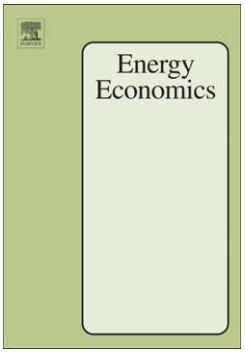

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How Does Daylight Saving Time Affect Electricity Demand? An Answer Using Aggregate Data from a Natural Experiment in Western Australia

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Abstract

Daylight saving time (DST) affects the lives of more than 1.6 billion people worldwide, with energy saving being the original rationale for its implementation. This study takes advantage of natural experiment data from September 2006 to March 2013 in Western Australia in which DST was observed from December 2006 to March 2009, to estimate the effect of DST on electricity demand. Using the difference-in-differences (DD) approach, we find that DST has little effect on overall electricity demand and electricity generation costs. However, it has a strong redistributional effect by reducing electricity demand substantially in the late afternoon and early evening. This redistributional effect of DST may be of particular interest for policymakers who are interested in controlling high demand and the short term energy market price.

Keywords: Daylight Saving Time, Electricity Demand, Electricity Generation Costs

JEL codes: Q4, Q41, Q48

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