Household electricity consumers’ incentive to choose dynamic pricing under different taxation schemes - DTU Orbit (19/12/2018)

Household electricity consumers’ incentive to choose dynamic pricing under different taxation schemes: Electricity consumers’ incentive to choose dynamic pricing

Dynamic pricing of retail electricity, as opposed to the widely applied average pricing, has often been proposed to enhance economic efficiency through demand response. The development of variable production from renewable energies and expectations about the installation of heat pumps and electric vehicles has now reinforced interest in flexible demand and dynamic pricing. With a roll-out of smart metering one important technical hurdle is going to be cleared, and dynamic retail pricing may soon become an eligible option for many households. We quantify the potential incentives to adopt new pricing schemes using exemplary Danish data. Until now, limited activity of household consumers on retail markets indicates that switching supplier or contract is perceived costly. We apply the concept of switching costs to explain this hesitant behavior, and use it to estimate a threshold level based on recent observations in the Danish market. We calculate potential savings from dynamic pricing and show how the choice of electricity taxation technique may hamper or enhance potential benefits. In the light of switching costs, our results suggest that the combination of smart meter roll-out and dynamic pricing offerings might be insufficient to convince the majority of households to switch contracts and become active in response to prices, unless they hold a substantial flexibility potential. Dynamic taxation, even if applied to parts of the levies, could contribute significantly to inducing flexible consumption.

General information
State: Published
Organisations: Department of Management Engineering, Systems Analysis, Transport DTU, Dansk Energi
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Publication date: 2018
Peer-reviewed: Yes

Publication information
Journal: Wiley Interdisciplinary Reviews: Energy and Environment
Volume: 7
Issue number: 1
Article number: e270
ISSN (Print): 2041-8396
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 3.69 SJR 0.963 SNIP 1.264
Web of Science (2017): Impact factor 2.514
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.32 SJR 0.951 SNIP 1.325
Web of Science (2016): Impact factor 2.889
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.46 SJR 0.689 SNIP 1.035
Web of Science (2015): Impact factor 2.321
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 1.53 SJR 0.451 SNIP 0.757
Web of Science (2014): Impact factor 1.225
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 0.45 SJR 0.214 SNIP 0.434
ISI indexed (2013): ISI indexed no
Web of Science (2012): Indexed yes
Original language: English
Electronic versions:
Katz_et_al_ACCEPTED_VERSION_Household_electricity_consumers_incentive_to_choose_dynamic_pricing_under_differ
ent_taxation_schemes.pdf. Embargo ended: 18/10/2018
DOIs: