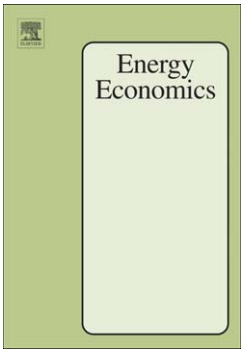

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Preferences for Green Electricity, Investment and Regulatory Incentives[☆]

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Abstract

This paper develops a theoretical model to investigate how consumers' preferences for green electricity affect the incentives of a regulated firm to provide and invest in electricity from green sources. Optimal incentive regulation implies a trade-off between providing an optimal match of consumers with green and brown electricity and efficient incentives to invest in cost reductions. We show that a single price cap on green electricity is ineffective as it yields the same expected market outcome as with an unregulated firm. Price caps on both green and brown electricity is akin to a market share target policy which implements efficient investment but gives an inefficient ex post consumer allocation. A single price cap on brown electricity (weakly) dominates these schemes and gives rise to three different optimal regulation regimes as a function of the underlying technology parameters.

Keywords: Consumers' Environmental Awareness, Green Electricity, Price Cap Regulation.
JEL classification: L51, D42, D82, L90.

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