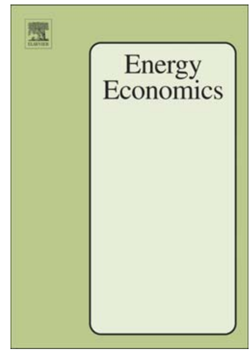
Accepted Manuscript



Taxation of Nuclear Rents: Benefits, Drawbacks, and Alternatives

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PII: S0140-9883(15)00180-2
DOI: doi: 10.1016/j.eneco.2015.06.007
Reference: ENEECO 3098

To appear in: *Energy Economics*

Received date: 26 August 2011
Revised date: 25 May 2015
Accepted date: 10 June 2015

Please cite this article as: Morbeecor, J., Himpens, P., Proost, S., Taxation of Nuclear Rents: Benefits, Drawbacks, and Alternatives, *Energy Economics* (2015), doi: 10.1016/j.eneco.2015.06.007

Taxation of Nuclear Rents: Benefits, Drawbacks, and Alternatives

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Abstract

This paper studies the taxation of nuclear energy using a stylized model of the electricity sector, with one dominant nuclear producer and a competitive fringe of non-nuclear plants. First, we find that the optimal nuclear tax is different depending on the time horizon: the optimal short-run tax has the same order of magnitude as the nuclear taxes imposed in Belgium and Germany, while in the long run the optimal tax may be negative, i.e. a subsidy. Second, government credibility is important: when a government cannot credibly commit, the mere possibility of a short-run tax could severely harm incentives for future investments in lifetime-extending refurbishment or new plants. Third, when there is natural scarcity in nuclear potential, other policies like inviting multiple competitive bidders for lifetime extension franchises or for investments in new plants, may be more efficient ways to increase government revenue.

Keywords: electricity market, nuclear rent, taxation, lifetime extension, investment
JEL: H25, L12, Q41, Q48

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