

Addressing the climate problem: Choice between allowances, feed-in tariffs and taxes

By

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Abstract

Instruments chosen to pursue climate related targets are not always efficient. In this paper we consider a country with three climate related targets for its electricity generation: a given share of “green” electricity, a given expansion of “green” electricity, and a given reduction of “black” (fossil based) electricity. At its disposal the country has three instruments: an allowance system (tradable green certificates), a subsidy system (feed-in tariffs) and a Pigouvian fossil tax. Each of these instruments may be used to attain any of the given targets. Within the setting of the model it is verified that each kind of the target has only a single efficient instrument (under certainty), and that there is a deadweight loss of using other instruments to achieve the target. The paper also discusses the relevance of the various targets.

Keywords: energy policy, green certificates, subsidies, Pigouvian taxes, climate change

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