



## Master Thesis

### „Cloud Computing in the Smart Grid: Overcoming Challenges of Energy Systems“

Cloud computing technology has made its way into practice across industries, speeding up processes and improving analytical efficiency. The energy industry - the German electricity system in particular - are challenged to integrate renewable energy sources and to **progress toward smart grids**. Corresponding research strives for cloud computing concepts which may assist in the energy transition becoming reality.

Besides laying out foundations, this thesis will develop and apply a methodically sound approach to **study one or more challenges** or research directions as summarized in the recommended readings.

*Die Masterarbeit ist vorzugsweise in englischer oder in deutscher Sprache zu verfassen.*

#### Recommended Literature:

- Bera, Misra, Rodrigues (2015): Cloud Computing Applications for Smart Grid.  
In: IEEE Transaction on Parallel and Distributed Systems 26 (2013) 1477-1494.  
DOI: [10.1109/TPDS.2014.2321378](https://doi.org/10.1109/TPDS.2014.2321378).
- Markovic et al. (2013): Smart power grid and cloud computing.  
In: Renewable and Sustainable Energy Reviews 24 (2013) 566-577.  
DOI: [10.1016/j.rser.2013.03.068](https://doi.org/10.1016/j.rser.2013.03.068).
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Yigit, Gungor, Baktir (2014): Cloud Computing for Smart Grid applications.  
In: Computer Networks 70 (2014) 312-329.  
DOI: [10.1016/j.comnet.2014.06.007](https://doi.org/10.1016/j.comnet.2014.06.007).

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