

# Why do most of us consume as much as we do?

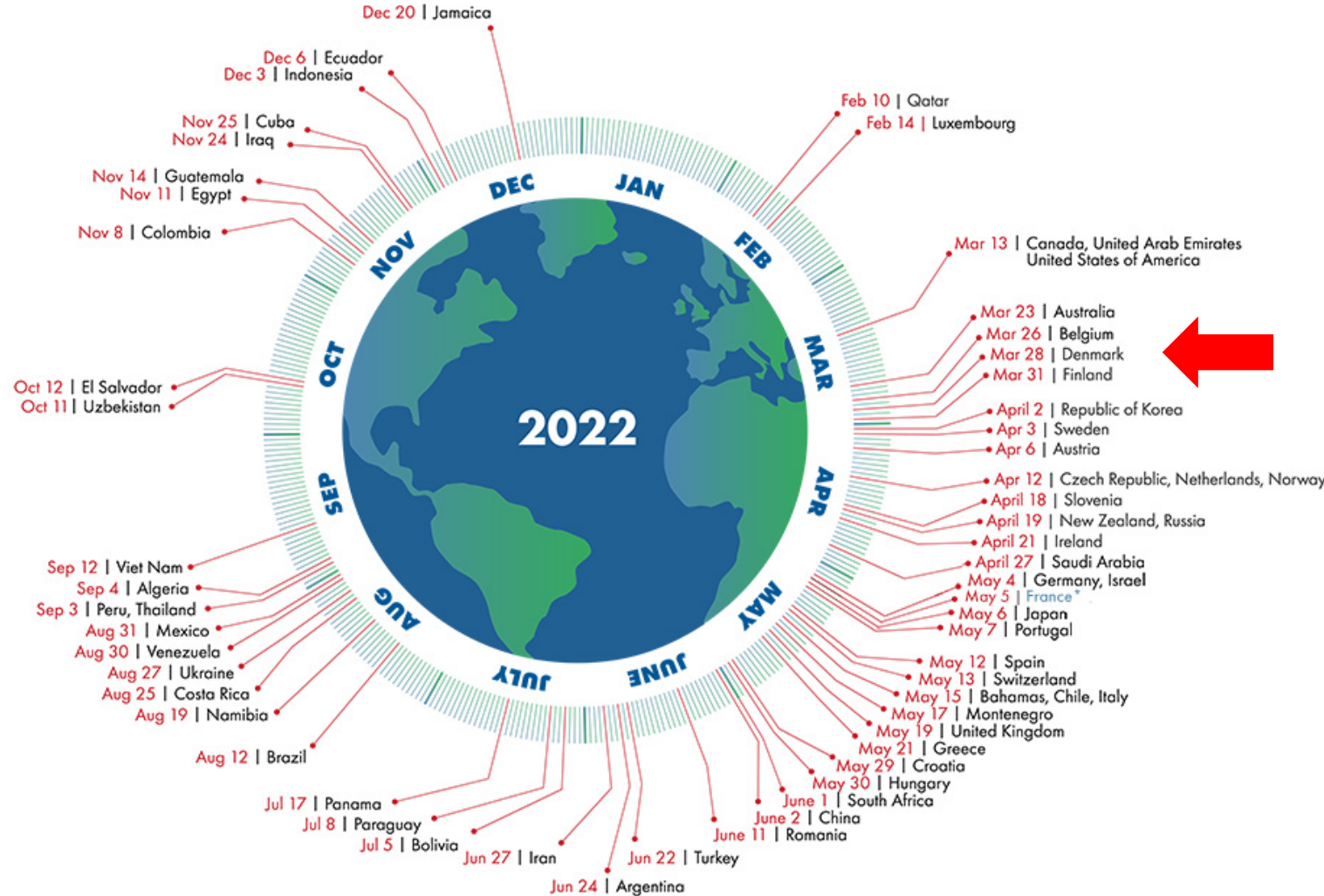
Kirsten Gram-Hanssen,  
CRESR seminar 19th April 2023



AALBORG  
UNIVERSITY

# Country Overshoot Days 2022

When would Earth Overshoot Day land if the world's population lived like...



## Denmark is not green!

► ... even we for long have had rather green ambitions related to energy and climate

# What will I discuss:

- In a global perspective it is the consumption from the wealthiest people that is the problem
- Denmark is a quite egalitarian society. My claim is that in DK it is the consumption from the majority of people that is the problem. Backed by (Ivanova et al., 2017; Jack and Ivanova, 2021)
- Still, we have income difference in Denmark, so what is the relation between affluence and inequality related to the green transition?
- And how do this impact the green transitions and changing practices towards lower consumption?



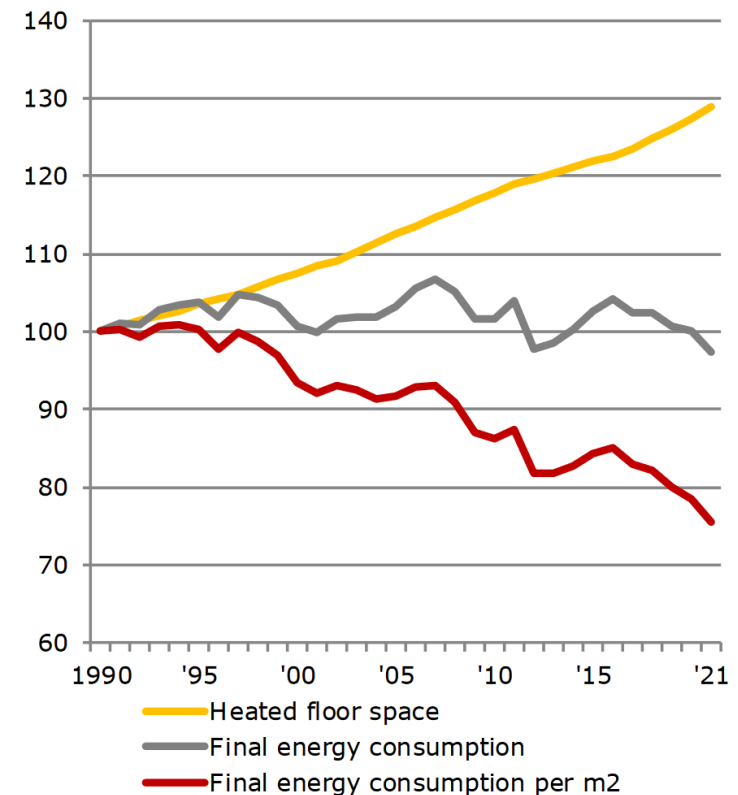
# Energy for heating buildings...

- ▶ ..is a major share of DK energy consumption
- ▶ A tight and efficient policy for 30 years have resulted in more efficient buildings - but not in reduced energy consumption

## Energy consumption for space heating in households

(Climate adjusted)

Index 1990=100



(Energistatistikken, 2021)

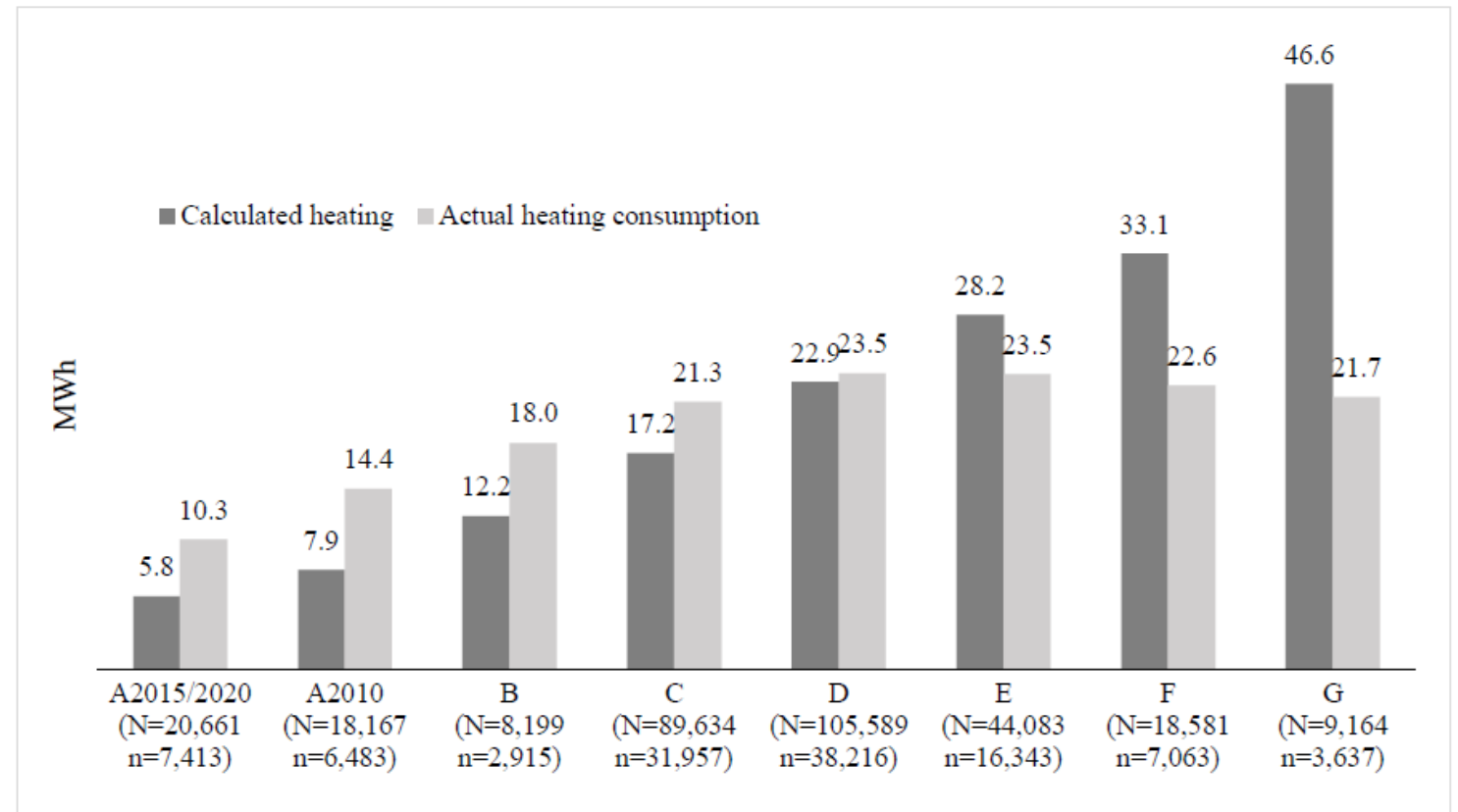
**Two reasons :**

- still more heated square meters**
- still higher indoor temperatures**

**Is this just the rich people?**

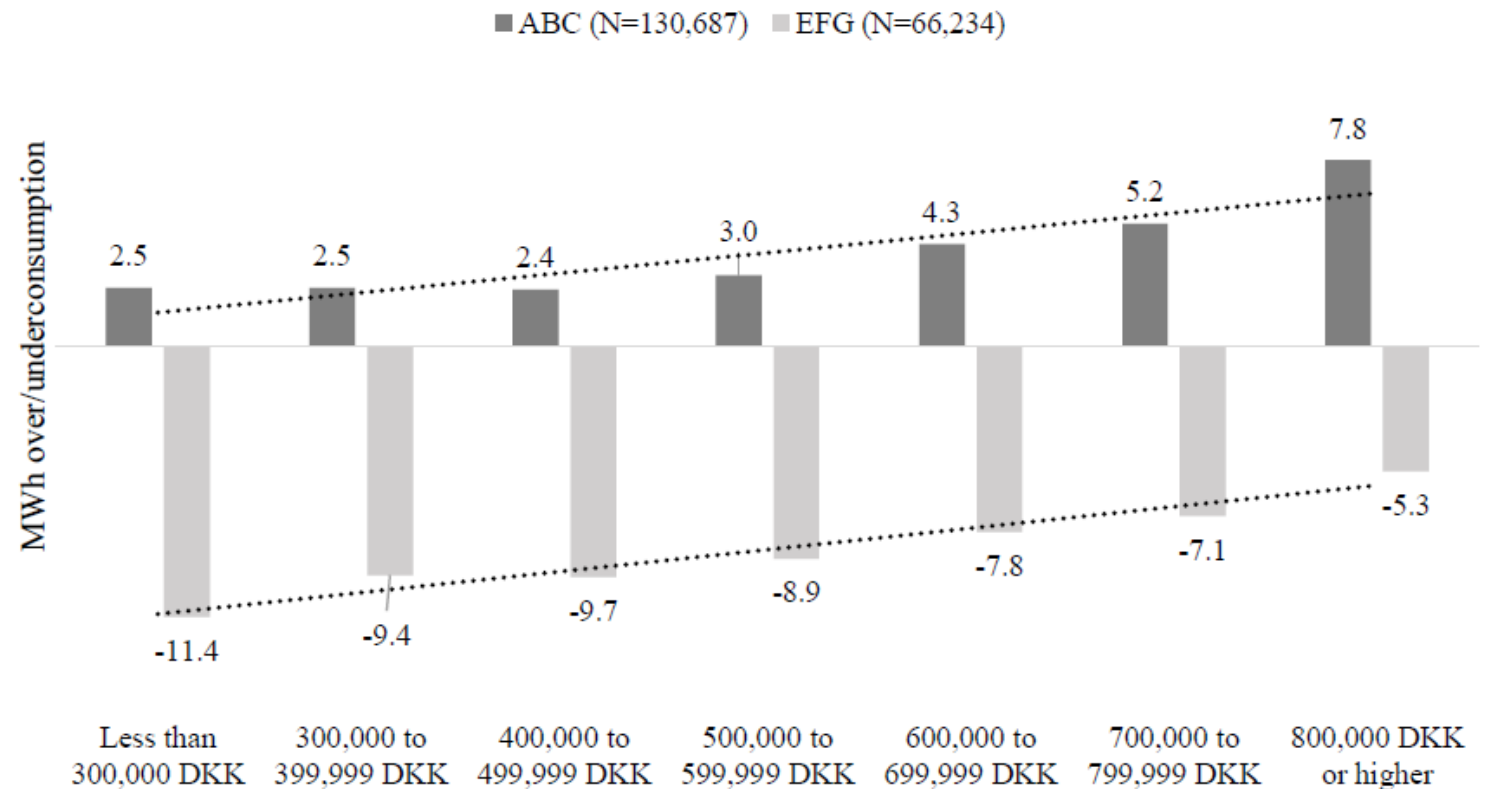
# Comparing calculated and actual consumption

- ‘Over-consumption’ in new efficient homes and ‘under-consumption’ in old inefficient homes
- Materiality impact comfort practices and norms



# Over- and under-consumption related to income

- Both rich and poor over-consume in new efficient homes. The rich more than the poor
- Both rich and poor under-consume in old inefficient homes. The poor more than the rich
- Comfort practices and norms are shaped by both materiality and (forms of) capital

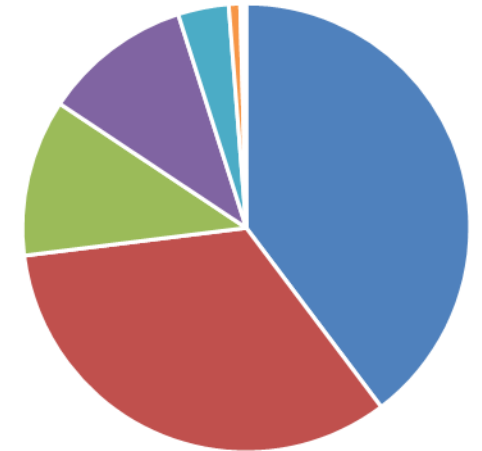


(Hansen and Gram-Hanssen, 2023)

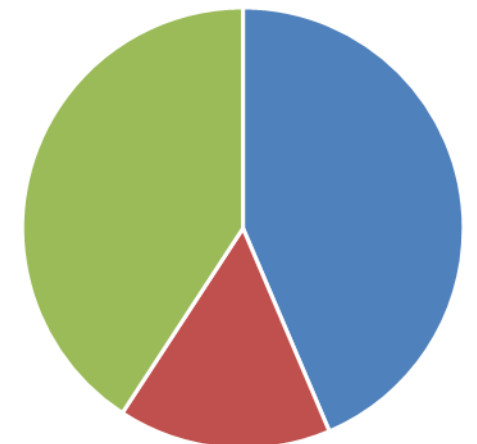
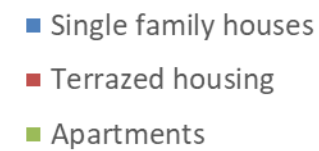
# Why do we heat still more square meters?

- ▶ Not just the rich people living in big homes
- ▶ Mismatch between demography and available housing
- ▶ 60% of single-family housing occupied by 1 or 2 people
- ▶ 30-40 years old has 40 m<sup>2</sup>/per  
80-90 years old has 80 m<sup>2</sup>/per
- ▶ Danes stay in their house when children has left, and the husband dies

Household size in Denmark 2022



Distribution of housing in Denmark 2022





**Higher comfort temperatures  
and more rooms heated – what  
happened during the energy  
crisis?**

# Studying energy crisis

- Energy poverty in Denmark: Not previously a big problem – but with this winter's energy crisis?
- Representative survey in four EU-countries. Ad hoc work coordinated by Melanie Jaeger-Erben at BTU, with contributions from NL, DK, NO.
- Interviews 30 households – found through different channels. Looking for people being economically stressed by the crisis or being interested by the green transition
- Analysis not really started yet – so only potential results



# COST OF ENERGY



## Reaction to increased energy costs

■ Top 2 Agree    ■ Middle (code 3)    ■ Top 2 Disagree

I am trying to save energy as much as possible	71%	19%	9%
I try to save other expenses to cover rising energy costs	54%	23%	23%
I started to feel high financial stress	36%	24%	40%
The increased rates are no problem for me	31%	27%	42%
I can't afford to maintain my comfort standard any longer	23%	25%	53%
I think about moving house	18%	16%	66%
I incur debts to pay for the higher costs	16%	11%	73%
I applied or will apply for financial support (e.g. housing or energy subsidy)	16%	17%	67%

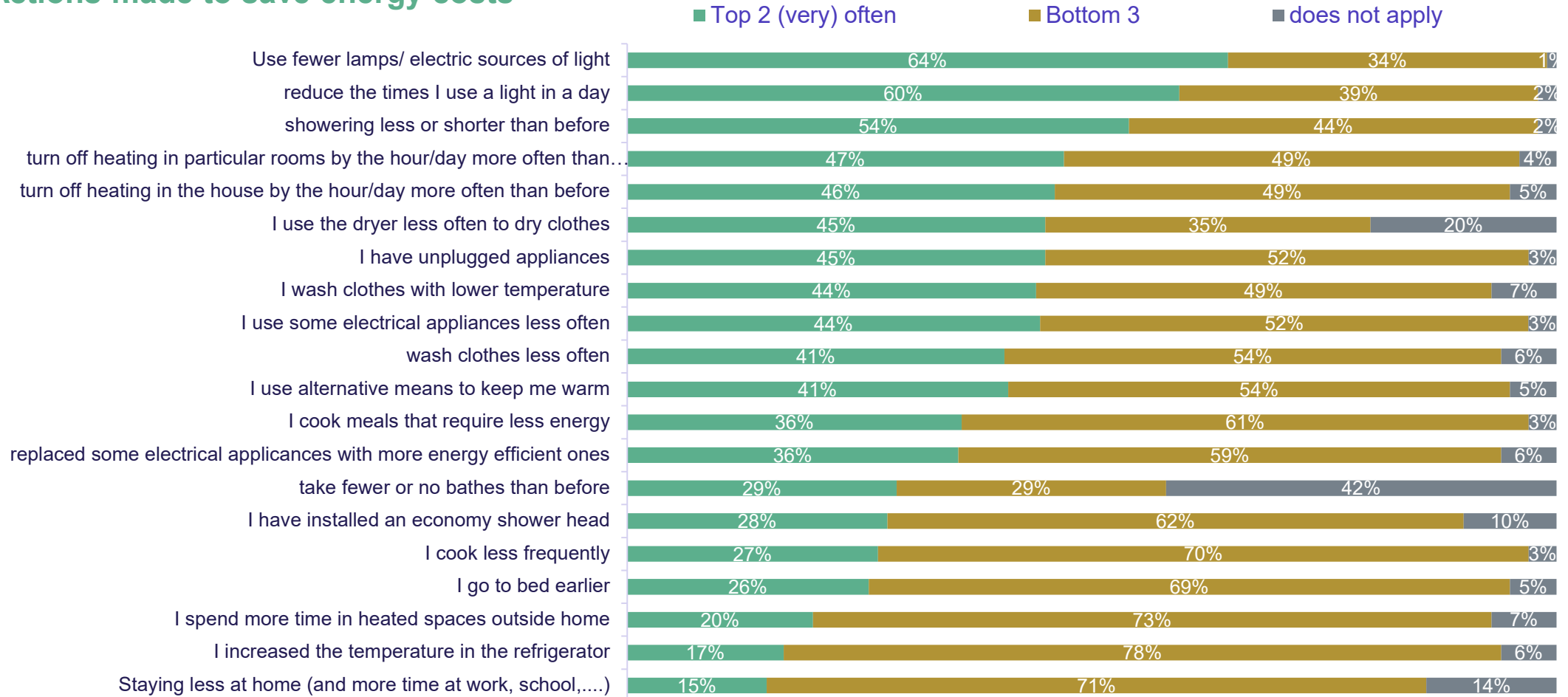
Q18. What was your reaction to increased energy costs?

DK: n=914 (Experienced a rise in water, electricity, space heating, water heating costs)

# ENERGY SAVING



## Actions made to save energy costs



Q29. What did you do to save energy costs or costs in general? Please list only activities that you have not done before the rise in energy prices.

DK: n=829 (Saving energy as much as possible (code 3-5))

# Some first qualitative notes on changing practices

- Reducing temperatures and amount of heated rooms
- Both positive and negative effects on everyday life
  - Shame and distress for some; children and health issues
  - Pride, competition and inventiveness in reducing energy and maybe educating children
- Caring (for oneself or others) versus saving energy



**Changing practices towards  
lower consumption –  
materiality and meanings**

# New norms of the good life after the crisis?

- ▶ We all uses to much energy in Denmark – both rich and poor
- ▶ Energy efficiency and technological solutions have led to raising norms of comfort and ideas of the good life as a resource intensive life
- ▶ Energy crisis showed that reductions can be made quite fast: Depending on materiality and resources in a stressful or an agreeable way
- ▶ It is about developing new norms of what the good life is
  - ▶ a life which can be experienced as positive even it is less resource intensive.
  - ▶ But may also feel like scarcity and poverty if you have no other choice and compare yourself to others

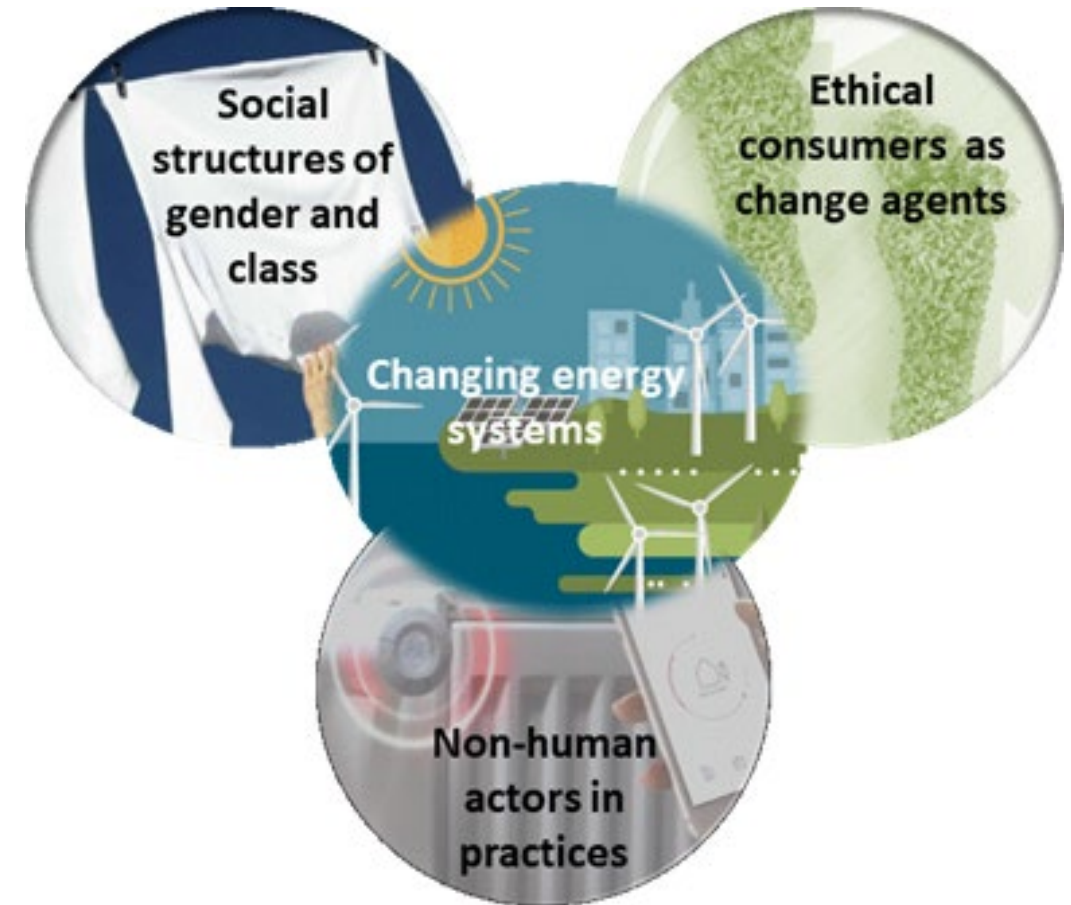


# Part of the eCAPE project

## eCAPE: New Energy Consumer roles and smart technologies – Actors, Practices and Equality

- ▶ An ERC-grant dedicated to develop new theory within theories of practice related to energy transitions

eCAPE is financed by the European Research Council (ERC) Horizon 2020 research and innovation program under the grant agreement number 786643.





# References

- ▶ Ivanova D, Vita G, Steen-Olsen K, et al. (2017) Mapping the carbon footprint of EU regions. *Environmental Research Letters* 12(5). IOP Publishing: 054013. DOI: 10.1088/1748-9326/aa6da9.
- ▶ Jack T and Ivanova D (2021) Small is beautiful? Stories of carbon footprints, socio-demographic trends and small households in Denmark. *Energy Research & Social Science* 78: 102130. DOI: 10.1016/j.erss.2021.102130.
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