



**UNIVERSITY OF
CAMBRIDGE**

Department of Engineering

CONSTRUCTION ENGINEERING MASTERS DISSERTATION ABSTRACT

The effectiveness of Smart metering and feedback systems at encouraging occupants to reduce energy consumption

With the UK reaching its capacity limit to supply electricity, there is a significant drive to better understand energy usage and to reduce overall consumption. One of the strategies deployed by the UK Government is to replace old gas / electricity meters for domestic and small businesses by 2020. This national roll out provides a huge logistical and technological challenge for the energy industry which will involve millions of homes and small businesses. Implementation has been estimated by energy regulator Ofgem is to be around £12.1bn. A cost which sceptics would argue would be eventually passed onto consumers through higher energy prices.

It is believed that smart meters combined with a feedback device will help consumers become more aware of how much energy is being used and take steps to reduce consumption. Equally there have been questions raised regarding the implementation and overall effectiveness of the technology.

To date, much of the benefits from using this technology have been confined to short term trials and test environments. By analysing real live consumption data, this investigation sets out to identify whether smart meters and feedback systems actually solves some of the inherent problems associated with traditional metering, and ultimately reduce consumption. It will also help to determine any solutions to resolve shortfalls associated with the technology.

Hussain Chizari

October 2014