



ISR
University of Coimbra

Intelligent Energy  Europe

Workshop
"Energy Efficiency in Buildings – Improving the Database"
Berlin, 29 May 2008

**Results of the survey on electricity
consumption in German households**

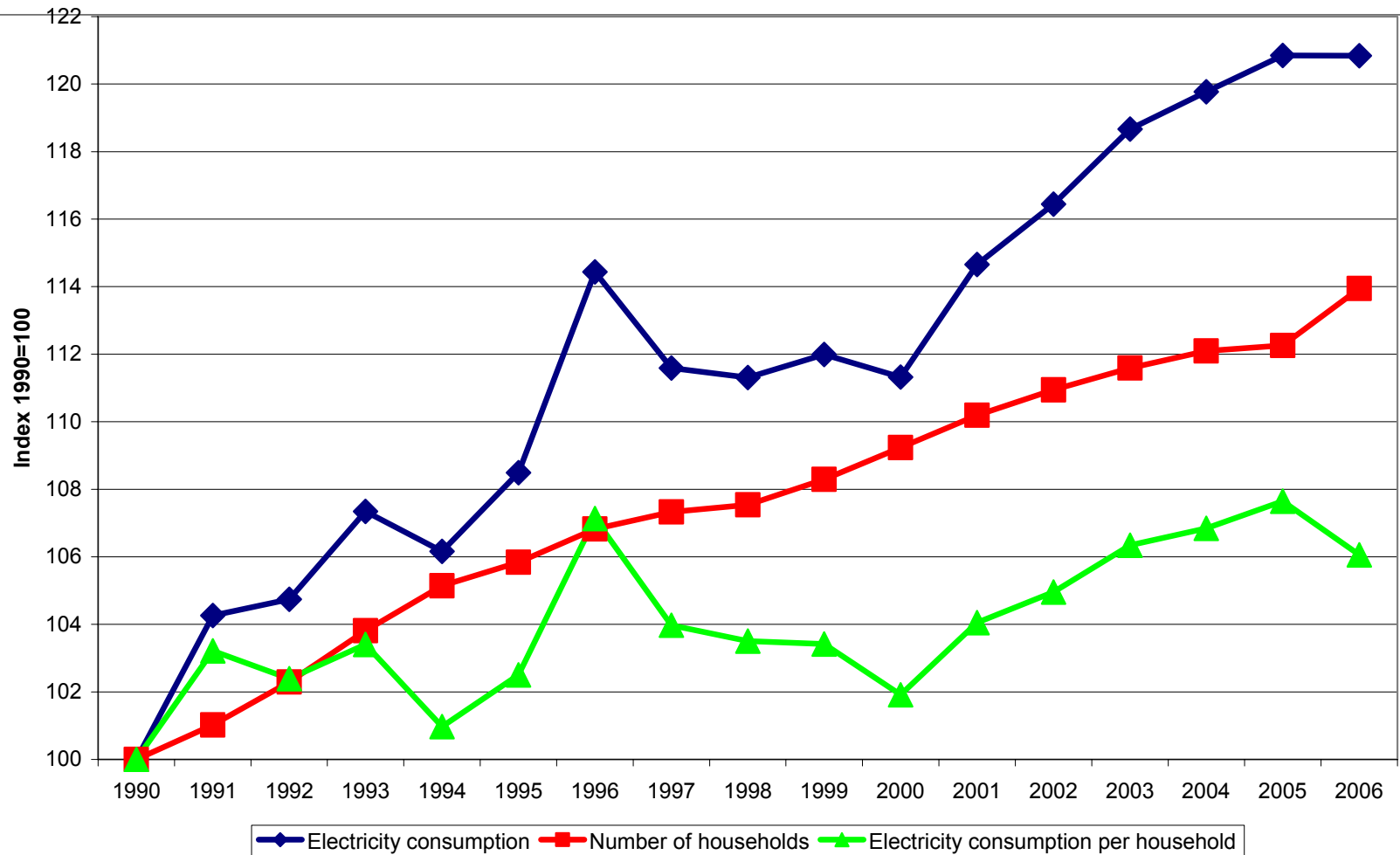
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Electricity consumption in German households 1990-2006



Sources: AGEB; Statistical Office; Odyssee database

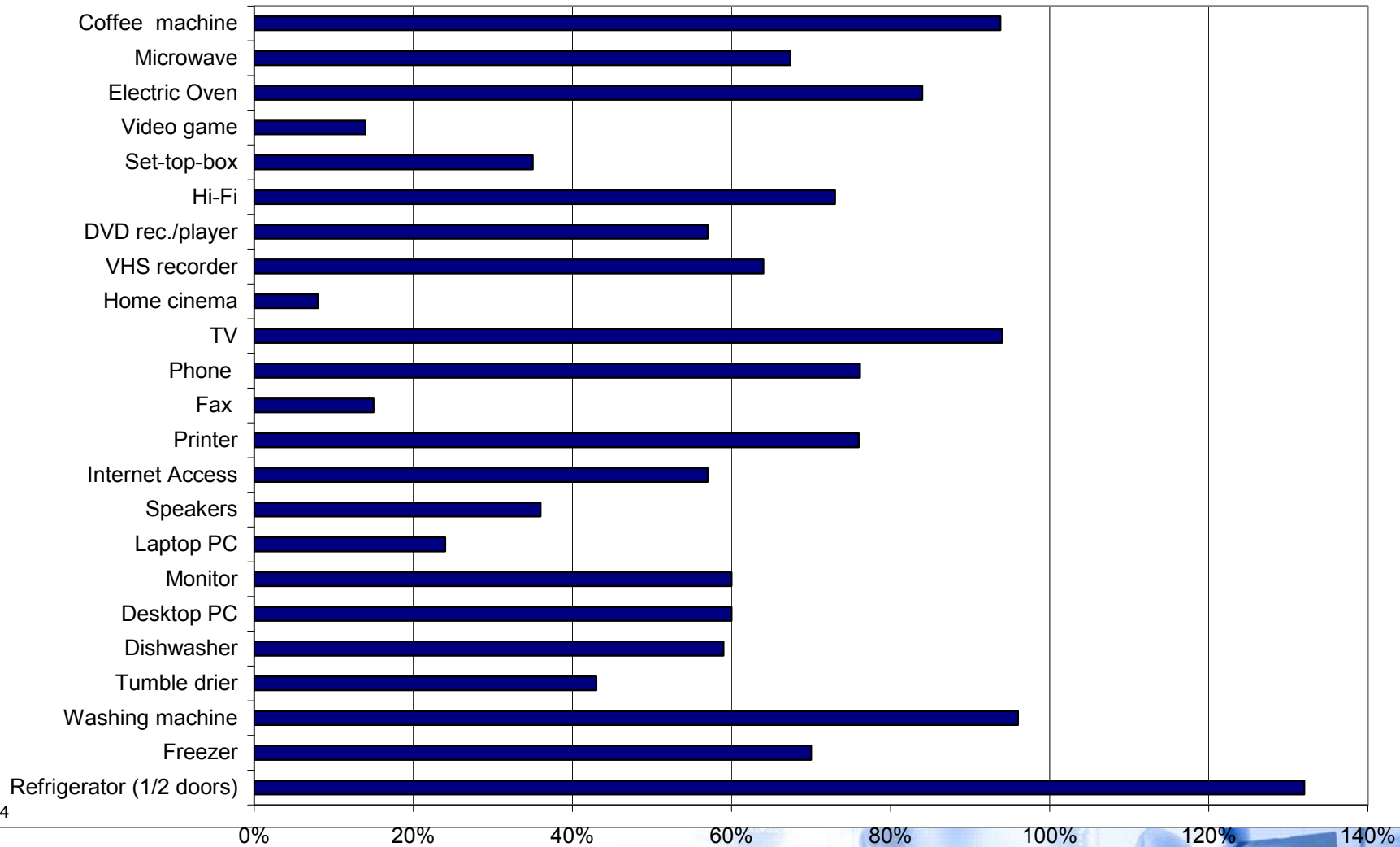


Methodology of the REMODECE survey in Germany

- Sample selection:** Representative panel (**GfK household panel**)
- Sample size:** 545 households (response rate: 78 %)
- Date of survey:** November/December 2006
- Type of survey:** Written (mail survey)
- Questionnaire:** Homogenous questionnaire from the REMODECE project
- Quality of answers:** In general very good, i.e. high number of valid answers; only a few problematic questions (mainly questions on electricity bill and on the efficiency class of the appliances)



Ownership rates of the main electrical appliances in German households



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Sources: REMODECE survey; GfK/ZVEI; Fraunhofer ISI et al. 2005

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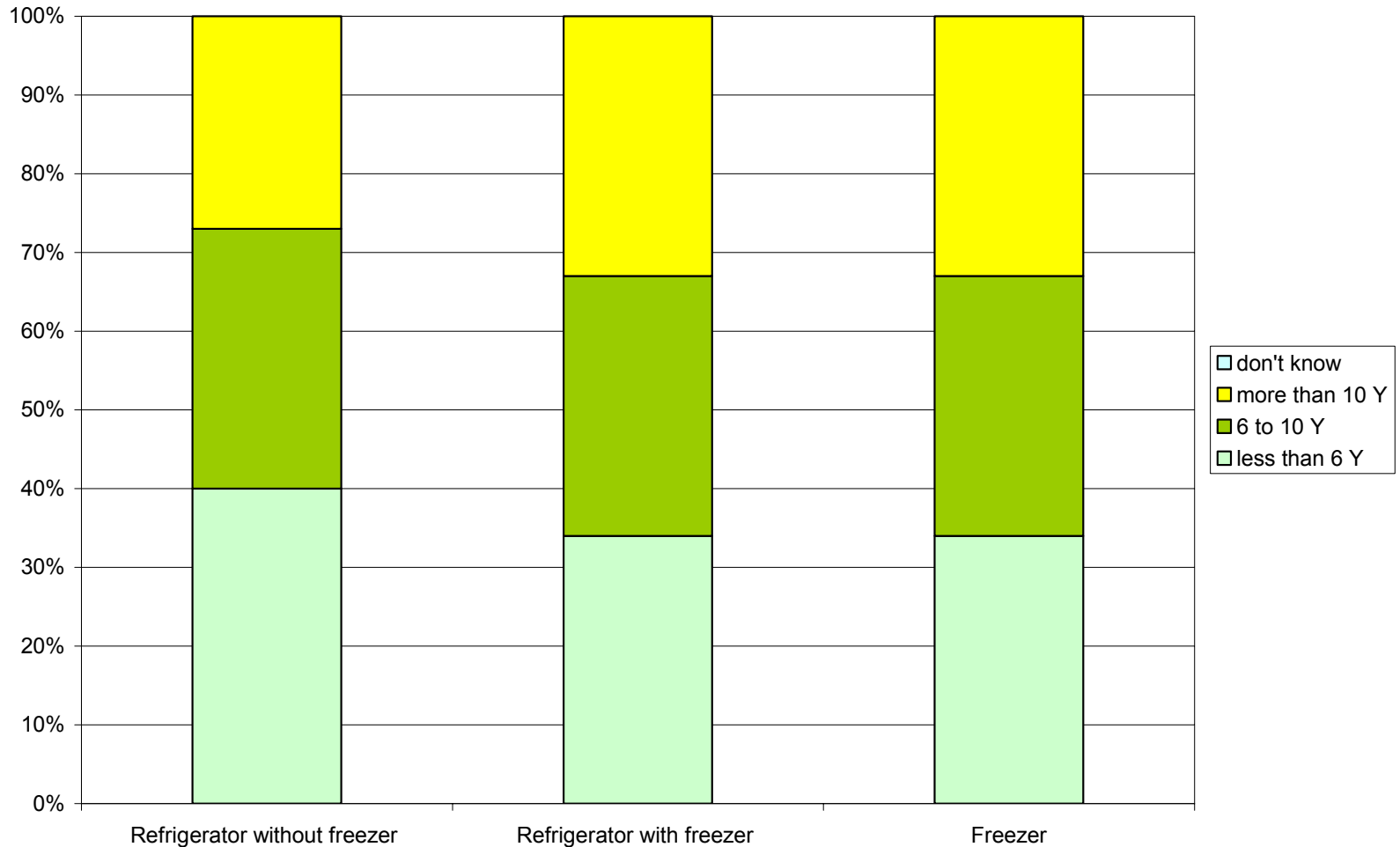
Average electricity consumption of households in the sample

Average electricity consumption	per household	per person
in EURO	620	275
in kWh	3474 (2001: 3340)	1541

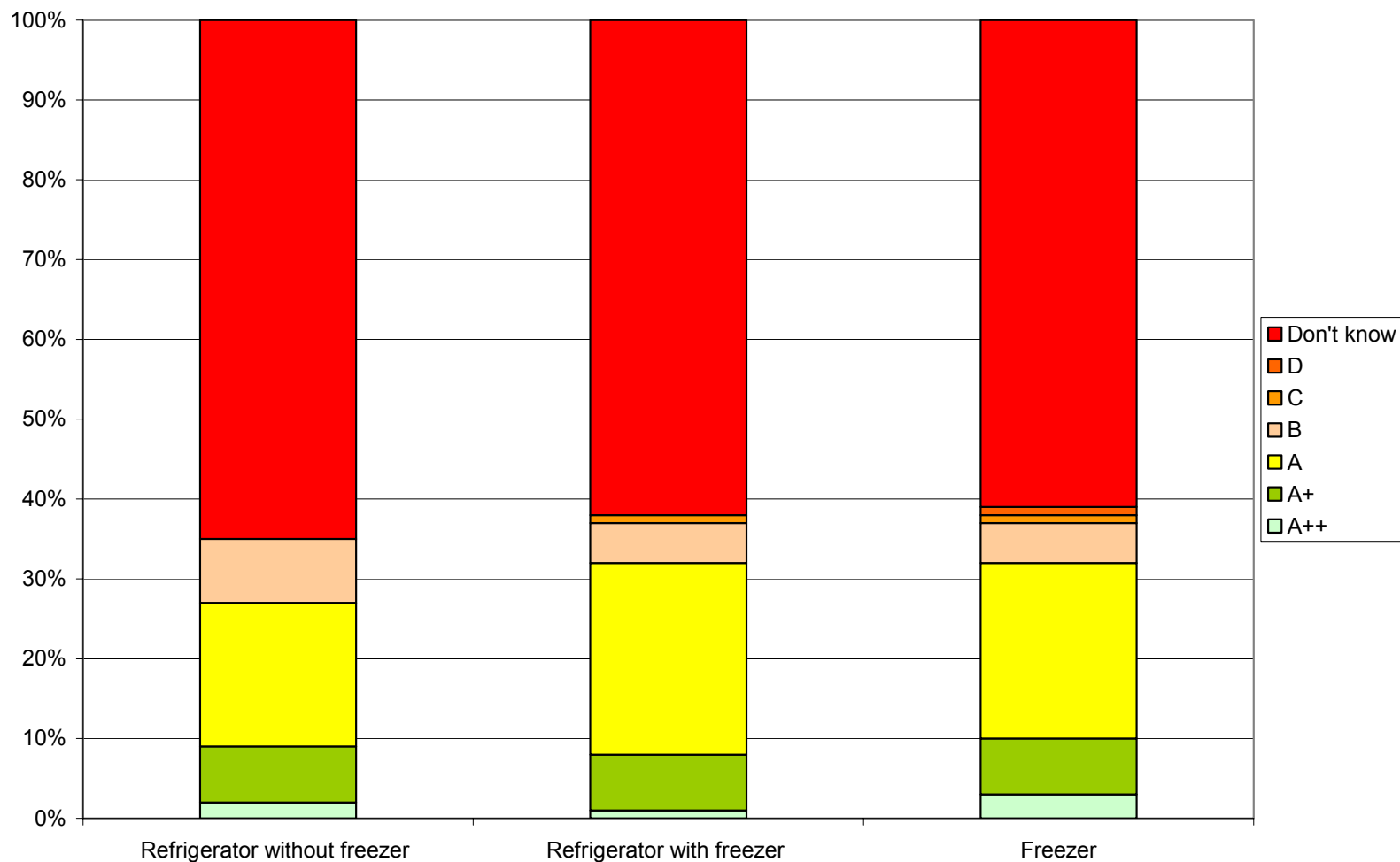
Statistical value (2006):
3562 kWh/hh



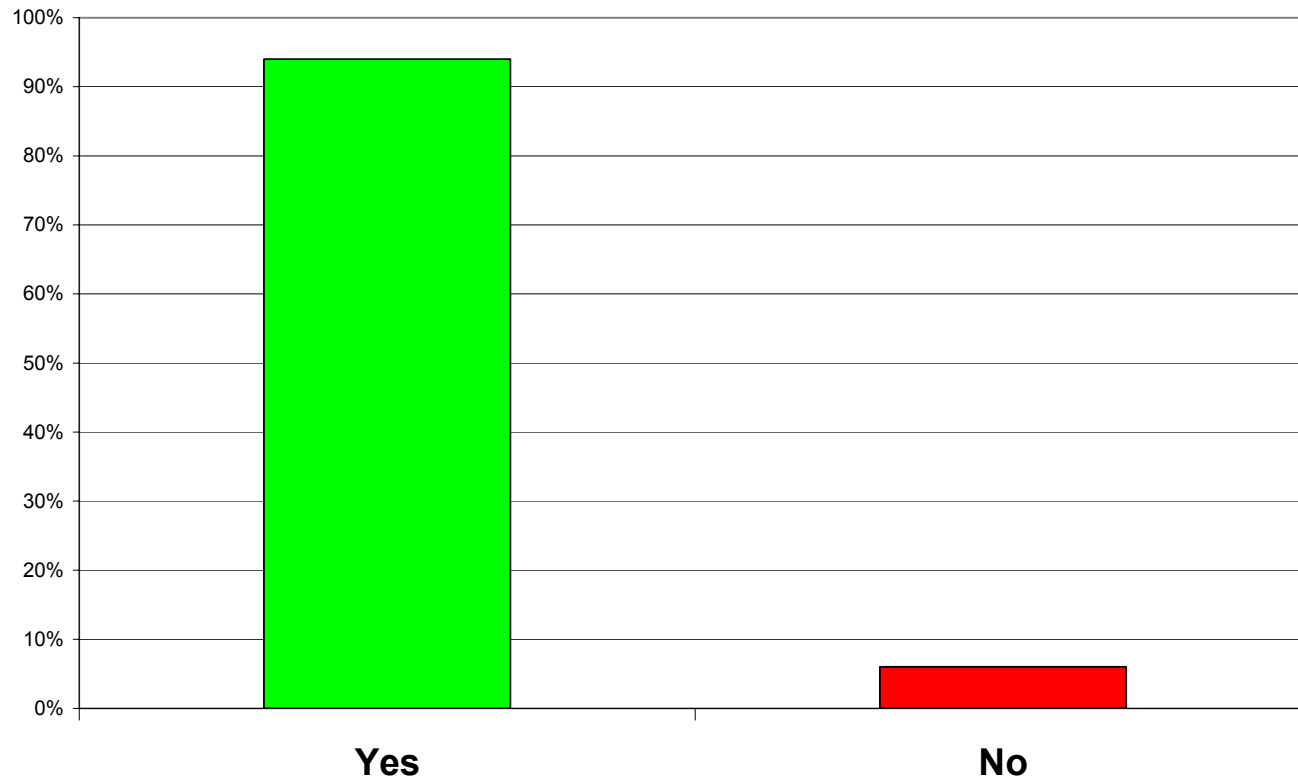
Age structure of cooling appliances



Efficiency class of cooling appliances



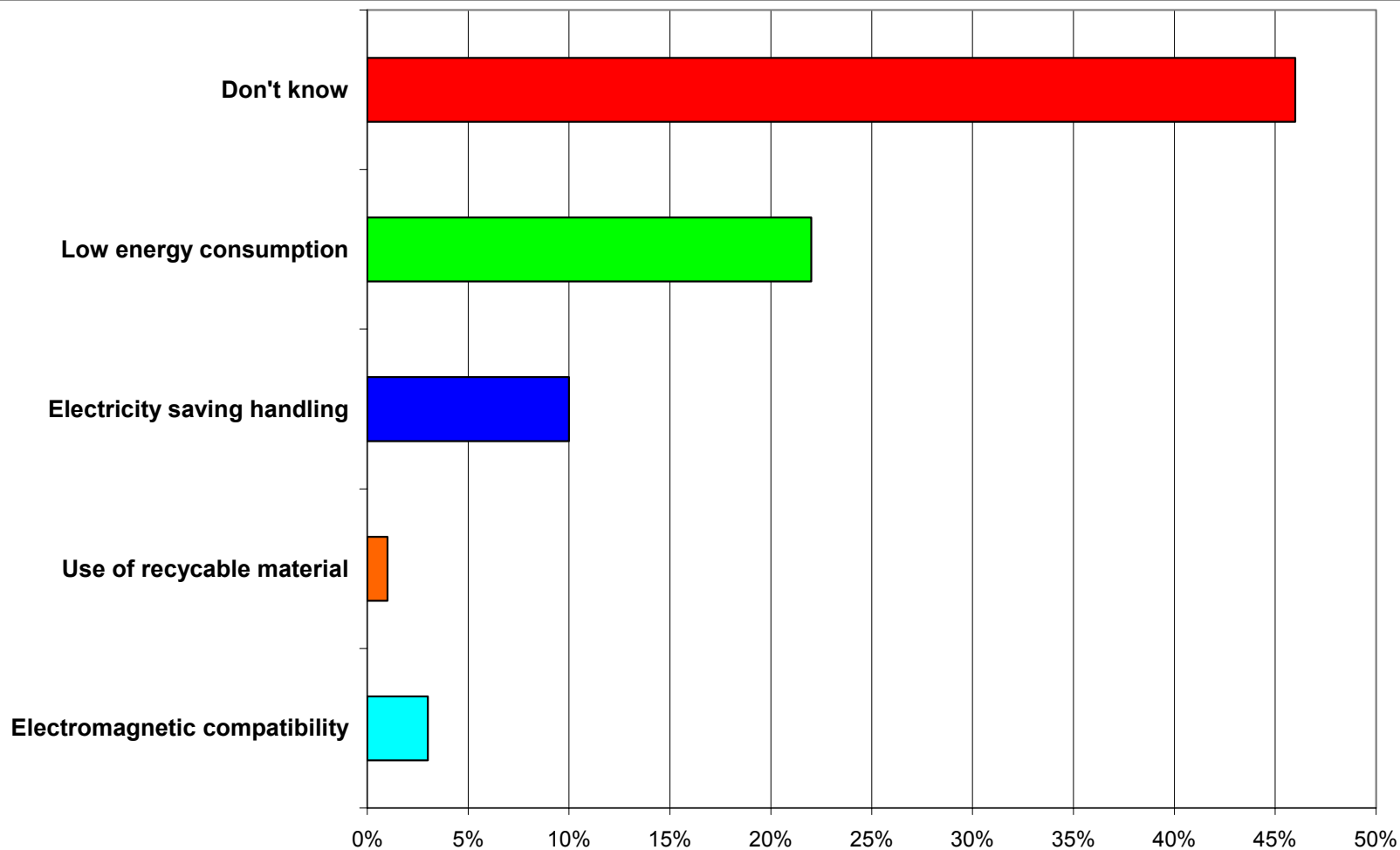
Check of the EU Energy Label when purchasing equipment:



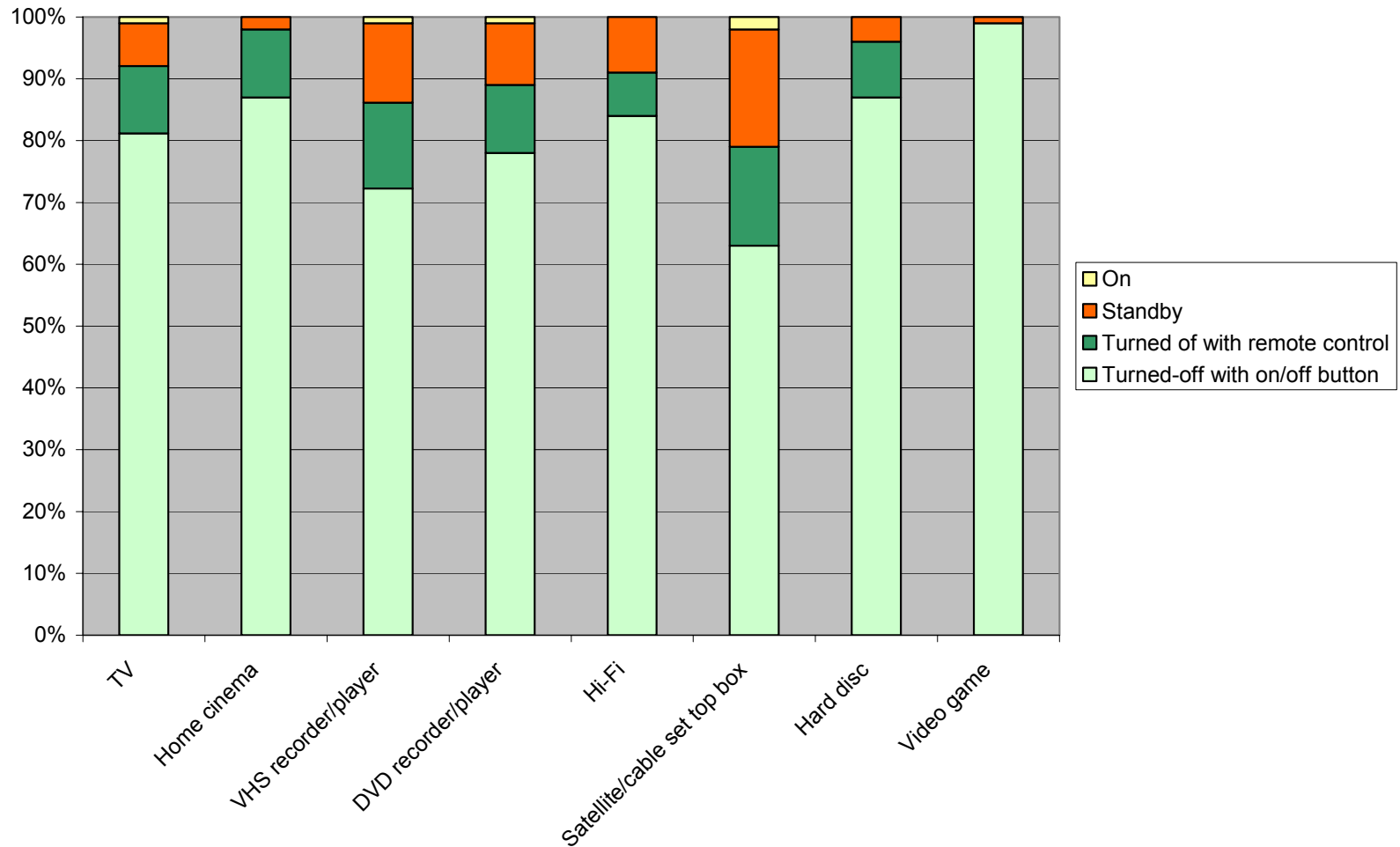
Very high importance of the EU Energy Efficiency Label when purchasing electrical appliances in Germany.



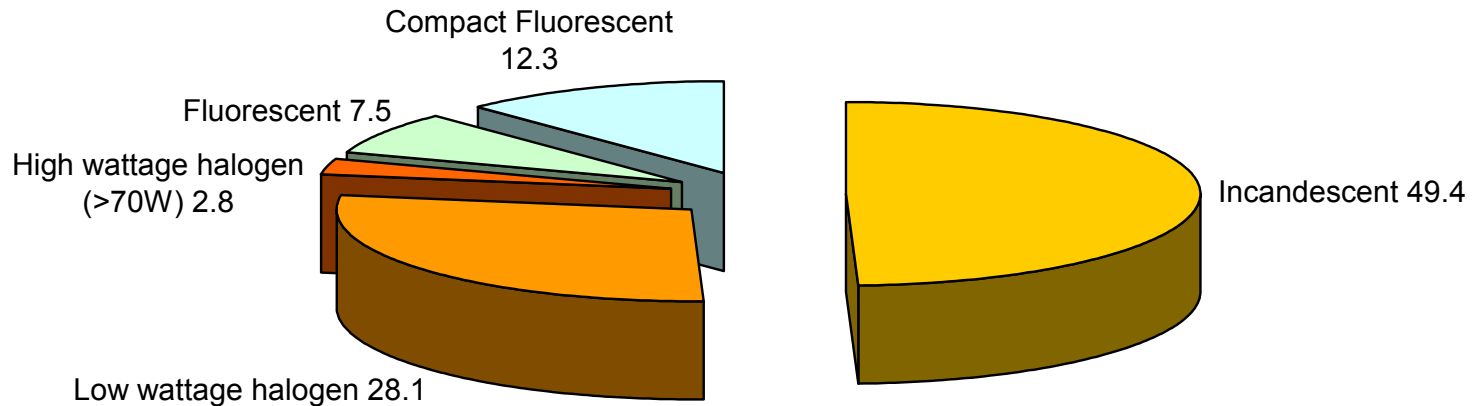
But poor knowledge on Energy Star label



Home entertainment: state when the device is not used



Share of household lamps by type



Average number of lamps per household: 25

Number of compact fluorescent lamps: 3 (share of 12.3 %)

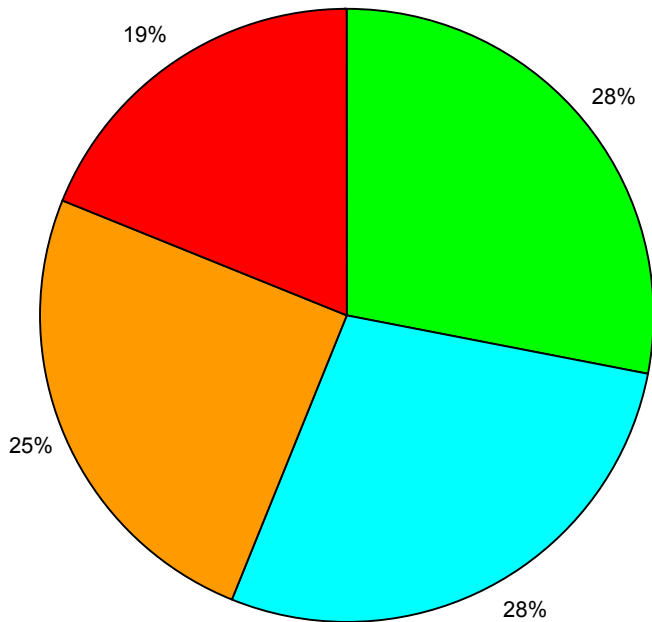
Survey in 2001:

25 lamps per household of which 3.6 (or 14 %) were CFLs.

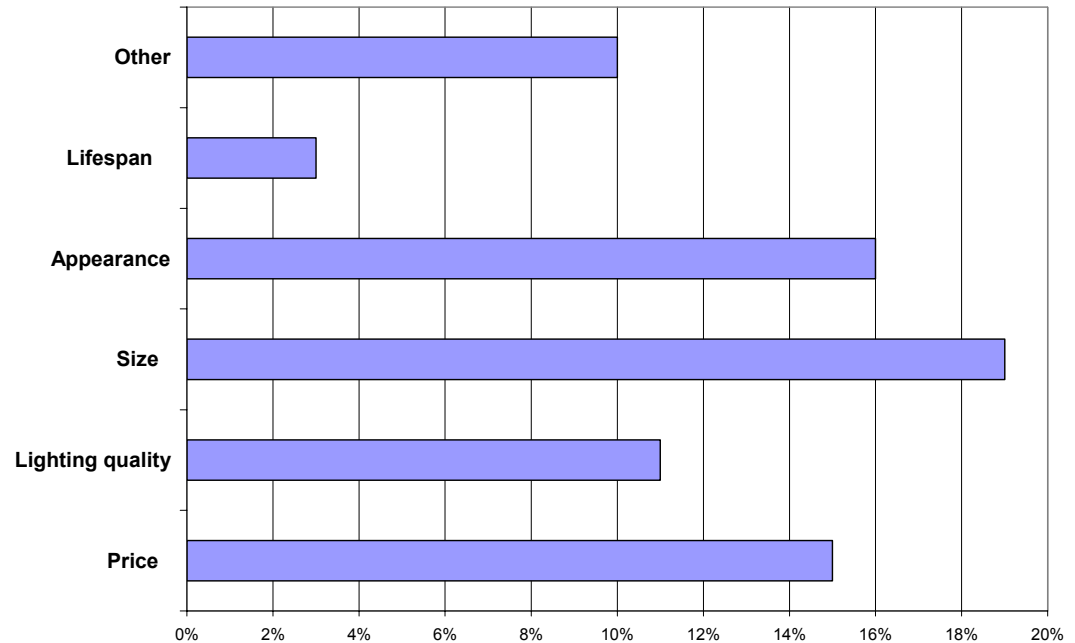


Attitude of German households towards energy saving lamps

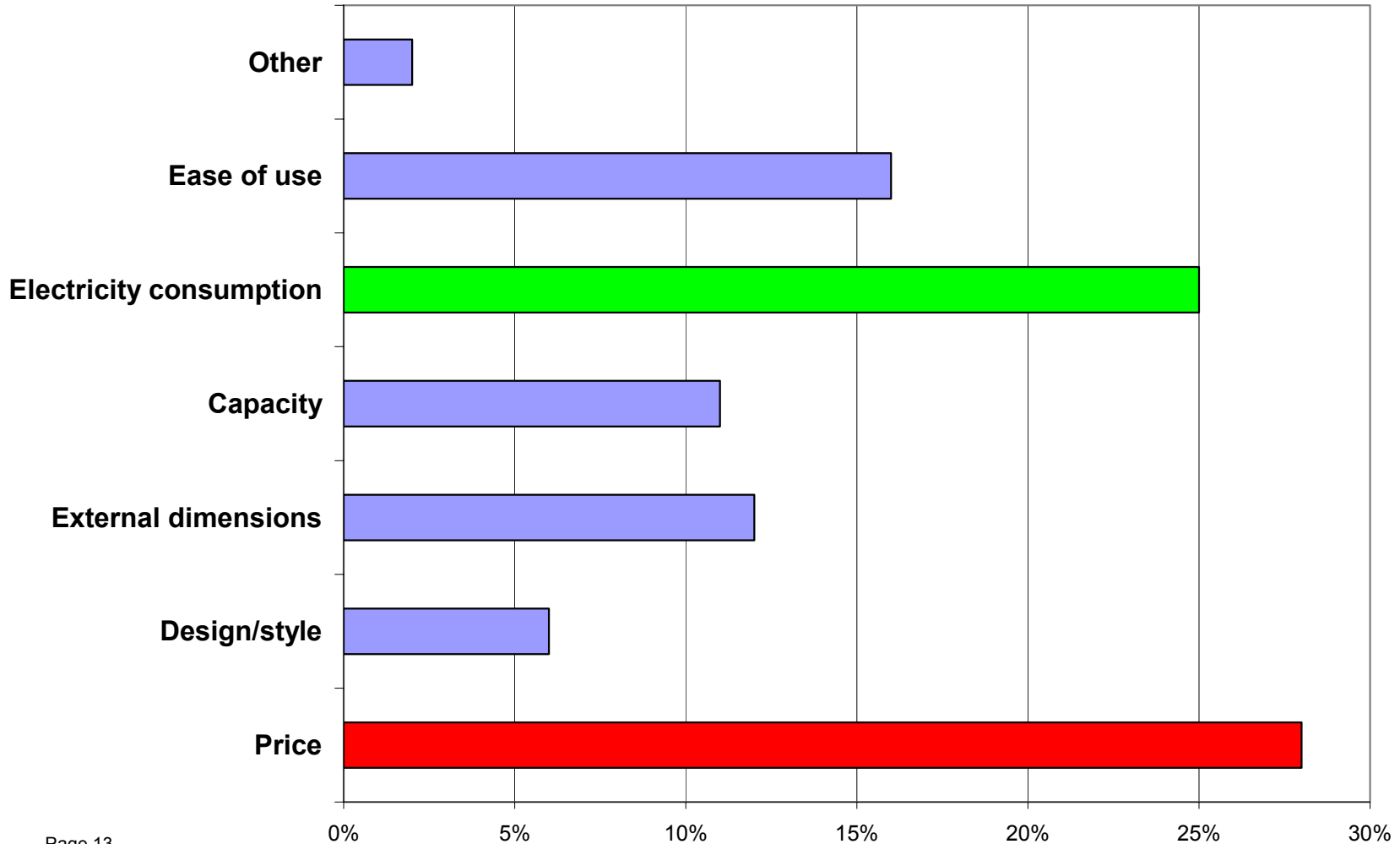
Replacement of damaged lamps by energy saving lamps:



Reasons why CFLs are not used:



Criteria for the purchase of new domestic appliances



Conclusions

- The ownership rates for most of the electrical household appliances and office equipment are relatively high in Germany. The results of the survey match well with the data from other surveys, studies or statistics. More difficult to grasp is multiple ownership (esp. for refrigerators, TVs and PCs).
- Many questions in the REMODECE survey concern the behaviour and attitude of households towards energy efficiency. On the whole the results show that the German households are relatively energy-conscious, especially with regard to white appliances and standby.
- But the survey also gives some evidence for information deficits and fields for further improvements:
 - **Office equipment:** low knowledge on the Energy Star label and not important for purchase decision of office equipment.
 - **Lighting:** low share of CFLs and many reservations towards energy saving lamps.
 - **Dishwashers:** relatively high washing temperature (44 % use 65 °).



Contact

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More information on the REMODECE project: www.isr.uc.pt/~remodece

