**Lehrstuhl für Wirtschaftliche Staatswissenschaften,
insbesondere Energiewirtschaftslehre**

Bachelor Thesis

Economics of small modular reactors

According to the International Atomic Energy Agency Small Modular Reactors are “nuclear reactors designed to generate electric power up to 300 MW, whose components and systems can be shop fabricated and then transported as modules to the sites for installation as demand arises” (IAEA, 2020). In recent years the interest in SMRs has been growing mainly due to their small size and modularity (Mignacca and Locatelli, 2020). This modularization promises advances in terms of facilitated standardization, enabled factory fabrication, and easier transport (Mignacca and Locatelli, 2020). However, so far it remains unclear to which extent the production of SMRs can hold these promises.

The aim of this thesis is to identify and describe the current economic state of SMRs. The analysis includes a comprehensive review of the literature and reports about, e.g., cost developments, learning rates, applications, and governmental financial support. The scope of the work can be set to a selection of large countries.

Key tasks and objectives of the thesis

- Review literature und reports on the economics of SMRs
- Illustrate historical developments and key figures
- Identify current economic conditions and projections

Your profile

- Economics major, best with a focus on energy
- Analytical thinking and the ability to carry out independent scientific work

Literature

- Subki, H. (2020). Advances in small modular reactor technology developments.
- Mignacca, B., & Locatelli, G. (2020). Economics and finance of Small Modular Reactors: A systematic review and research agenda. Renewable and Sustainable Energy Reviews, 118, 109519.
- Locatelli, G., Bingham, C., & Mancini, M. (2014). Small modular reactors: A comprehensive overview of their economics and strategic aspects. Progress in Nuclear Energy, 73, 75-85.
- Cooper, M. (2014). Small modular reactors and the future of nuclear power in the United States. Energy Research & Social Science, 3, 161-177.

Contact

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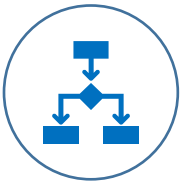
Topics

- Small modular reactors
- Economics of emerging technologies

Methods



- Literature review
- Economic analysis