

# VORträge zum Operations Research

Kolloquium des Instituts für Operations Research

*Zeit:* Montag, 7. November 2016, 14:00 Uhr

*Ort:* Raum 231, Gebäude 11.40

*Es spricht:* Prof. Dr. Felix Müsgens, BTU Cottbus-Senftenberg

*Zum Thema:* **Intermittent Electricity Generation and Equilibrium Prices**

*Abstract:* Increasing electricity generation from intermittent renewable energy sources changes electricity systems: the availability of these generation capacities is uncertain and fluctuating. The implications for wholesale electricity prices, power plant revenues, flexibility requirements and even market design are among the most fundamental issues currently discussed in electricity markets. This paper contributes to that discussion by analysing the effect of RES generation on average wholesale electricity prices as well as price variance. We calculate a market equilibrium in the wholesale electricity market applying an investment and dispatch electricity market model. In a competitive equilibrium, electricity prices cover generators' total costs. Our results confirm that price volatility increases with intermittent RES. We attribute the increase to two effects: Firstly, RES load shedding driving down wholesale prices. Secondly, uncertainty makes price peaks less likely and thus increases them in height.

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**Die Vorträge zum Operations Research wenden sich an alle Interessierten!**

Bei Rückfragen wenden Sie sich bitte an:

Prof. Dr. Oliver Grothe, Institut für Operations Research.