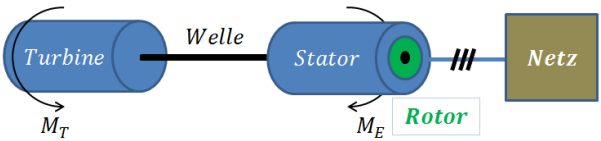
Status	Availible
Start	Immediately

Typ	Master thesis
Topic	Simulative frequency studies of the future network status with the basis of the network development plan.
Supervisor	M. Sc. David Riebesel

As part of the new energy policy, conventional energy sources are increasingly being replaced by renewable energies. Since the new types of generators are usually connected via converters, there is mostly an accelerating of the system dynamics. New approaches are needed to respond appropriately. To this end, the methods already applied are to be analysed under new circumstances.

The aim of the thesis is to evaluate the change from conventional power generation to the future grid structure with a high penetration on zero instantaneous reserve plants. The work is to take place simulatively in the PowerFactory software. The current European grid state is to be taken as a basis. Based on the network development plan the future states will be approximated and investigated.

Absolutely necessary:
Mathematical affinity,
Advanced knowledge about electrical networks,
Experience with simulations



Necessary lectures:
BKE, BVE, Control Engineering

Preferred language:
English,
German

$$J\frac{d\omega}{dt} = M_{\mathrm{T}} - M_{\mathrm{E}} - M_{\mathrm{D}}$$

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