

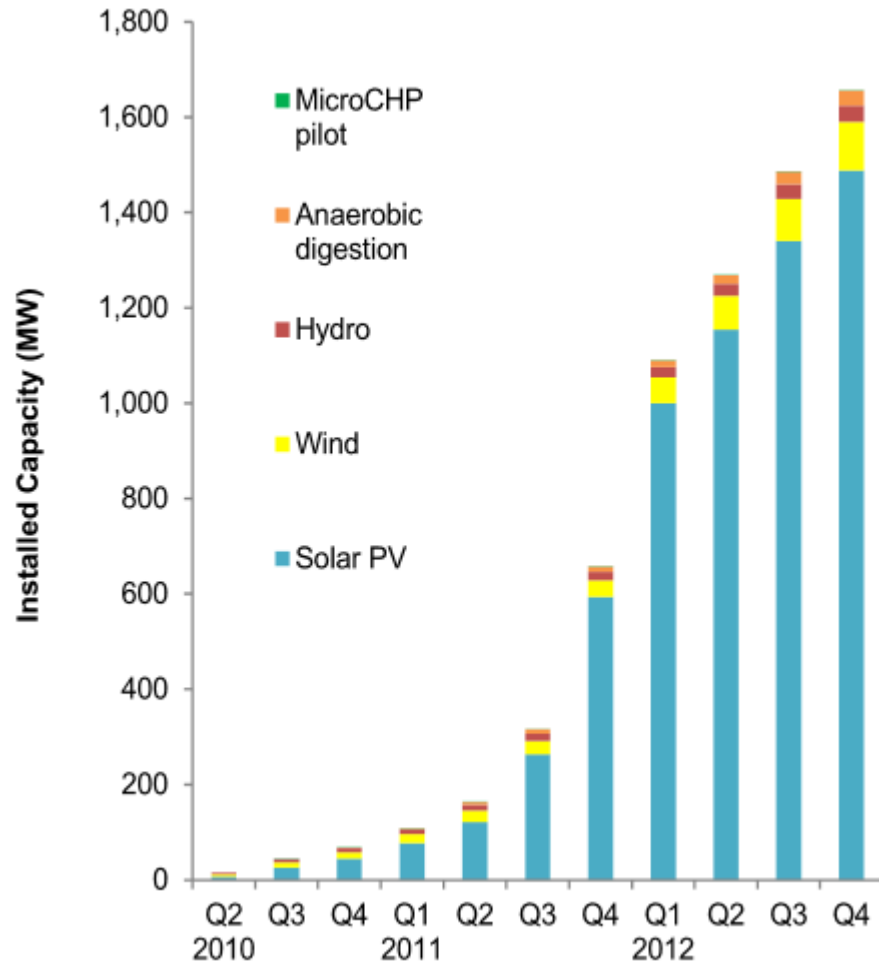
Conversations with my washing machine

an in-the-wild study of demand shifting with self-generated energy

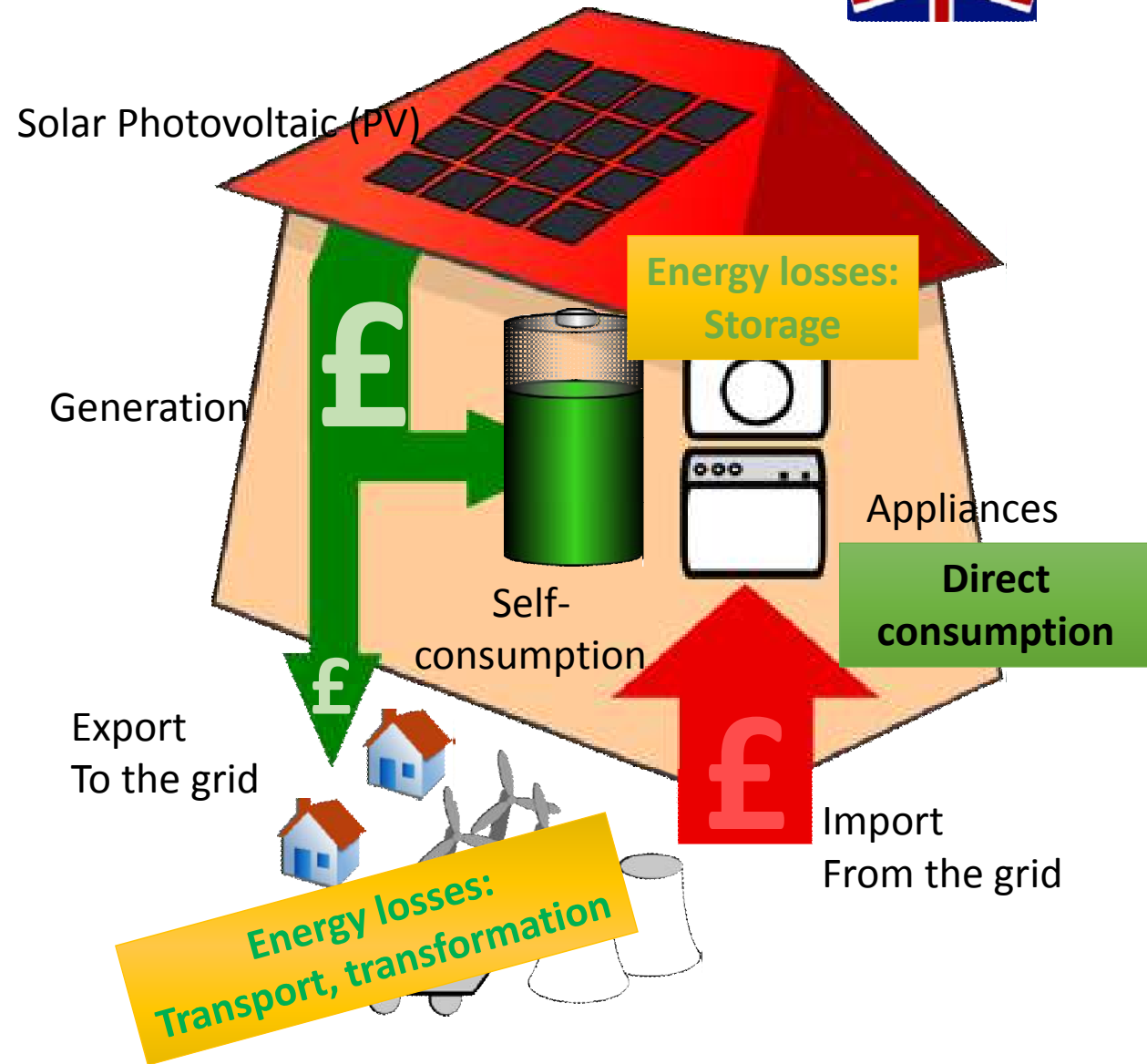
J. Bourgeois, G. Kortuem, J. van der Linden and B. Price

The Open University - April 2014

Ordinary householder as 'energy farmer'



Distributed generation over the last years

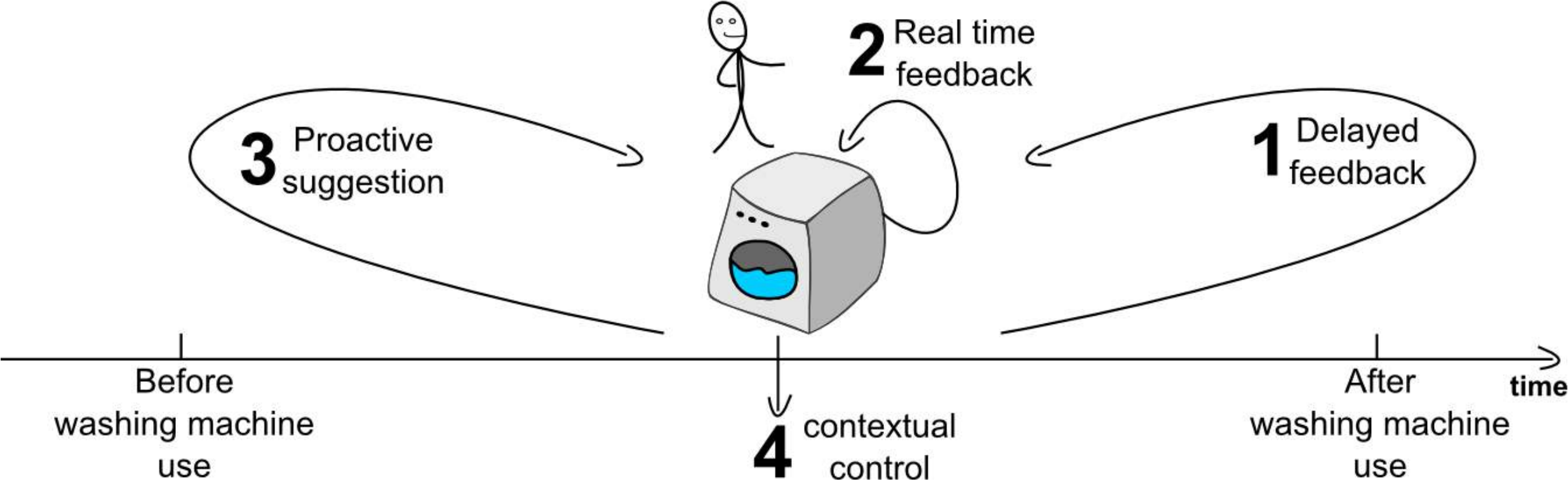


Energy becomes
more *visible* and more *complex*



**How to support people in a more
intelligent use of energy?**

Interactive Energy Demand-Shifting technologies around the washing machine



User study

- 18 participants from EON Thinking Energy Project
- 8 months from July 2013 to February 2014
- Participatory data analysis, focus groups and questionnaire
- Monitoring of overall energy consumption, generation and washing machine consumption
- Remote control of the washing machine



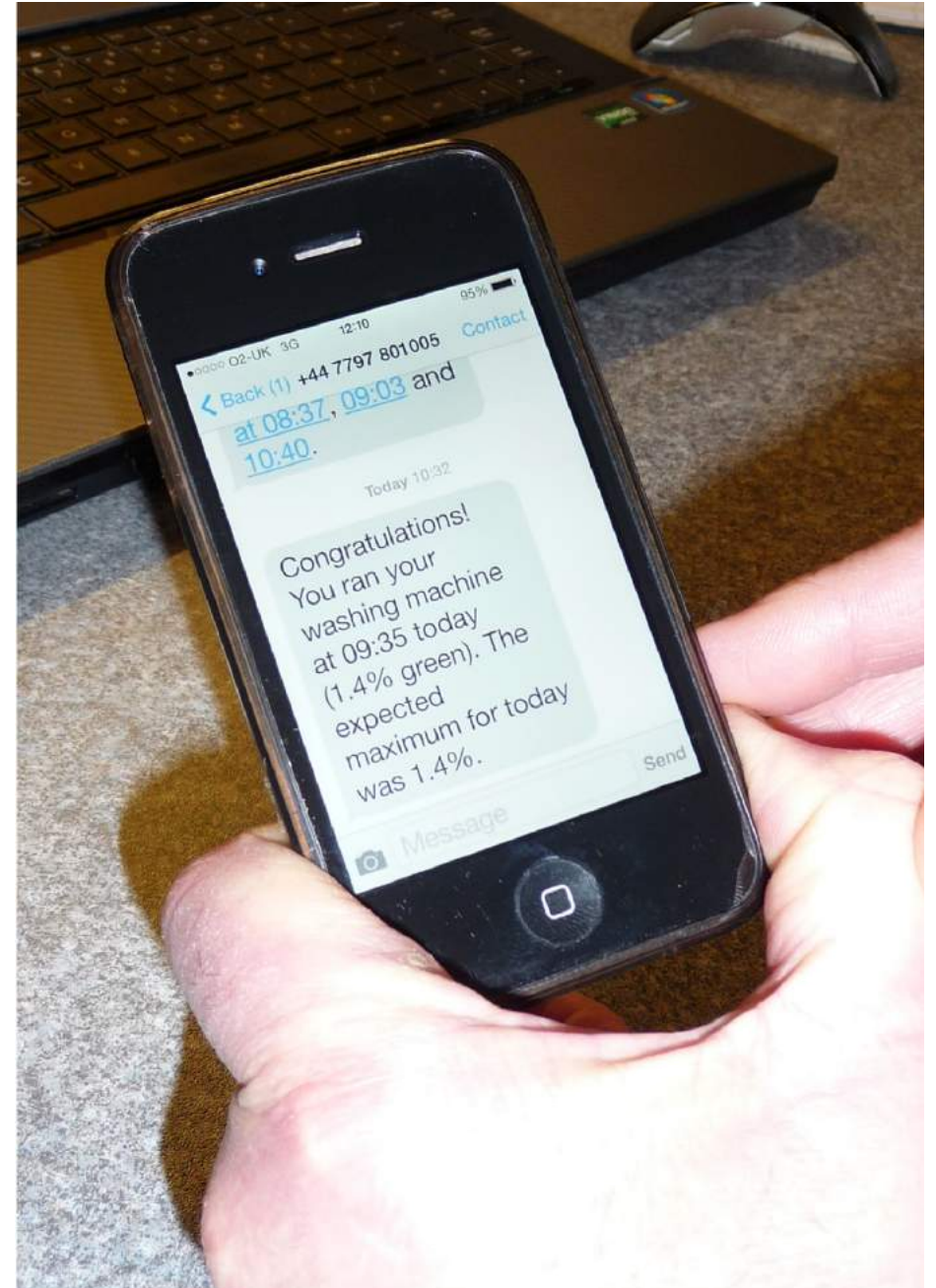
Text messages

Real time feedback

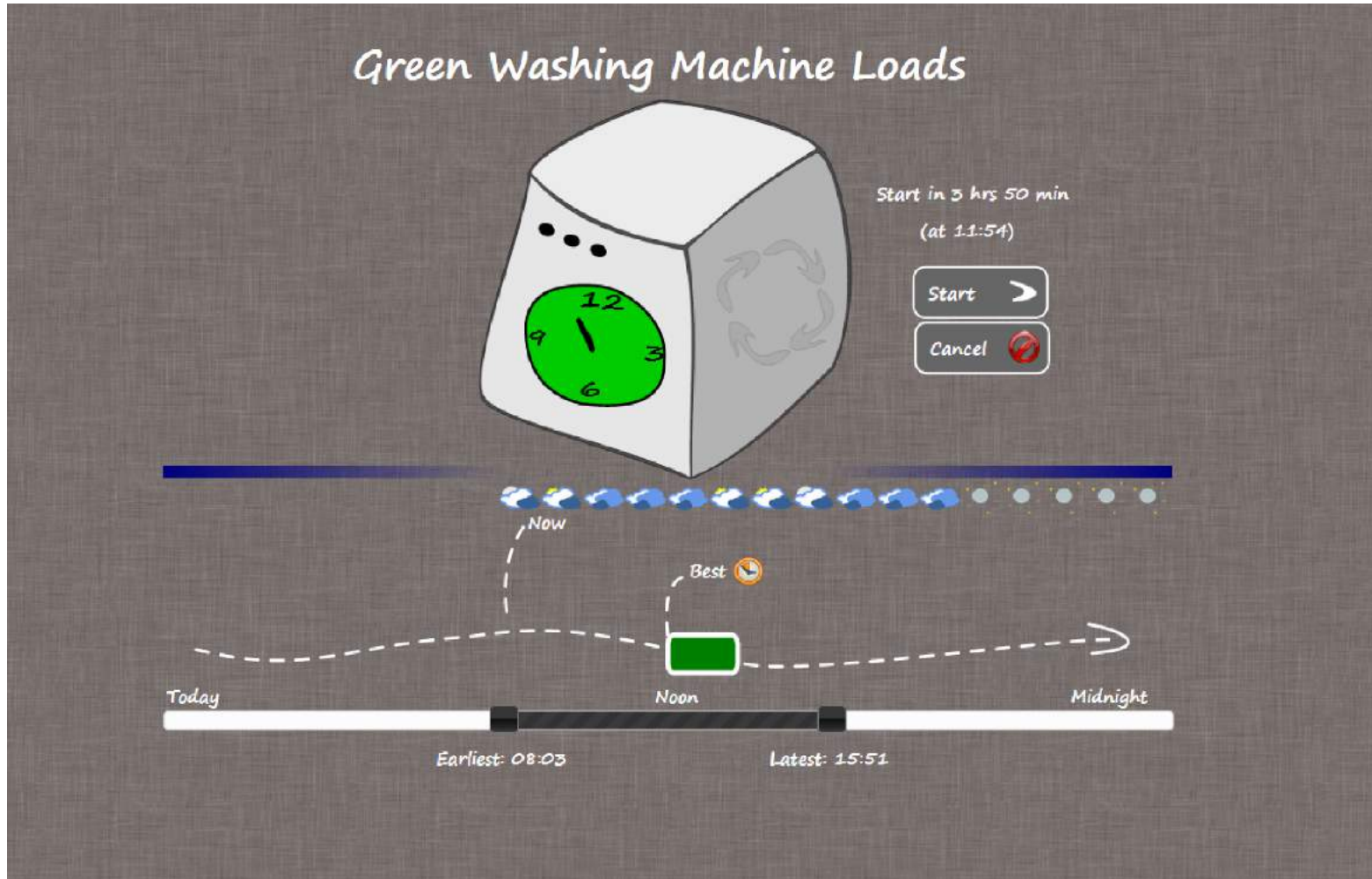
'You ran your washing machine at 12:04 and 15:45 today (3.7% green). You could have achieved 43.6% by starting it at 10:34 and 13:52.'

Proactive suggestions

'If you want to run your washing machine today, then 12:30-14:30 should be the greenest time. It is a better day than tomorrow.'



Contextual control



Washing machine application



Deployment

1. Shifting & decision making



3. Appliance interference

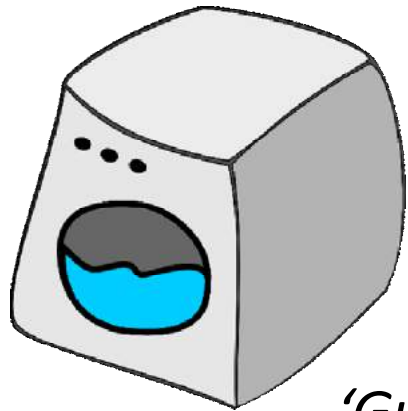


Towards interactive energy management systems

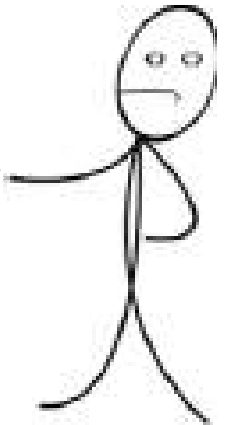
'Guys, full power in 15 minutes!'



'OK, I'll suggest they get me ready for that...'

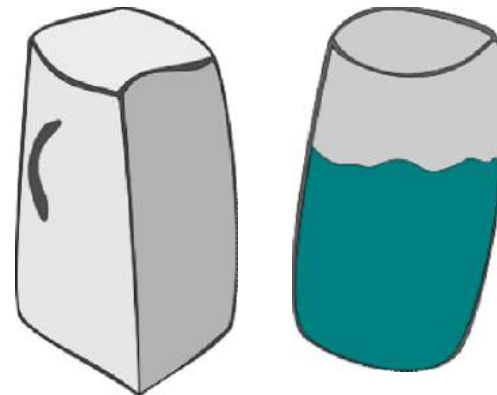


'Hmm... I want these clothes for today, I'll start the washing machine right now.'



'Guys, I'm going to use a lot of power for the next 30 minutes'

'That's fine, we can go to sleep for a while.'



Thank you

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- Submitted at ICT4s 2014 “*Using Participatory Data Analysis to Understand Social Constraints and Opportunities of Electricity Demand-Shifting*”, Bourgeois J., van der Linden, J., Kortuem, G., Price, B.
- Submitted at UbiComp 2014 “*Conversations with my washing machine: an in-the-wild study of Interactive Energy Demand-Shifting with self-generated energy*”, Bourgeois J., van der Linden, J., Kortuem, G., Price, B.