

Daily behaviour and energy saving strategies

Christine Boomsma, Sabine Pahl, Julie Goodhew & Amber Gardner

PSYCHOLOGY
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PLYMOUTH
UNIVERSITY



Energy consumption at certain times of the day leads to **peaks in energy demand in the grid**. Load shifting strategies and facilitating technologies (e.g. smart meters) have been proposed to avoid these peaks and ensure that demand better matches supply. But we don't know much about the public's views on peak energy behaviours and load shifting.

This study aimed to be a starting point to communicating and achieving load shifting in the public. The results are presented of a survey filled in by members of the public ($N = 283$, 46.3% female, mean age = 40) in Plymouth, UK, using a kiosk placed in the city council reception (see image on the right).

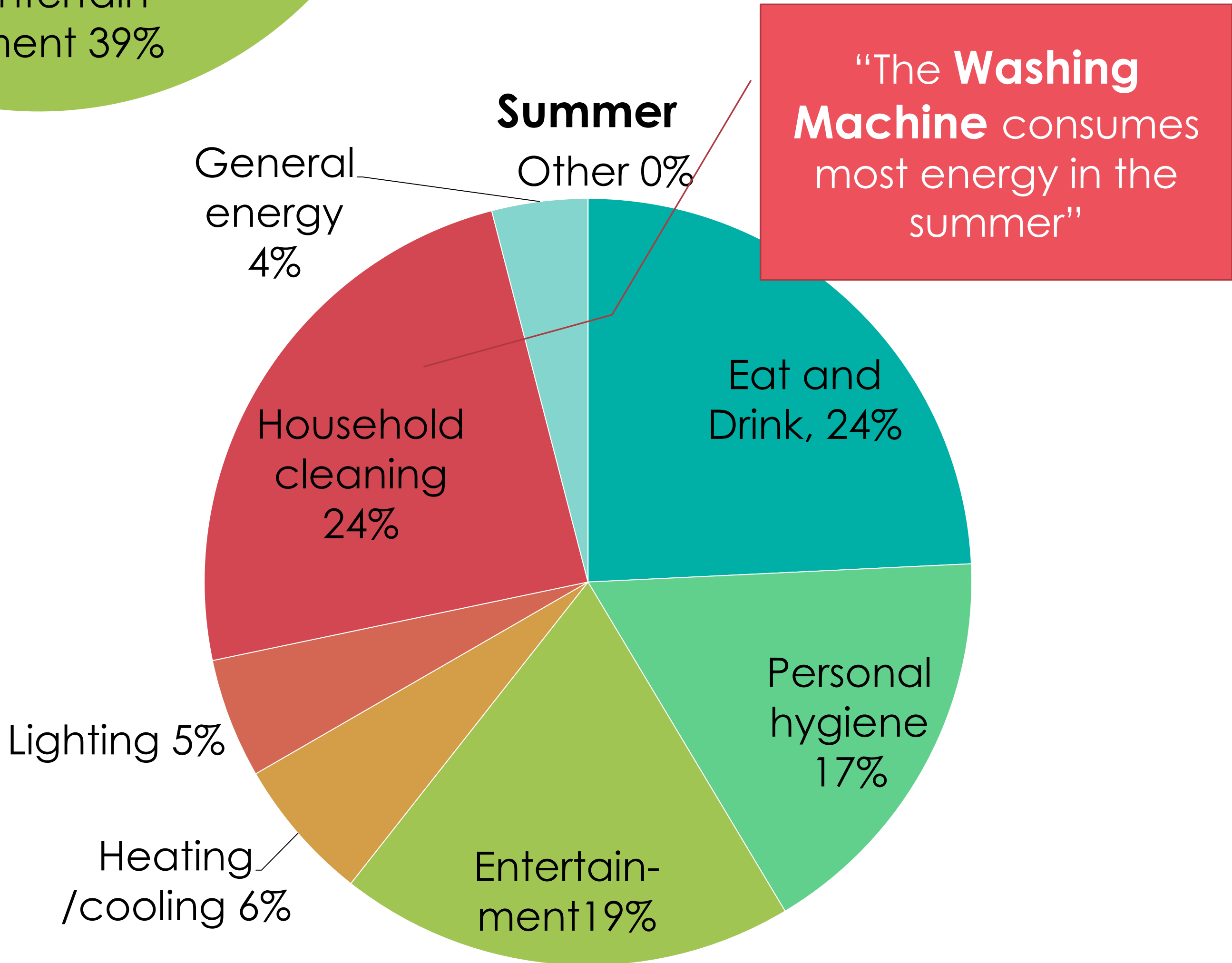
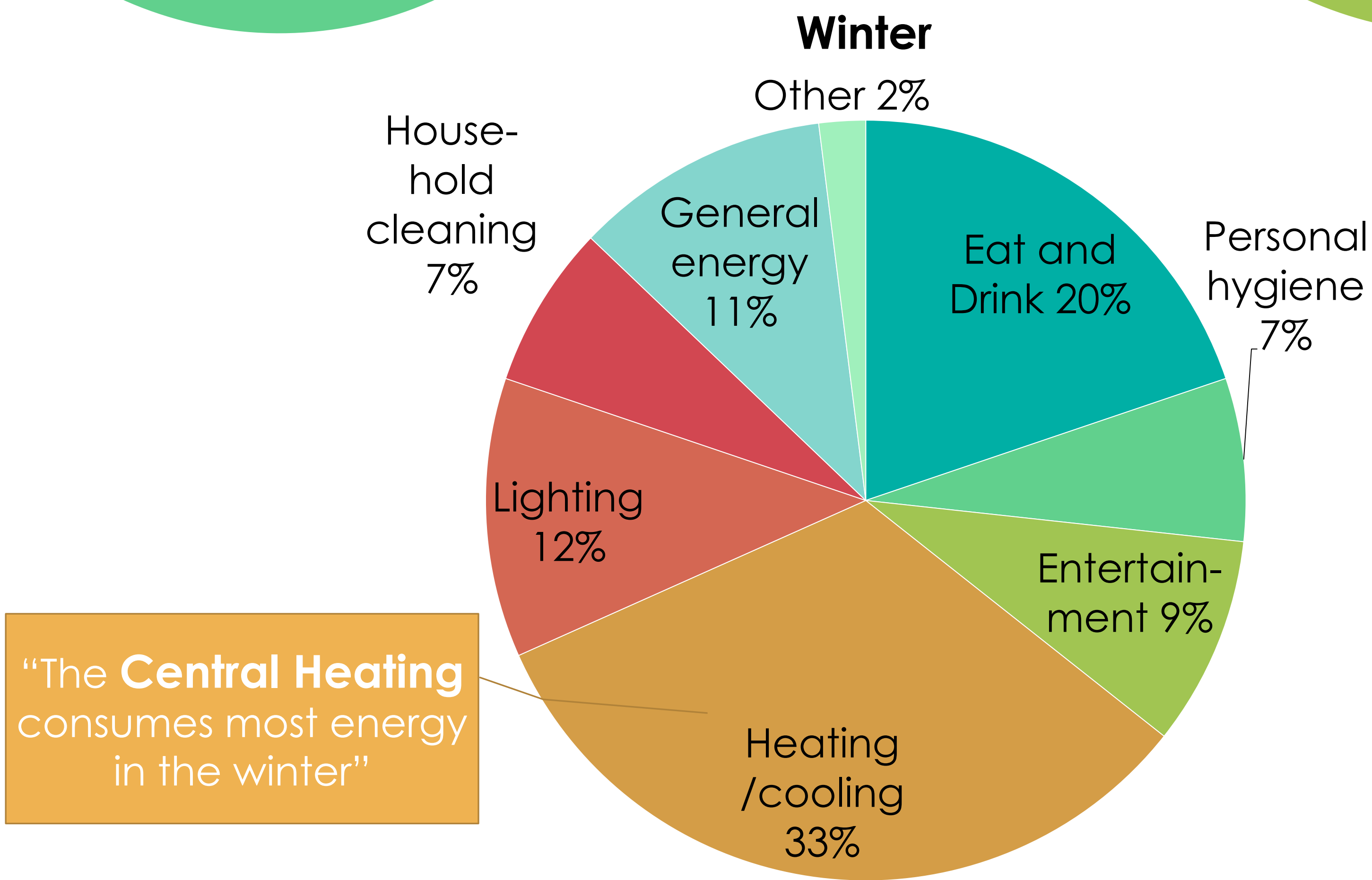
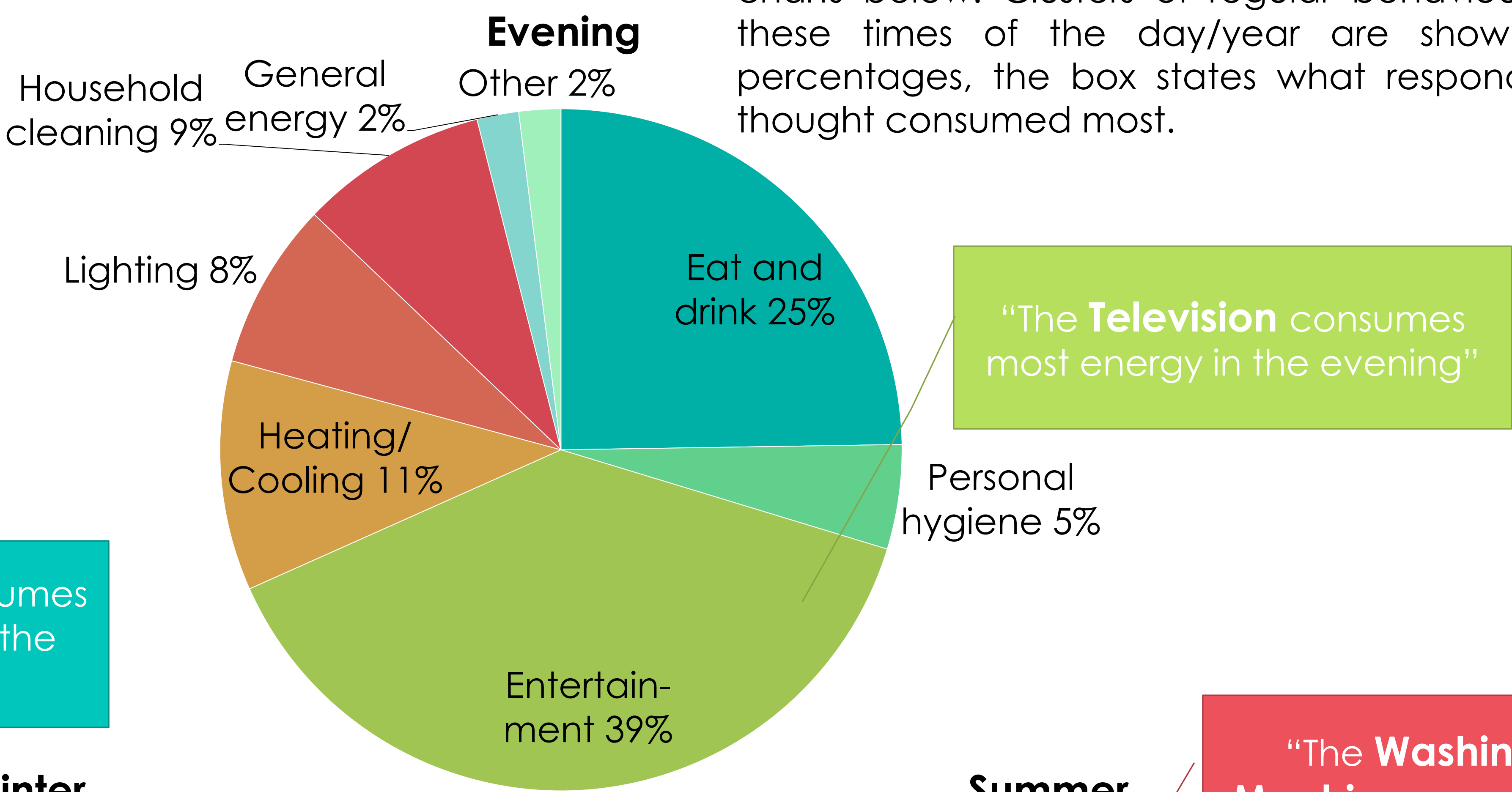
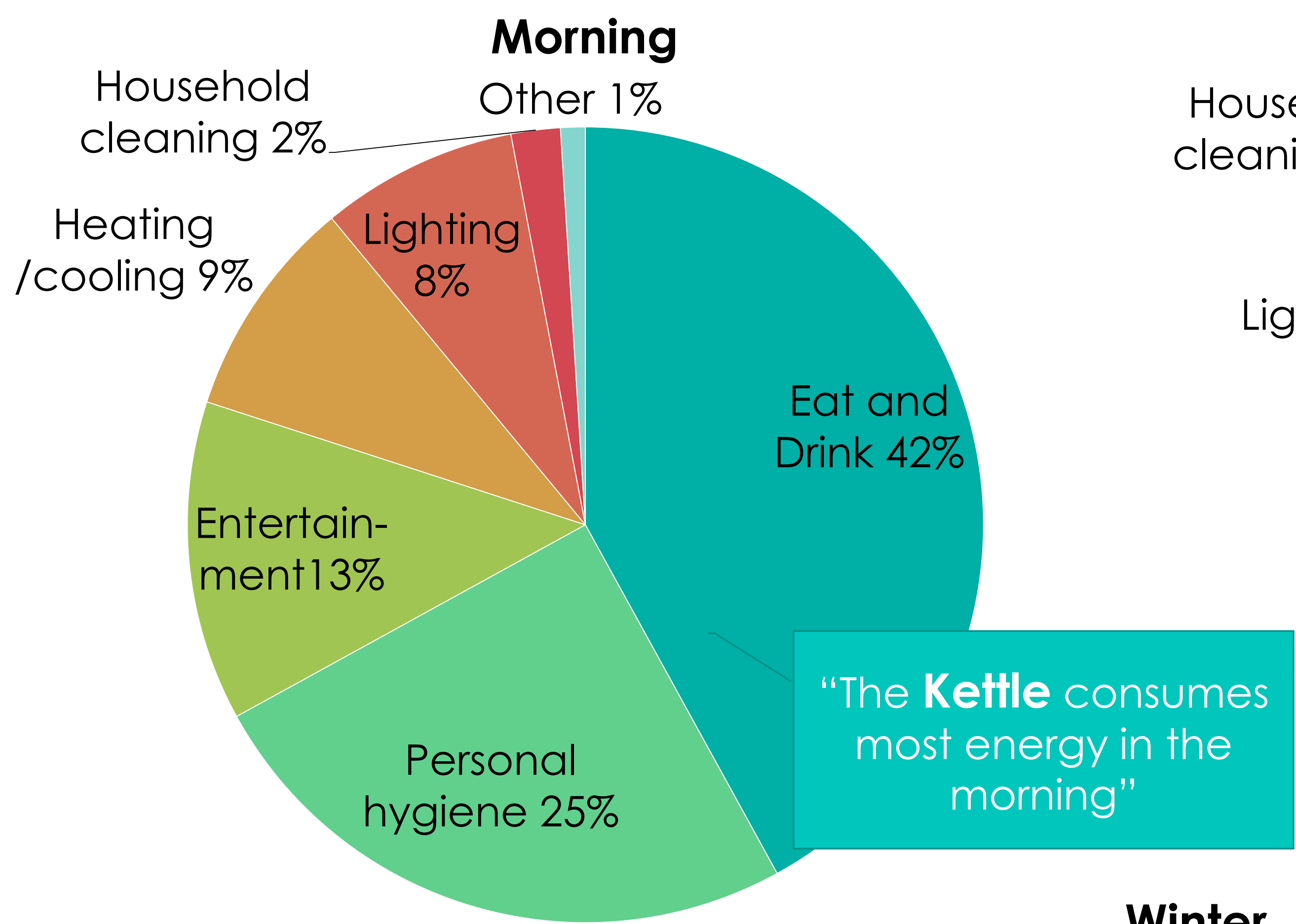


Public awareness of load shifting was low. In our survey **44%** had never heard of load shifting to reduce peak time demand. Of those who had heard about it **66%** indicated knowing almost nothing, or very little, about it.

To design effective communications we need to understand peak behaviours better, including perceptions of energy demand of these behaviours.

What do people do at peak times and what perceptions of energy use are related to these behaviours?

One out of seven ranking questions was randomly allocated to each respondent, the results to four of these are presented in the pie charts below. Clusters of regular behaviours at these times of the day/year are shown as percentages, the box states what respondents thought consumed most.



What do people already do to save energy and is this in line with their energy use perceptions?

Top 5: Actions that are perceived to consume most energy in the household	Top 5: Energy saving strategies reported
1. Using central heating	1. Lighting (e.g. switching off/energy saving light bulbs)
2. Using the kettle	2. Heating (e.g. turning down thermostat)
3. Watching television	3. Water (e.g. shorter showers) & General turning off
4. Using the washing machine	4. Structural or building related (e.g. double glazing)
5. Having a shower	5. Electrical appliances (e.g. not leaving on standby)

Contact:
christine.boomsma
@plymouth.ac.uk

Understanding people's daily behaviour and perceptions of energy demand could help in the design of communication strategies to encourage load shifting that fit with the public's current conceptualisation of energy demand: it enables us to connect with **what people are already doing and what they already know**.