing the quotas."

Widerberg recommends instead that the Swedish electricity market should be controlled through emissions trading alone, as this affects all sectors and markets.

"In isolation, each of the two systems would have worked, but together they're less successful."

More information: The thesis "Essays on Energy and Climate Policy -- Green Certificates, Emissions Trading and Electricity Prices" was presented on 15 June 2011.

Provided by University of Gothenburg

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