

Title: Preliminary results from a large field experiment inducing flexibility in household power consumption
Lars Gårn Hansen

Abstract: Danish electricity generation is becoming more dependent on inflexible power sources like windmills whose electricity supply is decided by wind and climate rather than when consumers demand power. One solution is to rely on conventional backup capacity or international electricity markets to smooth imbalances but this is expensive and can ultimately limit conversion to renewable energy sources like wind and solar power. For this reason consumers that can exhibit flexibility in power their consumption on short notice are interesting and can help reduce the cost of converting to renewable energy sources.

In a randomized field experiment (INCAP) Danish power consumers were invited to participate in a flexible power consumption program. In the program power consumers get sms' encouraging them to move power consumption a few hours during the day (e.g. by starting the dishwasher or washing machine a few hours later or earlier than planned). Some consumer get a monetary incentive to do this while others are pro-socially motivated by the environmental effect that their reactions have. In April 2015 we invited 45.000 power consumer in southern Jutland to participate in this program and close to 3000 have elected to do so. I would like to present preliminary result on recruitment to the program and possibly also on the first month of metered power movement by participants. The focus will be on differences in how consumers react to monetary and prosocial motivation and on their reactions to variations in how the invitation is framed. I should stress that the presented result will be preliminary.