

Springer Series in Reliability Engineering

George Anders • Alfredo Vaccaro (Eds.)

Innovations in Power Systems Reliability



Springer

Contents

Strategies and Roadmaps to Meet Grid Challenges for Safety and Reliability	1
Vahid Madani and Roger L. King	
Optimal Maintenance Policies for Power Equipment	13
George J. Anders	
Mathematical and Physical Properties of Reliability Models in View of their Application to Modern Power System Components	59
Elio Chiodo and Giovanni Mazzanti	
Adequacy Assessment of Wind-Integrated Composite Generation and Transmission Systems	141
Roy Billinton, Yi Gao, Dange Huang and Rajesh Karki	
Strategic Lines and Substations in an Electric Power Network	169
Alvaro Torres and George J. Anders	
Transmission Expansion Planning: A Methodology to Include Security Criteria and Uncertainties Using Optimization Techniques	191
Armando M. Leite da Silva, Leandro S. Rezende and Luiz Antônio F. Manso	
The Economic Evaluation of System Security Criterion in a Competitive Market Environment	221
Teoman Güler, George Gross, Eugene Litvinov and Ron Coutu	
Probabilistic Transient Stability Assessment and On-Line Bayes Estimation	259
Elio Chiodo and Davide Lauria	

Updating System Representation by Trajectory Acquisition in a Dynamic Security Framework.	313
Sergio Bruno and Massimo La Scala	
Reliable Algorithms for Power Flow Analysis in the Presence of Data Uncertainties.	329
A. Dimitrovski, K. Tomsovic and A. Vaccaro	
Index	359