

Master thesis in cooperation with the University of Oxford

Perception of cyber risks in connected energy systems - a comparison between German and UK households

Background:

With the introduction of smart meters and the possibility of measuring energy behavior in higher resolution, a discussion about cyber security and data protection in the power sector has entered the social discourse. The perception of these risks plays a major role, especially in accepting energy technologies and their widespread integration. The master thesis, therefore, aims to find out whether there is an awareness of these risks among the population and, if so, which risks dominate. Furthermore, the quantitative study aims to investigate whether the perception of smart meters changes when the role of this technology is being communicated in the context of the energy transition. Finally, the study investigates how perceptions differ between UK and German households. This is particularly relevant since the installation of smart meters is more advanced in the UK than in Germany.

Research questions:

- To what extent are people aware of cyber security risks in the context of connected energy systems?
- Which risk perceptions dominate, and how does the perception change when placing the technology into the energy transition context?
- How does the perception differ between German and UK households?

Tasks:

- Conducting literature research
- Developing of a survey design in German and English
- Pretesting and conducting the survey
- Analyzing and reporting the data

Requirements:

- Above average grades
- Experience in survey design and statistical methods
- High motivation and excellent English skills
- Cultural openness

Supervision:

Researchers from the Institute of Industrial Production of the KIT and the Environmental Change Institute of the University of Oxford will supervise the master thesis. This requires the student to conduct and write the thesis in English.