



## Wind Energy for Power Generation

By Kenneth Eloghene Okedu

LAP Lambert Acad. Publ. Mrz 2011, 2011. Taschenbuch. Condition: Neu. Neuware - The grid codes require taking into account the reactive power of the wind farm/park in order to contribute to the network stability, thus operating the wind farm as active compensator device. This book gives a comparative study of stabilizing wind farms using flexible ac transmission systems (FACTS) units like the (Static Synchronous Compensator) STATCOM and the variable speed wind turbines like the Doubly Fed Induction Generators (DFIGs) during wind speed change and grid fault. Both systems can provide reactive power to the wind farms during dynamic and transient conditions. Simulation analyses were carried out in laboratory standard simulation software called power system computer aided design/electromagnetic transient including DC (PSCAD/EMTDC). The simulated results show that the wind farms could be effectively stabilized with both systems. However, the cost is reduced with the DFIGs system because, apart from generating electric power during steady state, it can also provide reactive power through its frequency converters to stabilize the wind farms without the need of an external reactive power compensation units like the STACOM. 172 pp. Englisch.



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### Reviews

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