



ISR
University of Coimbra

Intelligent Energy  Europe

Workshop

"Energy Efficiency in Buildings – Improving the Database"

Berlin, 29 May 2008

Results of the metering of electricity consumption in 100 households in Germany

Annette Roser, Jürgen Reichert

BSR Sustainability GmbH, Karlsruhe, Germany



Fraunhofer



Institute
Systems and
Innovation Research



BSR Sustainability GmbH

Büro für Sozialverträgliche Ressourcennutzung

Fraunhofer

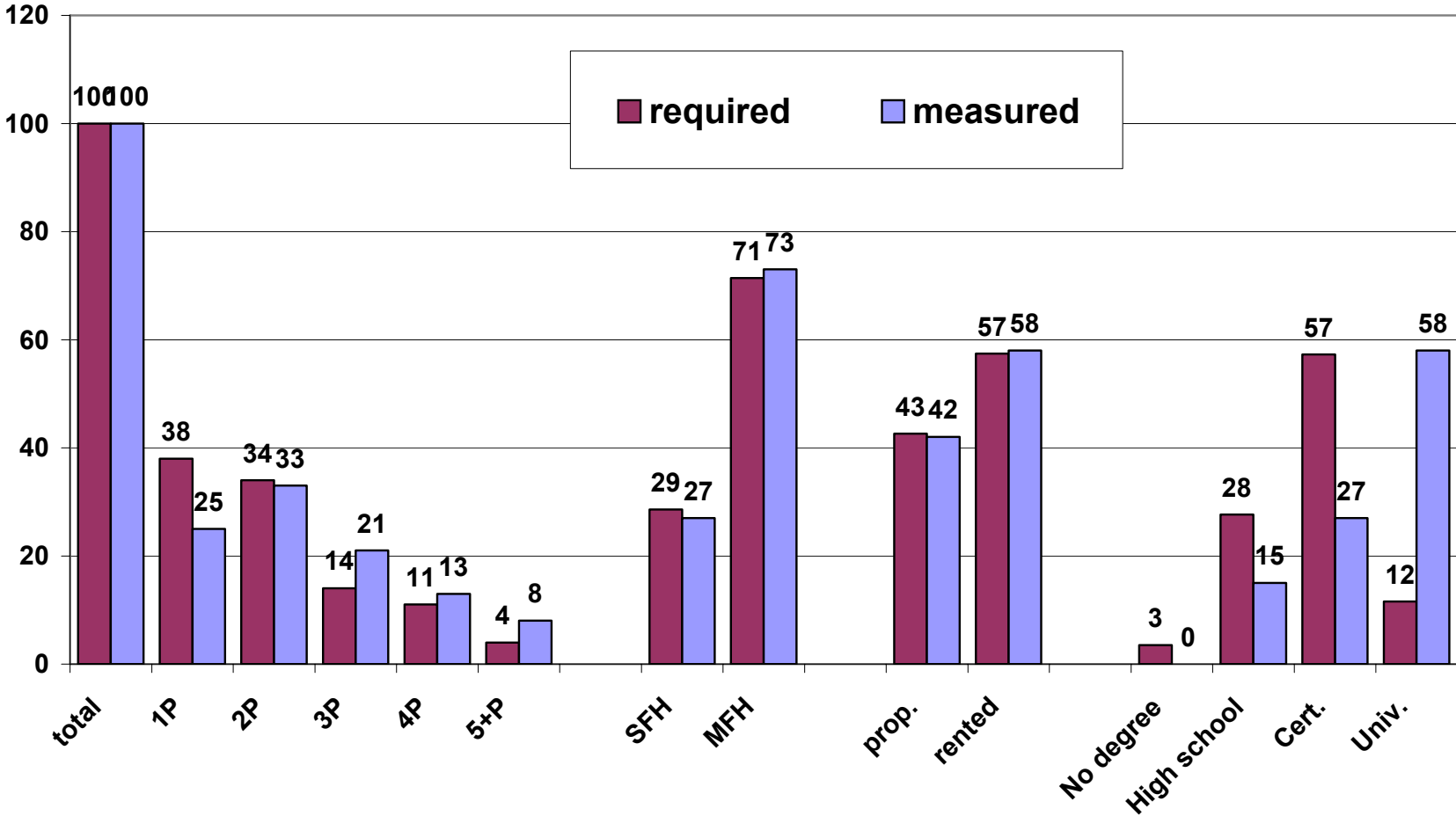
Measurements in Germany

- Beginning and end of measurements: January 2007 to March 2008
- Total number of households: 100
- Results:
 - Socio-economic parameters
 - Electricity consumption per household and day
 - Electricity consumption per person and day
 - Stand-by consumption per year
 - Share of appliances
 - Electricity consumption for TV
 - Electricity consumption for computers
 - Electricity consumption for cooling
 - Electricity consumption for lighting

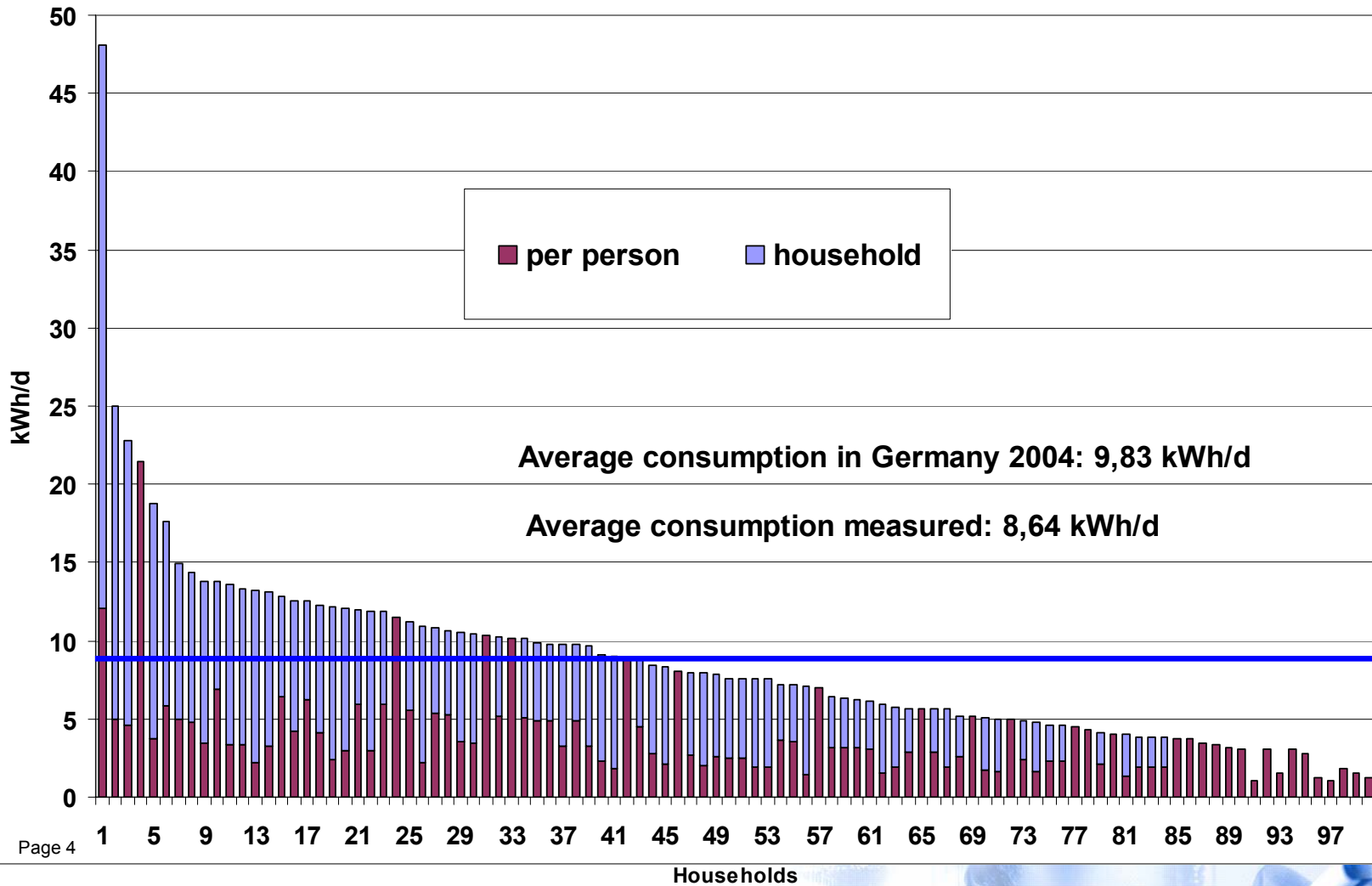
Page 2



Socio-economic parameters of the measured households



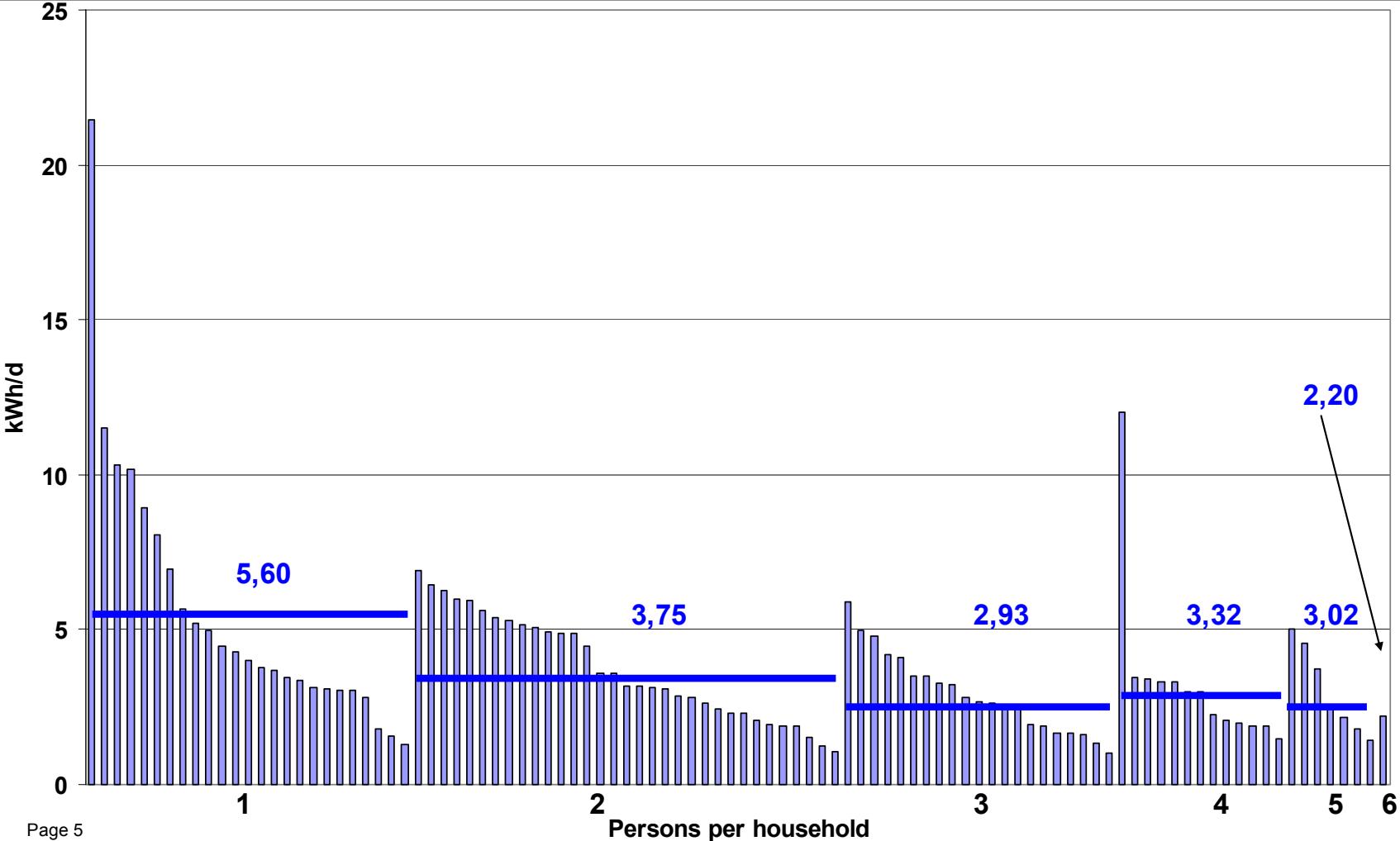
Electricity consumption of the measured household per day



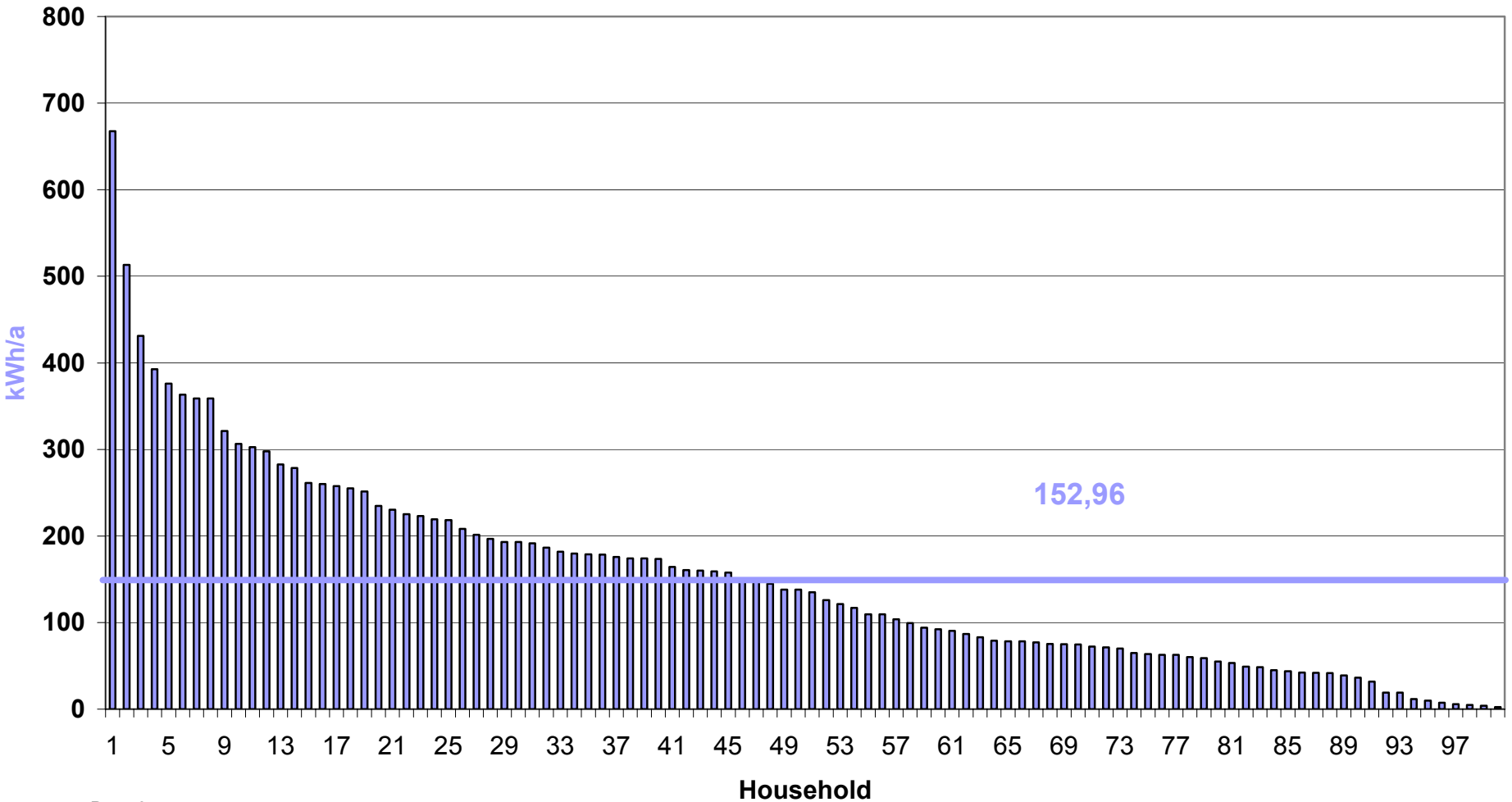
Page 4



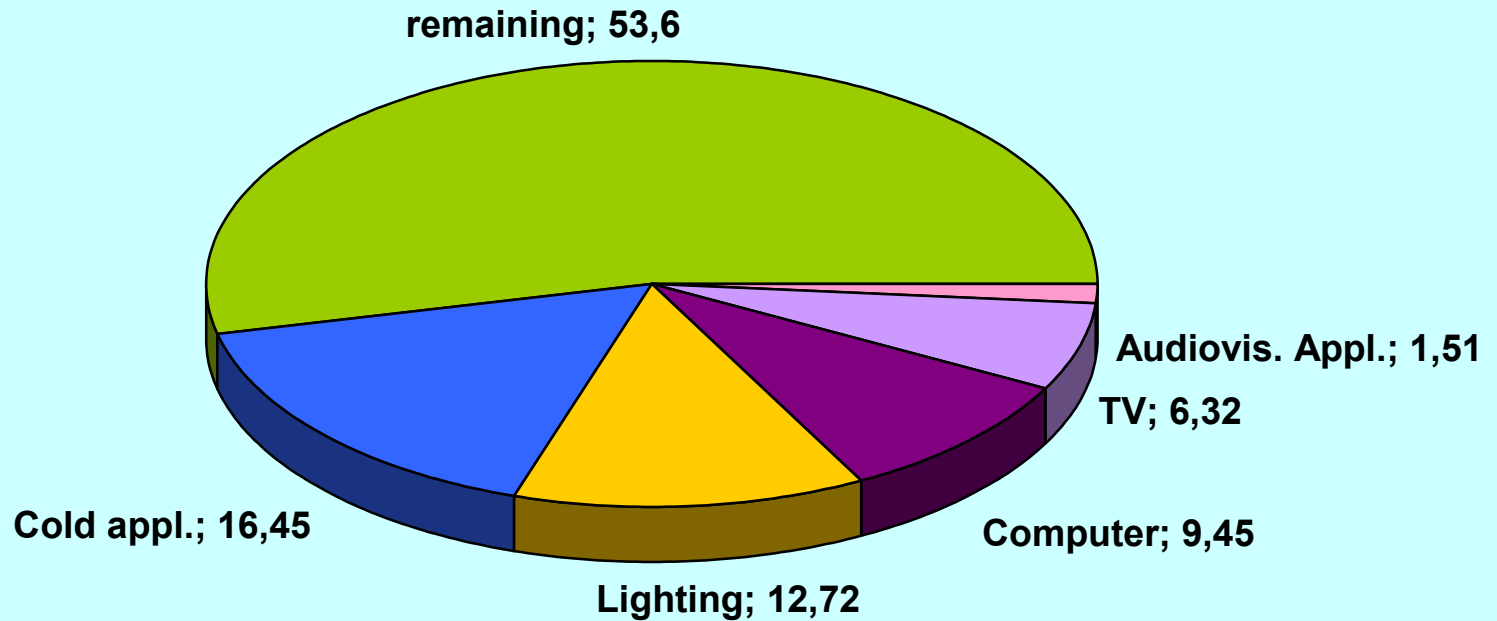
Consumption per person



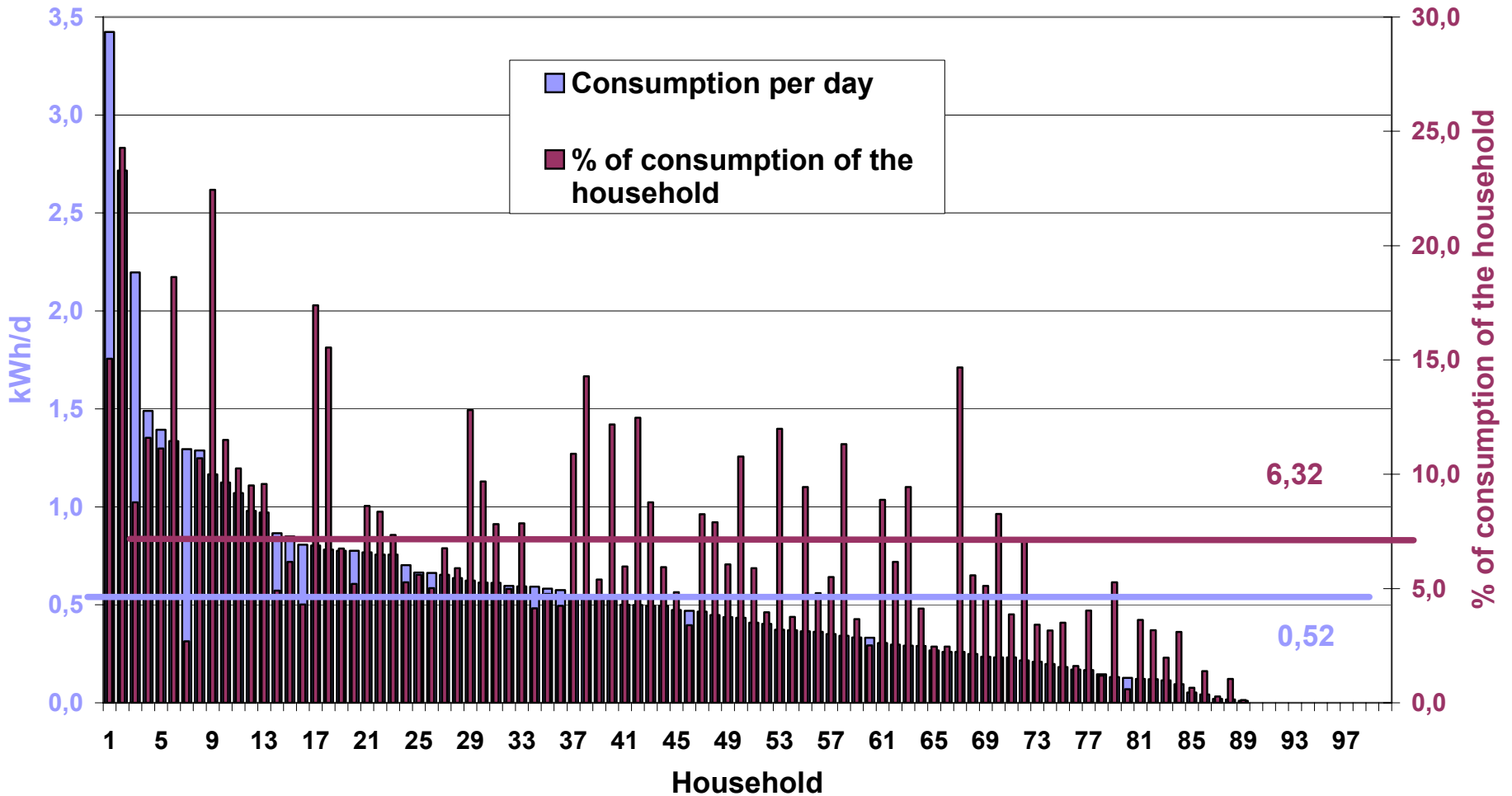
Standby-consumption per year



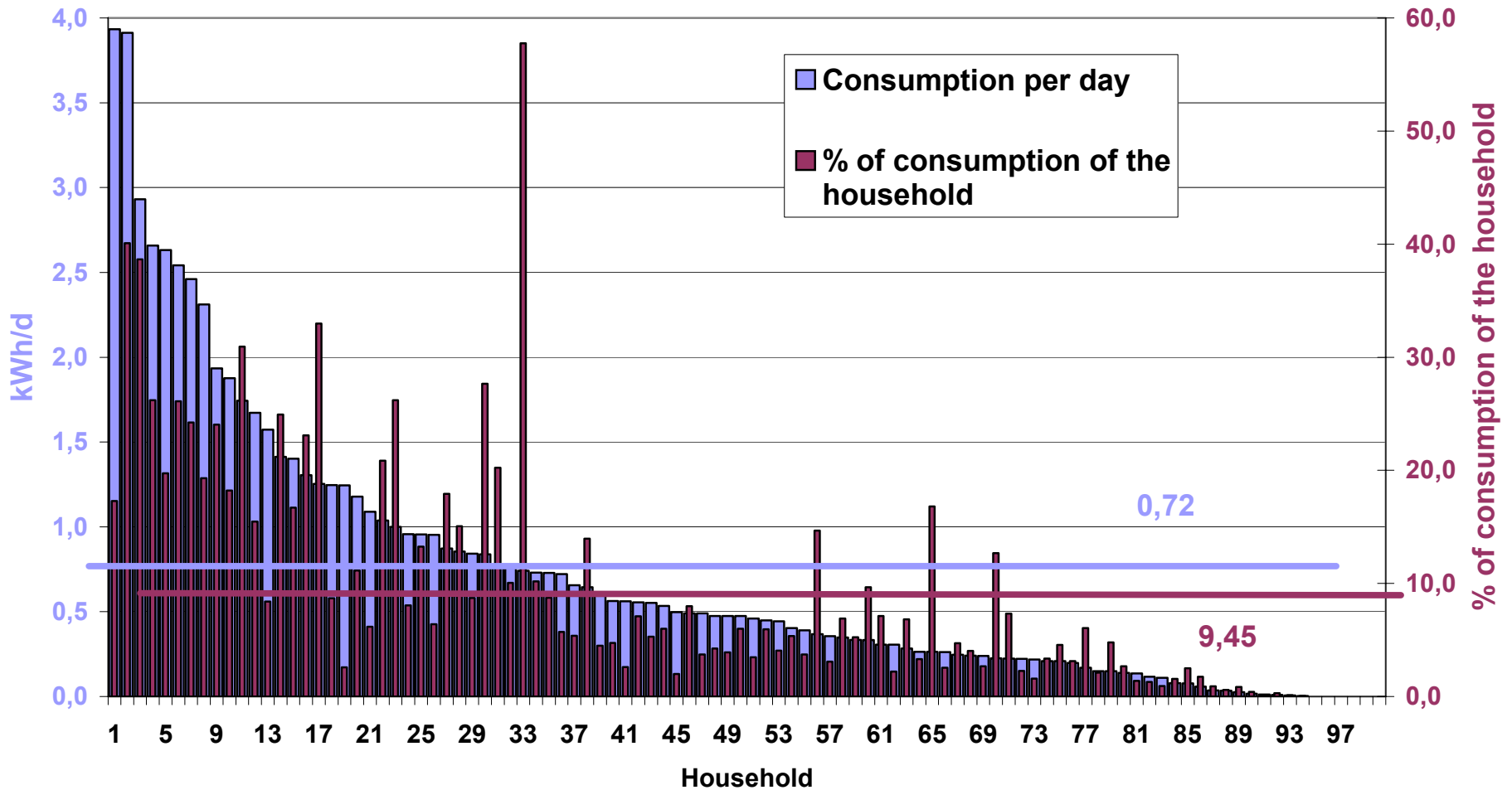
Shares of some appliances in the electricity consumption of the 100 households



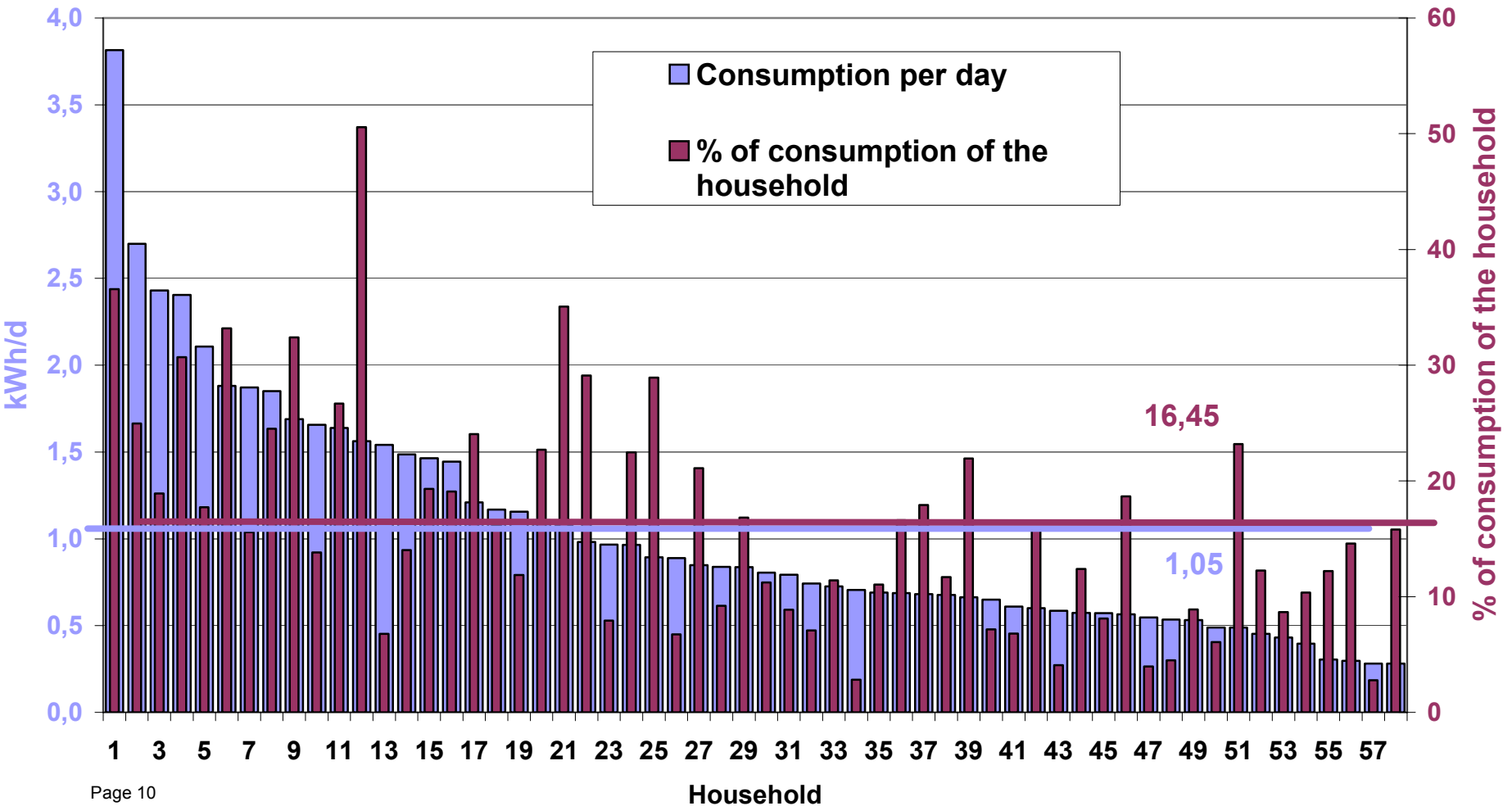
Consumption of households for TV



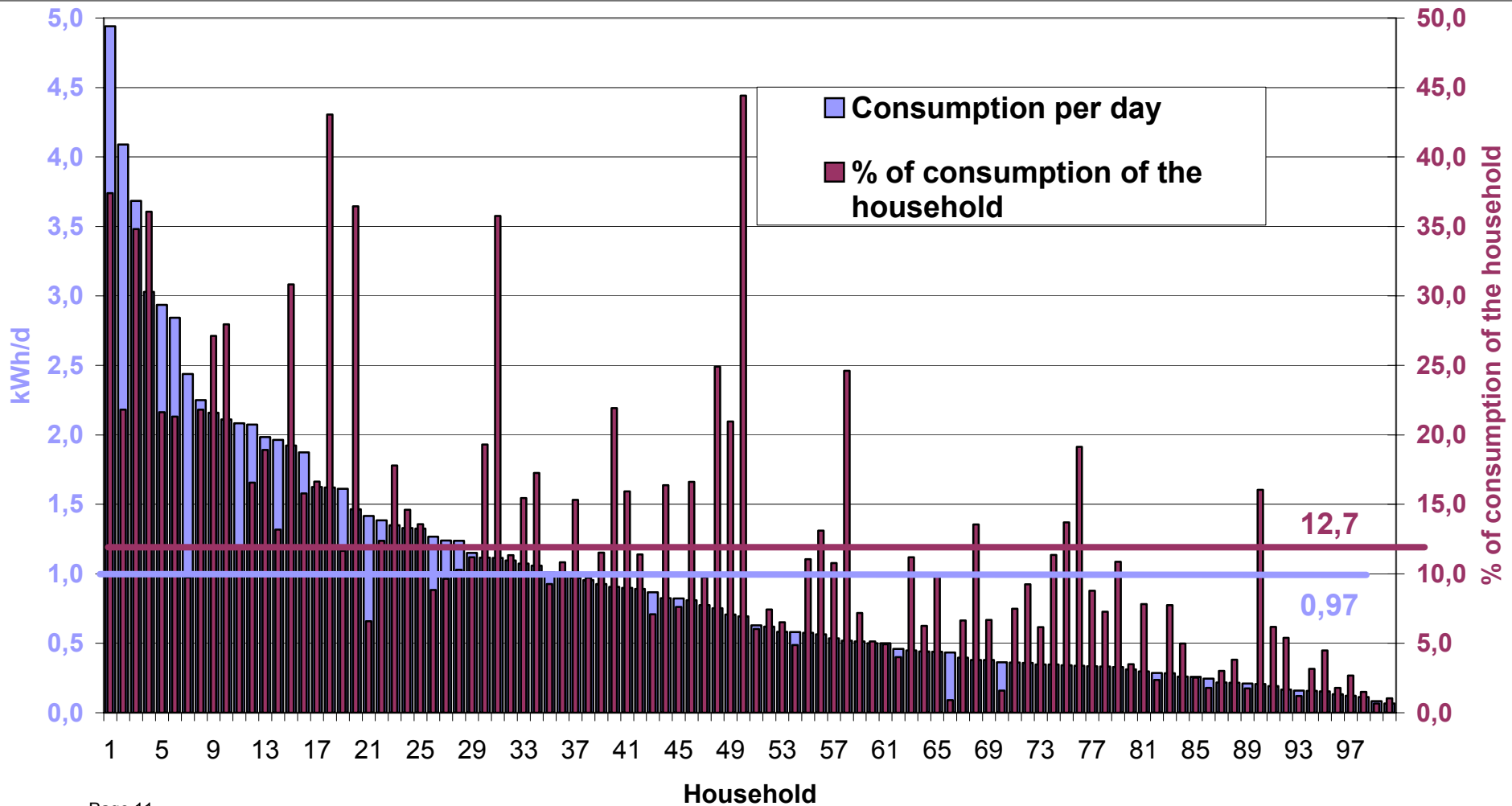
Consumption of households for Computers



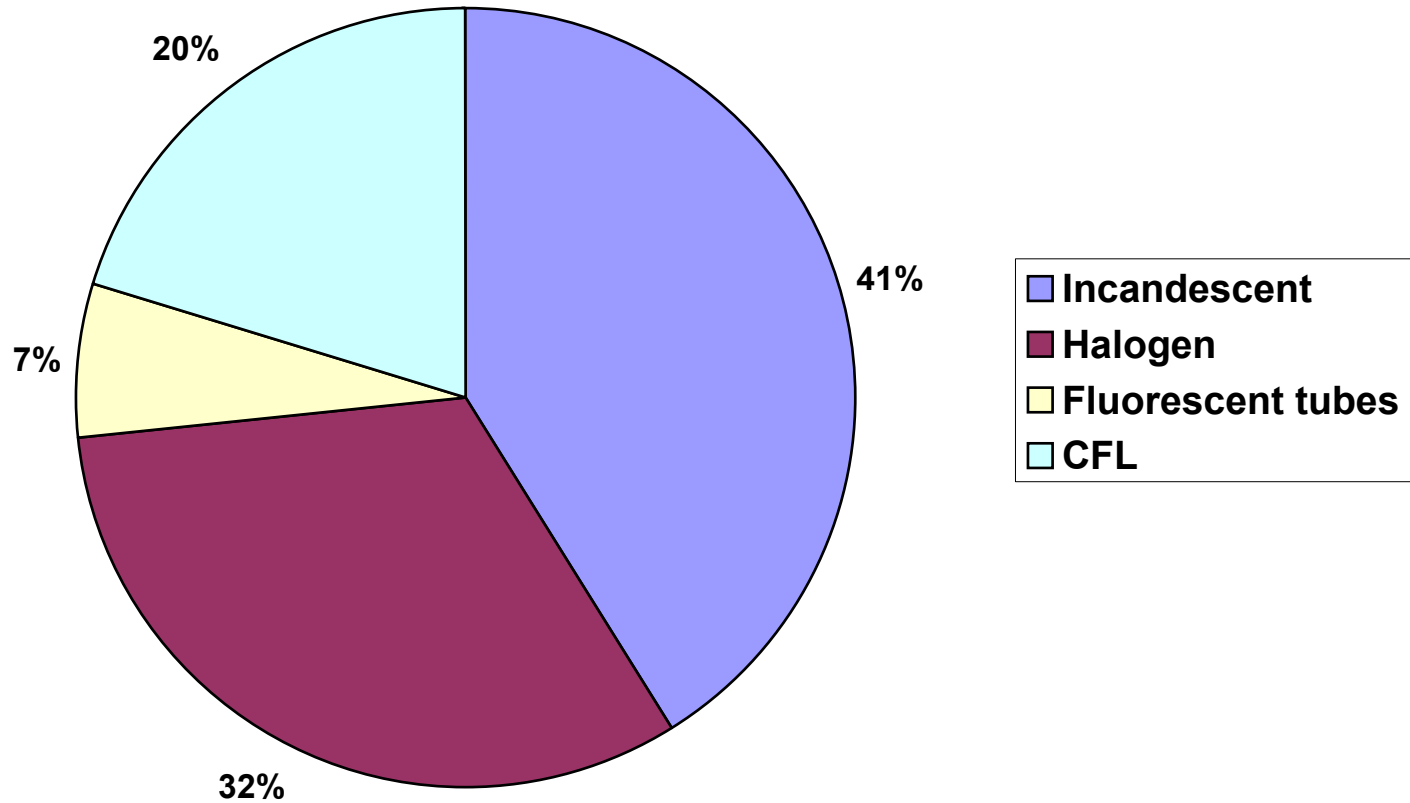
Consumption of households for cold appliances



Consumption of households for lighting



Share of lighting technologies



Summary of the results

- The measured average values are quite close to the official statistics.
- There is a very high saving potential for lighting, followed by cooling, office equipment and home entertainment.
- For many appliances, the electricity consumption depends on the behaviour of the user and the period of usage.
- Other parameters that have an influence on the electricity consumption are life style and trends.

Instruments to tackle the problems:

- Policy measures: to ban energy intensive appliance from the market or to give limits of electricity consumption, to label the appliances in order to leave the purchase decision to the user.
- Information and awareness campaigns in order to initiate a change of consciousness and behaviour.





ISR
University of Coimbra

Intelligent Energy  Europe

Thank you very much for your attention!

Dr. Annette Roser

BSR Sustainability GmbH,
Koenigsberger Str. 2 H,
76139 Karlsruhe
Phone +49-721-915 26 36-33
Email: a.rosler@bsr-sustainability.de
URL: www.bsr-sustainability.de

Jürgen Reichert

Fraunhofer ISI,
Breslauer Str. 48,
76139 Karlsruhe
Email: juergen.reichert@isi.fraunhofer.de
URL: www.isi.fraunhofer.de

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



Fraunhofer



Institute
Systems and
Innovation Research



BSR Sustainability GmbH

Büro für Sozialverträgliche Ressourcennutzung

Fraunhofer

