

# Encouraging Energy Saving by Simple Feedback Measures: An Underestimated Potential

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## Introduction

In consideration of the need for a significant reduction of CO<sub>2</sub>- emissions, technical measures seem to be high accepted, promising intervention techniques. In contrast, intervention techniques focussing on behavioural change are mainly undervalued. However, there are some intervention techniques that - in contrast to information only strategies - may have a sufficient impact on behaviour change (Abrahamse et al. 2005).

## Methods

The study evaluates a campaign that focuses on the reduction of private electricity consumption. N=367 households in Dortmund – a densely populated German city in the Ruhr area – participated in the study. Using a design with two experimental groups control group, self-reported behaviour as well as the actual consumption of electricity has been measured over a period of six month. Influencing factors were taken into account on the base of the Norm-Activation Model (Schwartz & Howard, 1981). In addition, intentions and the habitualization of five behaviours have been measured as well by a standardized online questionnaire. During the campaign, different intervention techniques have been applied, based on the Norm-Activation Model: a) information (focussing on the *awareness of need*), b) self commitment (focussing on the *personal norm*), and c) a switchable connection plug board (focussing on the *perceived behaviour control*). In addition feedback has been implemented because participants have been asked to make a monthly note of their electric meter. After the first measuring time,

the participants of the experimental group A (n=241) got a package including detailed information about sufficient behaviours to reduce the private electricity consumption, a switchable connection plug board, a schedule for self commitment, and notepads to make a note of the electricity meter. In addition, they were able to get different information from the homepage and could take part in a bulletin board. Experimental group B (n=126) has been only affected by the feedback; they did not get any additional information.

## Results

The feedback showed up as the strongest measurement: the “feedback only” group was able to reduce the private electricity consumption for 11,2 percent during the period of six month. The additional intervention techniques achieved a reduction of 16,5 percent for the experimental group A. Within the campaign, all participants were able to reduce about 72,5 tons of CO<sub>2</sub>, – in this regard the campaign can be valued as effective. Besides the behavioural changes, the results showed an increase of the cognitive factors of the Norm Activation Model. This result has to be discussed with respect to possible generalisation effects.

## References

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