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Green Electricity Markets: Market Design, Entreprenurial Discovery and Political Legitimacy

Following deregulation of the principal energy markets, and EU's failure to impose harmonised taxation on polluting emissions, one trend in European energy and environmental policy has been towards market based greening of energy supply. Through well constructed market designs, it is thought possible to correct undesired market behaviour. Such designs provide the "right" incentive structures to the market actors, governed by a consistent regime where regulators specify efficient rules and workable procedures and also have sufficient control to implement them.

Moving from introducing a new mechanism into an already existing market, as in the case of taxation, to constructing a totally new market by political design, however, implies a radical stepping up in policy complexity. Many elements of the rational market design vision can therefore be questioned and arguments can be developed for an alternative learning- and innovation oriented understanding. In other words, moving from the rationalist vision of market design to a more process oriented vision of market evolution.

Based on empirical studies of emerging experiences in European green electricity markets, the paper explores the challenges to the "rational" deregulation and market design approaches confronting the static efficiency premises with a dynamic efficiency approach. The paper also brings in the question of institutionalisation and political legitimacy as a critical challenge to market design.

The paper is organised in three sections: A first section elaborates on the three analytical perspectives: Static efficiency, dynamic efficiency and institutional legitimacy. A second section gives a brief overview of experiences in three green electricity markets: the Dutch green certificate market, the Swedish green electricity certificate market and the UK Renewables obligation certificate market, The third section presents a discussion and draws some analytical conclusions about the challenges facing design of green electricity markets in Europe.