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Self-Disconnection Among Pre-Payment Customers - A Behavioural Analysis

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The concept behind prepayment meters is simple - instead of paying for gas and electricity after it has been used, customers pay for their energy upfront in a similar way to as a 'pay-as-you-go' mobile phone.

Although there are many advantages to using a prepayment meter – for example, allowing customers to monitor their energy usage and avoid the inconvenience of large bills – one of the key disadvantages is that it can lead to 'self-disconnection'.

In this scenario – the customer runs out of money and therefore the energy supply is stopped. Little is known about self-disconnection: while the regulator (OFGEM) records and monitors the number of disconnections among non-pre-payment customers, no comparable effort is made to capture the extent (and drivers) of self-disconnection among pre-payment customers.

In this paper, we study the extent and drivers of self-disconnection among pre-payment energy customers. Using metering data from 2.3 million electricity pre-payment customers, we find is that, in any given year, the majority of households (ca. 78%) do not self-disconnect; ca. 12% self-disconnect once; ca. 3% self-disconnect more often than four times.

We also find that most self-disconnections (ca. 62%) last for less than one day; between 72% and 82% last for less than two days; 12%-18% last for more than 3 days. As for the main driver of self-disconnection, we identify financial constraints.This suggests that it is likely to be difficult/expensive to reduce the total number of self-disconnections.

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In the second half of the paper, we discuss an alternative/complementary approach to reducing the total number of self-disconnections: we explore whether it is possible to improve the timing of households' self-disconnection behaviour. We proceeded in three steps:

1. In the first step, we argue that households.self-disconnection behaviour over time tends to be sub-optimal.

2. In the second step, we provide evidence which suggests that one important driver for households' sub-optimal self-disconnection behaviour is (hyperbolic) preference reversals.

3. In the final step, we discuss several possible policy responses to preference reversals (in the context of smoothing self-disconnections over time) and conclude that an effective policy is likely to include an initiative to increase awareness of preference reversals and possibly the provision of a commitment savings device.

Taking this work forward, the main tasks will include: i) designing an awareness campaign; ii) a commitment savings device and iii) a research design which allows to evaluate the effectiveness of these policies with regard to households' ability to smooth self-disconnections over the course of a year/with regard to reducing the negative effect of self-disconnections.

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