Schweizerische Eidgenossenschaft
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Eidgenössisches Departement für Umwelt, Verkehr, Energie und Kommunikation UVEK

Bundesamt für Energie BFE
Marktregulierung

Accepted projects from the EWG Call 2017

1. **Université de Genève + Universität St Gallen (2017-2021): Applying nudging techniques to promote fuel efficient car purchases**
   Abstract: the project aims at developing effective low-invasive interventions (nudges) to motivate consumers to shift their preferences towards low carbon vehicles by combining theoretical knowledge with insights from practice. The project team will develop improved versions of existing nudges as well as new interventions. Implications for industry and policy will be derived on how to promote purchases of low carbon cars through low-invasive approaches.
   Contact: Ulf Hahnel, Université de Genève

2. **PSI + Cambridge econometrics (2017-2020): Swiss Industry: Price Elasticities and Demand Developments for Electricity and Gas**
   Abstract: This project investigates 1) price elasticities of natural gas and electricity consumption for Swiss industry, and 2) future long-term developments of the Swiss industries' energy demands by employing an energy econometric accounting framework combined with a techno-economic modelling approach. Therefore, a combination of the global macro-economic model E3ME and the Swiss energy system model STEM will be applied to conduct a multi-scenario analysis scoping on the Swiss industry.
   Contact: Tom Kober, PSI

3. **ETHZ (2017-2019): The Effectiveness of Standard and Behavioral Policy Instruments to Reduce Households' Electricity Consumption – An Experimental Test for Different Market Regimes**
   Abstract: In the proposed project we plan to systematically compare the effectiveness of standard and behavioral public policy tools used to reduce the negative externalities of electricity consumption. The instruments aim at steering consumers' electricity demand more towards (new) renewable energies and at reducing consumers' overall electricity demand. To date, evidence that allows comparing the effectiveness of different policy instruments is scant. Our research has the potential to fill this gap. Moreover, we will focus our research on two different market regimes, monopoly and competition, with the intention to discover differences in instruments' effectiveness that depend on the market structure. Given the planned liberalization of the electricity market for households in Switzerland, our study will thus provide important knowledge for policy makers who want to foster sustainable electricity consumption in a liberalized market.
   Contact: Renate Schubert, ETHZ

4. **Universität Basel (2017-2020): Reducing Swiss household energy demand: Modeling and assessing non-monetary incentives (information and social norms)**
   Abstract: Reducing energy demand is central to achieve the ES 2050 targets. In this project, we investigate the role of soft incentives (information and social norms) for reducing household energy use. We conduct an empirical analysis based on survey and municipal data covering different types

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of energy use and different types of households. Based on the results, we develop a novel model that is used to assess the aggregate effects of demand-side policies.
Contact: Frank Krysiak, Universität Basel

5. **ETHZ + TEP (2017-2020): The role of gas and gas infrastructure within the future energy system: a techno-economic assessment**
   Abstract: This project aims at a quantitative analysis of the impact of targeted framework conditions that aim at increasing the utilisation of interdependencies between various energy infrastructures (electricity, gas, and heating) at municipal level. Within this scope it includes also an assessment of the capability (especially of gas and thermal networks) of providing additional operational flexibility and security margin to the electrical power system. The analysis will take into account both technical, economic and policy related parameters, so that the accrued operational benefits will be weighted against the associated outlays and costs. The supply area of Wasserwerke Zug (WWZ) will be considered as a real-life cases study. Given its similar energy-economic structure it is possible to a large extent to generalize results and insights to Switzerland as a whole and to other municipal systems.
   Contact: Turhan Demiray, ETHZ

6. **ZEW (2017-2019): Empirical Estimation of Electricity Demand Elasticities for Different Customer Groups in Switzerland and Implications for Energy Policies**
   Abstract: The proposed research project aims at investigating price elasticities of electricity demand in Switzerland. Hourly demand elasticities are derived for Switzerland using consumption data on canton level. Thereby we can distinguish among the elasticities of households, industry and services. These elasticities are used to simulate and evaluate (regionally distinguishable) demand reactions to energy policies that influence the price of electricity such as a new tax on electricity**.**
   Contact: Dominik Schober, ZEW

7. **EPFL and Infras (2017-2020): Endogenous energy efficiency improvement**
   Abstract: Future energy use depends on energy efficiency improvement (EEI). In standard analyses of Swiss energy and climate policies, the speed and extent of EEI is usually assumed to be unaffected even by policies designed to foster innovation. This project introduces endogenous EEI and barriers to innovation into a complete simulation model of the Swiss economy and shows what difference that makes for energy policies in housing and one industry sector.
   Contact: Philippe Thalmann, EPFL

8. **ETHZ (2017-2020): Expectation formation in energy markets and its impact on the success of future energy policies**
   Abstract: Most of economic research deals with history-dependent equilibria leaving no room for expectations. We argue that the formation and the coordination of expectations are crucial for the success of energy policies. Specifically, we want to find out why market participants expect a new energy system to be successful. We seek to derive how policies affect the coordination of expectations in a market and to assess the consequences quantitatively.
   Contact: Lucas Bretschger, ETHZ

9. **ETHZ (2017-2020)**: **Fostering the transition towards more fuel-efficient cars**
   Abstract: This project focuses on private-sector and government-led policy options for encouraging the adoption of more fuel-efficient cars. It uses an experimental study design to investigate how

information on fuel-efficient cars and test-driving of a hybrid or a fully-electric car affect (1) preferences concerning (un)desirable attributes car owners associate with more fuel-efficient cars, (2) intentions to switch to more fuel-efficient cars; (3) preferences towards a wide range of government interventions that might be used to increase the vehicle fuel-economy.

Contact: Thomas Bernauer, ETHZ