

Proposal for Master's Thesis

The Impact of Renewable Energy Policies on the Performance of Electric Utility Companies

The recent years have seen a strong rise in the use of policies targeted at raising the deployment of renewable energy technologies. A large number of countries have introduced policy measures, such as feed-in tariffs, renewable portfolio standards, tax credits, or renewable energy certificate schemes. As a result of these policies, the share of renewable energies has risen significantly in recent years. This in turn has led to a fundamental disruption in the energy sector that increasingly affects incumbent actors, such as electric utility companies.

Despite the disruptive potential of renewable energy policies, anecdotal evidence suggests that not in all countries have electric utilities been hit hard by the policy-induced deployment of renewable energy technologies. In fact, countries have made use of policy instruments differ in the extent to which they allowed utilities to participate in the market for renewable energy generation. Moreover, policy instruments varied with regard to which renewable energy technologies they supported. Some of the technologies were quite aligned with the existing business models of utilities, while others carry the potential for major disruptions. Policy instruments that provide a strong incentive to electricity consumers to generate their own electricity, for example, pose a threat to the performance of utilities as they reduce electric utilities' sales.

To better understand the factors that determine the extent to which different policies may differently drive industry disruptions, ETH Zurich's Group for Sustainability and Technology (SusTec) offers a Master's thesis that seeks to quantitatively analyze the impact of deployment policies for renewable energy technologies on the performance on electric utility companies. The student's tasks comprise amongst others:

- Extending an existing database on renewable energy policies in a larger number of countries
- Extracting performance and other firm data on publicly listed electric utilities from existing databases
- Conducting a regression analysis (with a statistical software) to determine the impact of different renewable energy policies on firm performance of electric utilities
- Deriving implications for firms and policy makers in the energy sector

The Master student will be an integral part of the SusTec research team and will work in close collaboration with a postdoctoral researcher. The analyses of the thesis are intended to result in an academic publication. Through his or her research, the student will have the opportunity to shape firm strategies and policy making in a field of large societal importance.

We are looking for an excellent student who is interested in energy-related issues, highly motivated and able to work independently. Strong communication and project management skills as well as experience in data analysis are an asset. Ideally, the applicant has a background in energy science, engineering, economics, management, or innovation studies.

Start date: September 2016 (negotiable)
Duration: 6 months
Location: Zurich

Your application: Please send your CV, a short letter of motivation (max. one page), and transcripts of records (with grades) via email to **Dr. Joern Hoppmann** (jhoppmann@ethz.ch). Applications from non-ETH students are welcome. We look forward to receiving your application.