

Public perception towards the future of natural gas and thermal energy consumption in the built environment

An empirical study

Department: Copernicus institute of sustainable development

Research group: Energy and resources

Supervisor: Javanshir Fouladvand

Email address: j.fouladvand@uu.nl

Project description

*This research project **aims to gather and analyse empirical data to explore the 'individuals' opinions, concerns, and motivations towards thermal energy consumption in the built environment sector and understand the future of natural gas.** The current ongoing crisis in Eastern Europe has shown the heavy dependence of the European energy sector, particularly the built environment, on the Russian natural gas. In the Dutch context, this crisis and its impacts bring up the discussions around the future of natural gas and different possible options to address the thermal demand within the built environment, for instance: (i) extra extraction from the Groningen natural gas field, (ii) increasing natural gas import from other countries (e.g. Norway and the UK), (iii) new forms of energy imports (e.g. liquid natural gas (LNG) from North America or biogas from South America), and (iv) increasing the share of local renewable thermal energy resources (e.g. geothermal wells, bio-energy and heat pumps). This project aims to develop and conduct a survey among individual households to understand and analyse public perception towards these options. This can be translated as individual households' motivations, concerns, and behavioural attributes towards thermal energy consumption. **This project could bring insights for policy-makers to decide between the alternatives for the households' thermal energy consumption for the coming winter and coming years. This includes the preference and perception of individual households over the different available alternatives for thermal energy consumption within the households.***

*The preliminary exploration led to the development of a survey which needs further improvements and adjustments. **Therefore, the research involves developing the survey further, conducting it and gathering the data, analysing it and providing insights and recommendations.** For all these steps, close supervision and guidance will be provided. **This research is in close collaboration with Delft University of Technology (i.e. Technology, Policy and Management faculty);** therefore, the student assistant has an opportunity to collaborate with researchers inside and outside Utrecht University (and Copernicus institute of sustainable development).*

Job requirements

A highly motivated student, Fluency in English, Experience in empirical data (e.g. conducting a survey and interviews) or willingness to learn and develop such skills is a must, Experience in performing research on related topics (e.g. energy policy, economics and behaviour studies) is a plus, Knowledge and experience with statistical software and applications (e.g. R. and Python) is highly appreciated.