



NTNU – Trondheim
Norwegian University of
Science and Technology



Energy practices, reflections and flexibility: Stories from end-users

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Ingvild Firman Fjellså, PhD candidate
Dep. of interdisciplinary studies of culture

Overview

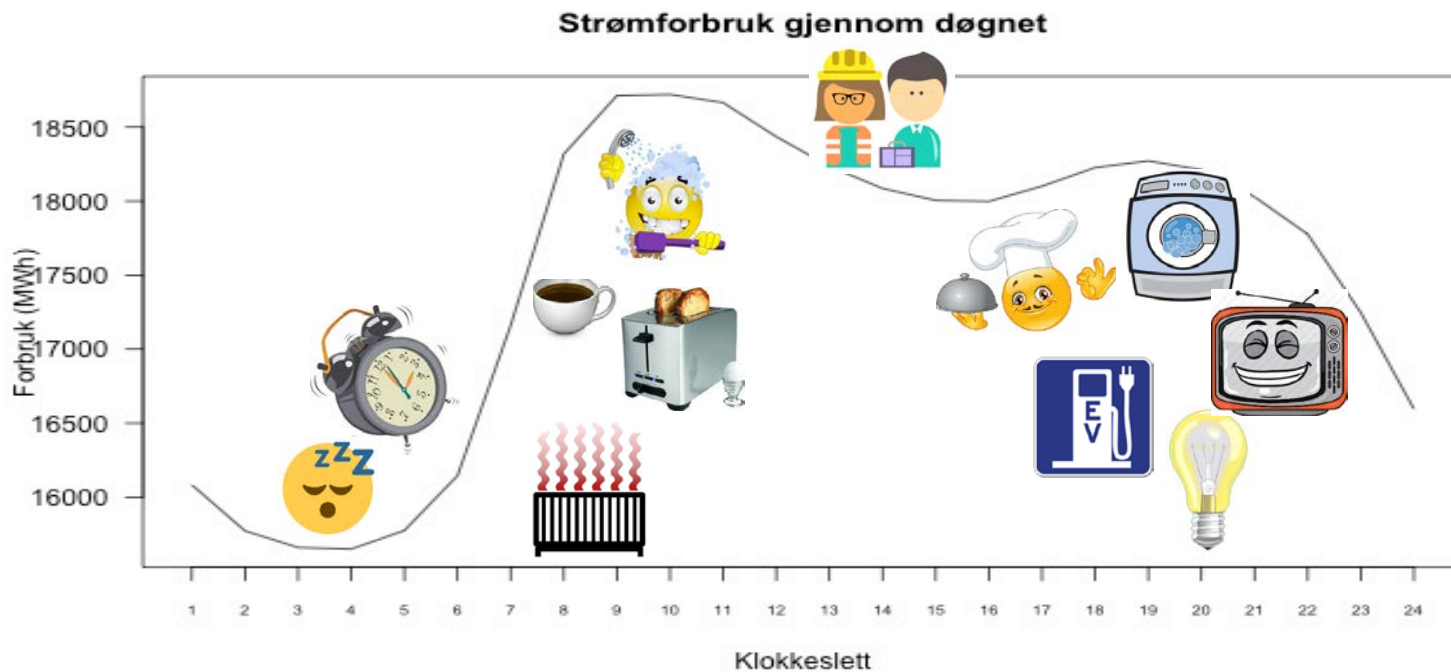
- End-user flexibility
 - The solutions, according to experts
- What does the end-users themselves say?



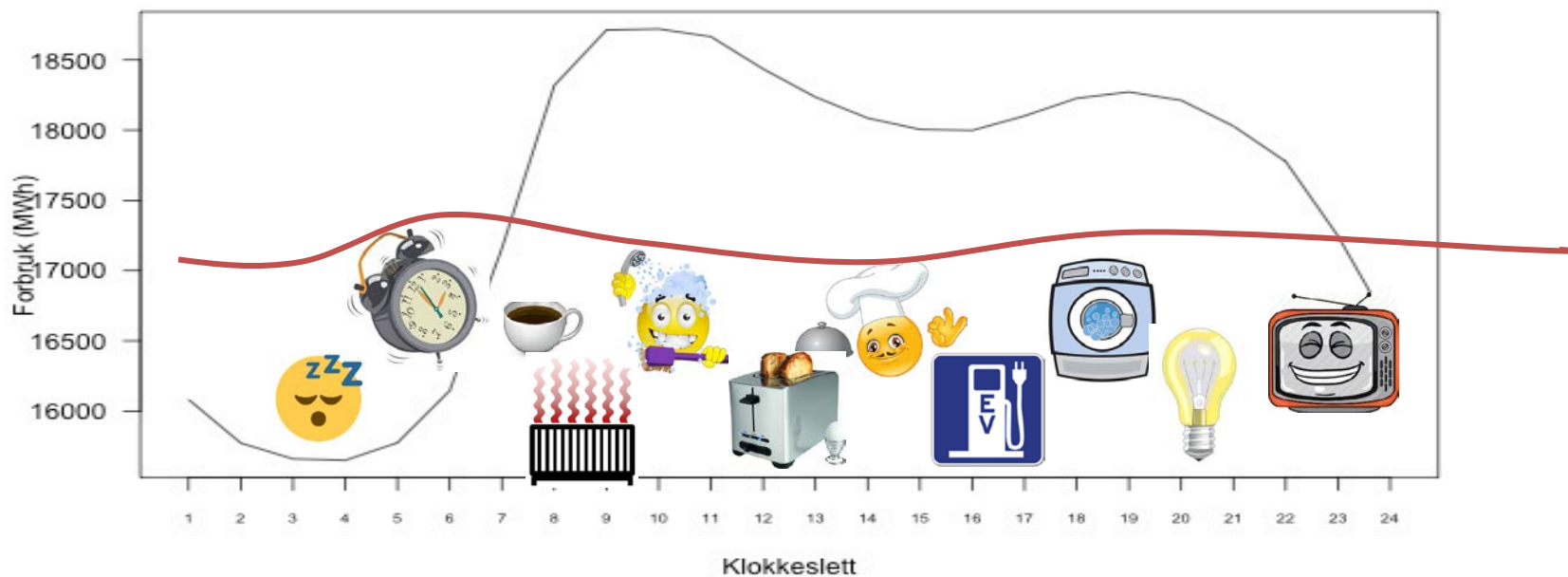
End-user flexibility



Energy consumption 24h



Foretrukket Strømforbruk gjennom døgnet



Three ways to «activate» end-user flexibility - according to experts



Information

Automation

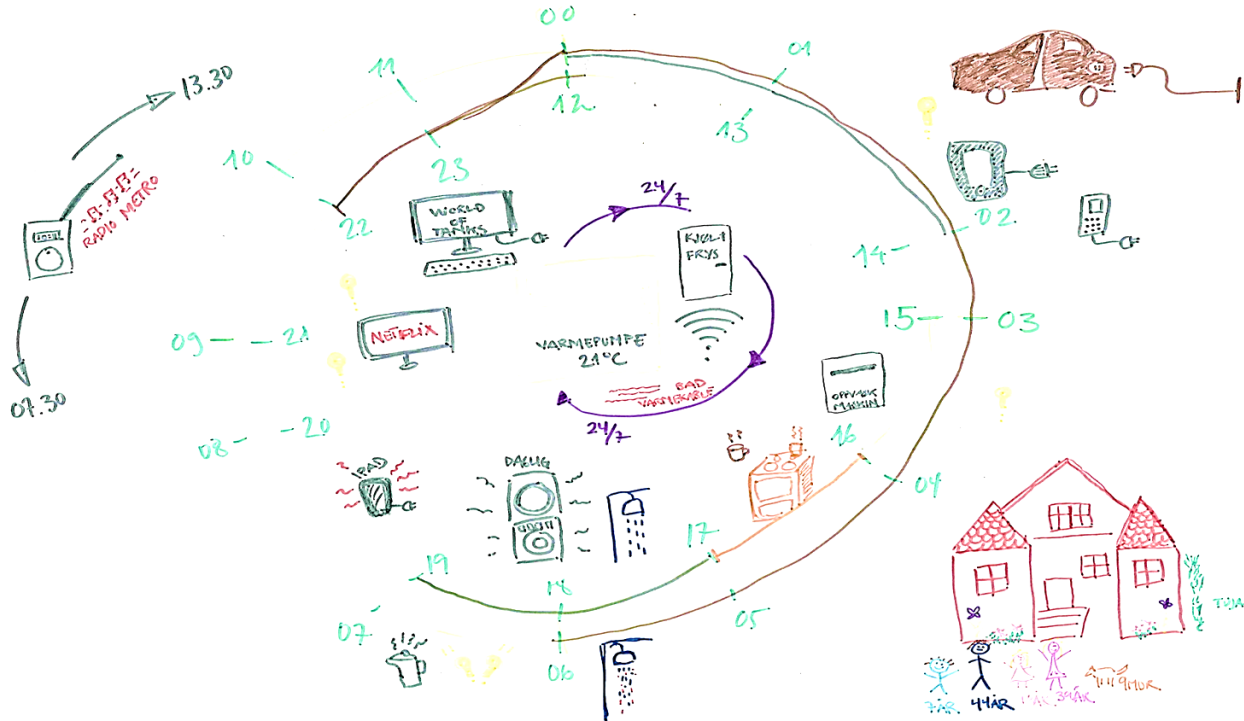


Pricing-
schemes



Skjølvold, T. M., Fjellså, I. F. & Ryghaug, M. (2019)
«Det fleksible mennesket 2.0» Human flexibility 2.0 (accepted)

What does the end-users themselves say?





Information

- What can we do?
 - Why?
- Are the reasons legit?
- Is there someone profiting on my flexibility?
- How do I practically shift my consumption?
- Is it *really* a problem to build out the grid?
- Who decides that this is the way to go?

Automation

- A third part controlling stuff in my house?
No thanks, I'll do it myself!
- I don't believe in automatic solutions
because I only use what I need.
- No stress, I think it is a natural development in
our society.
- I don't mind turning over the management of my energy
consumption. Would be weird to be compensated
economically, but I'd love a detailed rapport!



Pricing- schemes

Higher prices in peak hours (morning and evenings)



- Some heat and light is absolutely necessary when it's dark, even if the cost is high.
- Would turn on the washing machine when I go to bed, even though I shouldn't because of safety...
- I would adapt to pricing schemes, however, personally the environmentally aspects are more important than economy.
- If I'm to shift my consumption away from peak hours, but not to times when I'm not at home or asleep, when then?

To sum up:

- Energy consumption is primary about everyday routines and activities, secondary about kilowatt and peak hours
- The practical sides of end-user flexibility is more complex than presented by expertise in industry and research
 - End-users of energy is not a homogenous group
- Mental tug of war for end-users between personal economy, fire safety, everyday practices, comfort and moral.

Thank you!



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CINELDI

Centre for intelligent electricity distribution
- to empower the future Smart Grid