



Energy
National Research Programmes 70 and 71

Project

Understanding household energy consumption





Social learning helps reduce energy consumption

We all agree that reducing energy consumption is a good idea. But when it actually comes to saving energy, individual attitudes look very different. On the one hand, there is a lack of knowledge on how to reduce energy consumption, and on the other, many do not realise that every Swiss citizen has the capacity to contribute to the energy transition.



Washing requires electricity. Those who wash frequently therefore also use more electricity. This situation can be changed – ideally through social learning. *Source: Adobe Stock*





At a glance

- Households are responsible for almost one third of total energy consumption in Switzerland.
- In order to save energy, it is necessary to modify everyday routines; a difficult task as these habits are based on well-established patterns.
- According to the researchers, social learning in the form of challenges or demonstrations can help change these practices.

Whether we like it or not, everyday life consists largely of routines such as cleaning, washing and cooking. Once these have been taken care of, we can turn to entertainment and leisure activities. All these routines and behaviours have something in common: they call for energy. The washing machine does not run without electricity and the mobile phone is also powered by the plug in the wall. Accordingly, Swiss households, or rather the people living in them with their well-rehearsed behavioural patterns, are an ideal target group when it comes to saving energy. This is due to the fact that households are responsible for almost one third of total energy consumption in Switzerland. But is the Swiss population aware of this situation? And do these people feel concerned when it comes to saving electricity? Researchers working with Suren Erkman, professor at the Faculty of Geosciences and Environment in Lausanne, and Marlyne Sahakian, assistant sociology professor at the University of Geneva, have addressed these questions within the framework of the National Research Programme 71. To find answers, they conducted detailed surveys in French-speaking Switzerland and discovered that for this segment of the Swiss population, energy consumption in the household is not a major concern. And the researchers agree that a purely informative approach to changing behaviour is of little use, regardless of how the routines that consume electricity come into being. Social learning, for example in the form of games or challenges, would be more effective and could induce changes in everyday practices, thus contributing to a reduction of Switzerland's energy consumption.



Doing laundry like at home

The truth is that all human behaviour is based on socially established norms. These are often implicit and tacitly accepted. That is to say: how often we wash our jeans, for example, depends on what we feel is appropriate. And this in turn is affected by many different influences. For example, a behaviour may be copied from the parents, requested by a partner, or the result of an own idea. Such influences more markedly determine how often we wash a pair of jeans than the question whether these jeans are actually dirty, which is why many garments are laundered more often than necessary. This is exactly where the potential for saving energy lies: if the washing machine runs less often, less electricity is needed. Erkman and his team have conducted detailed surveys to gain a clearer understanding of the norms that influence everyday activities and to determine how behavioural patterns develop. The researchers used pictures, and sometimes humour, to learn more from the participants. Emotions regarding norms are often subconscious, and pictures facilitated the discussions. This gave the researchers a better understanding of the norms that trigger frustration or enthusiasm, and allowed them to then tackle targeted changes in everyday practices.



Citizens do not feel the need to reduce energy consumption

The results of the surveys have taught the researchers two things: firstly, that the energy transition is not a major issue for the population of French-speaking Switzerland and that awareness of electricity consumption is not particularly high. For example, half the citizens do not know how high their electricity bill is. Health, well-being, comfort, connectivity and safety are rated as far more important. At 90 %, the cleanliness of the home is the most important requirement. Secondly, by analysing the emotions expressed during the surveys, the researchers were able to conclude that behaviour influenced by norms can take on very different aspects. An example: person A washes her clothes twice a week because she is afraid of being perceived as an unclean person by her milieu. Person B, on the other hand, washes on Mondays because he has time to do so. A change in behaviour can be brought about in both cases, but the approaches used to achieve these changes will be very different.

Optimising does not equate with saving

If, for instance, an electrical appliance is considered energy-efficient, this does not necessarily mean that it consumes little energy. For example, a small energy efficiency class B refrigerator may consume less electricity than a giant A+ refrigerator. The term "efficiency" is often used in the debate about the energy transition, yet the primary goal is not to become more efficient, but rather to reduce electricity consumption. This is also called sufficiency.

Behaviour is difficult to change

However, when it comes to reducing the frequency of washing clothes, households must change their daily routines. According to the researchers, it is not enough to simply inform citizens that frequent washing is unnecessary. Social commitment is required. To test this hypothesis, the scientists launched three projects.

Call for action

The most successful of the three projects was the "Jeans Wash Challenge". Marlyne Sahakian and her team were inspired by Tullia Jack's Jeans Challenge in Australia. The aim of the campaign was to change people's laundry behaviour. For the participants, the challenge was to wear their jeans at least five days a week for four weeks without washing them. During this time, the jeans wearers connected via social media to compare notes on their feelings or on the best ways to remove stains from their trousers. At the end of the challenge, the participants not only realised that they felt clean and comfortable after four weeks, but also that many of their other garments needed to be washed much less often than expected. The researchers see great potential in using social learning to rethink behaviour and induce change.



This poster invited citizens to join the "Jeans Challenge". Terragir Genf

Indolence does not help save electricity

However, this presupposes the will to bring about change as well as a sense of responsibility towards achieving the energy goals. In this respect, the surveys revealed another sobering fact: 88 % of all participants believe that companies, businesses and the state play a leading and more important role than households in driving the energy transition, according to the motto "I will only act once they do something". Because of this attitude expressed by citizens, Marlyne Sahakian and her team are keen to pass on their findings to policy-makers and practitioners. In conclusion, it cannot be stressed enough that purely informative measures do not seem to yield the desired results, which is why more emphasis should be placed on challenges or demonstrations. Not only are these entertaining, but they may prove crucial when it comes to convincing private individuals to contribute to the energy transition.



Produkte aus diesem Projekt

- Consommation énergétique: des ménages mis au défi de diminuer leur consommation électrique de chauffage ou de lessive.
Date of publication: 12.12.18
- Kickoff-Poster
Date of publication: 16.01.19
- Constructing normality through material and social lock-in: the dynamics of energy consumption among Geneva's more affluent households
Date of publication: 06.02.19
- Exploring emotions and norms around Swiss household energy usage: when methods inform understandings of the social
Date of publication: 06.02.19
- Living Labs ENERGISE
Date of publication: 26.09.19
- L'électricité au quotidien: le rôle des normes sociales pour la transition énergétique suisse
Date of publication: 09.04.20
- Communiqué de presse: Fin des Living Lab ENERGISE
Date of publication: 12.12.18
- On débranche! Un projet de recherche sur la (dé)connectivité
Date of publication: 30.04.20



Contact & Team

Prof. Suren Erkman
Institut des dynamiques de la surface terrestre
Université de Lausanne Quartier UNIL-Mouline
Bâtiment Géopolis
Bureau: 5879
CH-1015 Lausanne

+41 21 692 35 52 Suren.Erkman@unil.ch



Suren Erkman
Projektleiter



Marlyne Sahakian

Béatrice Bertho

Associated projects



Energy efficiency in households

Saving energy by means of variable electricity prices: what works and what doesn't



Trade-offs in switching to renewable electricity

Where should electricity come from in future?



Energy

National Research Programmes 70 and 71

All information provided on these pages corresponds to the status of knowledge as of 10.05.2019.