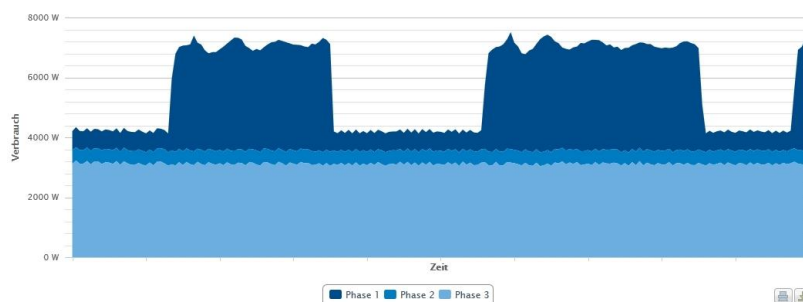


## Incentives to Control Power Consumption

wEnergy Project Studies Which Consumption Data Make People Minimize Their Power Consumption/Instrument in Fuse Box Supplies Own Power Consumption Data



As power consumption is recorded to the minute, big consumers in the household can be identified easily. (Graphics: wEnergy, KIT)  
((Verbrauch = Consumption; Zeit = Time))

The energy turnaround does not only focus on new energy sources and technologies. Every individual person has to change the pattern of using electricity in order to reduce consumption and to make fluctuating energies marketable. Smart electricity meters are to enable consumers to adapt their consumption to the power supply. PhD students of Karlsruhe Institute of Technology (KIT) now plan to test various feedback systems in order to find out how consumers can be encouraged to minimize their electricity consumption.

“How much electricity do I consume at the moment? What are the effects of fridges and appliances in the stand-by mode? Where are reduction potentials? These were the questions we asked ourselves when starting this project,” say Timm Teubner and Anders Dalén from KIT. “This directly led to the main problem we have to solve: What are the relevant data for the consumer and how can they be communicated in order to contribute to a sustainable change of consumption?”

To answer these questions, the scientists initiated the wEnergy project, in which 40 households in Karlsruhe will participate this summer. “Our sensor is installed on the mains and measures current

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electricity consumption at one-minute intervals. The inhabitants can see the results on the web portal,” explains energy systems engineer Dalén, who co-developed the measurement electronics. “The sensor is robust, inexpensive, and maintenance-free. And it can be installed without any technical knowledge.”

“We will now test whether concepts like competition, real-time feedback, or financial and non-financial incentives influence consumption in a measurable manner,” adds business engineer Teubner, who is particularly interested in personal and social motives of the consumers in reducing their electricity consumption. For instance, weekly or monthly electricity saving competitions might influence consumption. “Our test will also cover students who share apartments, because here the dynamics of both power consumption and interaction of the participants is expected to be highest.” Some places are still free. People interested in participating in the project will find more information on the homepage of the project.

For their project idea, Teubner und Dalén have been granted a Karl Steinbuch Scholarship by the Foundation of the Baden-Württemberg Media and Film Society. Hence, they now have the funds necessary to implement their project. From August, data will be collected and by the end of the year, these data will have been evaluated. “It is one of the most exciting aspects of the energy turnaround that everybody can contribute,” say the PhD students. “Within the framework of wEnergy, we can study the mechanism of integrating the daily electricity consumer.”

For more information, click the project homepage:

<http://www.wEnergy-project.de/>

**Karlsruhe Institute of Technology (KIT) is a public corporation according to the legislation of the state of Baden-Württemberg. It fulfills the mission of a university and the mission of a national research center of the Helmholtz Association. KIT focuses on a knowledge triangle that links the tasks of research, teaching, and innovation.**

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