1. Record Nr.   UNINA9910815521303321

   Titolo   Handbook of power systems . I / / Steffen Rebennack ...[et. al.], editors

   Pubbl/distr/stampa   Berlin ; ; Heidelberg, : Springer-Verlag, 2010

   ISBN   1-282-98273-7
                        9786612982736
                        3-642-02493-9

   Edizione   [1st ed. 2010.]

   Descrizione fisica   1 online resource (513 p.)

   Collana   Energy systems, , 1867-8998

   Altri autori (Persone) RebennackSteffen

   Disciplina   621.3191

   Soggetti   Power resources
                        Electrical engineering

   Lingua di pubblicazione Inglese

   Formato   Materiale a stampa

   Livello bibliografico Monografia

   Note generali   Description based upon print version of record.

   Nota di bibliografia Includes bibliographical references and index.

   Nota di contenuto   Operation planning -- Constructive Dual DP for Reservoir Optimization
                        -- Long- and Medium-term Operations Planning and Stochastic
                        Modelling in Hydro-dominated Power Systems Based on Stochastic Dual
                        Dynamic Programming -- Dynamic Management of Hydropower-
                        Irrigation Systems -- Latest Improvements of EDF Mid-term Power
                        Generation Management -- Large Scale Integration of Wind Power
                        Generation -- Optimization Models in the Natural Gas Industry --
                        Integrated Electricity–Gas Operations Planning in Long-term
                        Hydroscheduling Based on Stochastic Models -- Recent Progress in
                        Two-stage Mixed-integer Stochastic Programming with Applications to
                        Power Production Planning -- Dealing With Load and Generation Cost
                        Uncertainties in Power System Operation Studies: A Fuzzy Approach --
                        OBDD-Based Load Shedding Algorithm for Power Systems -- Solution
                        to Short-term Unit Commitment Problem -- A Systems Approach for
                        the Optimal Retrofitting of Utility Networks Under Demand and Market
                        Uncertainties -- Co-Optimization of Energy and Ancillary Service
                        Markets -- Expansion planning -- Investment Decisions Under
                        Uncertainty Using Stochastic Dynamic Programming: A Case Study of
                        Wind Power -- The Integration of Social Concerns into Electricity Power
                        Planning: A Combined Delphi and AHP Approach -- Transmission
                        Network Expansion Planning Under Deliberate Outages -- Long-term

and Expansion Planning for Electrical Networks Considering Uncertainties -- Differential Evolution Solution to Transmission Expansion Planning Problem -- Agent-based Global Energy Management Systems for the Process Industry -- Optimal Planning of Distributed Generation via Nonlinear Optimization and Genetic Algorithms.

Sommario/riassunto	Energy is one of the world`s most challenging problems, and power systems are an important aspect of energy related issues. This handbook contains state-of-the-art contributions on power systems modeling and optimization. The book is separated into two volumes with six sections, which cover the most important areas of energy systems. The first volume covers the topics operations planning and expansion planning while the second volume focuses on transmission and distribution modeling, forecasting in energy, energy auctions and markets, as well as risk management. The contributions are authored by recognized specialists in their fields and consist in either state-of-the-art reviews or examinations of state-of-the-art developments. The articles are not purely theoretical, but instead also discuss specific applications in power systems.