

<<发电、运行与控制>>

图书基本信息

书名：<<发电、运行与控制>>

13位ISBN编号：9787302076926

10位ISBN编号：7302076928

出版时间：2003-12

出版时间：清华大学出版社

作者：伍德

页数：569

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

## <<发电、运行与控制>>

### 内容概要

本系列教材的读者对象为信息技术学科和电气工程学科所属各专业的本科生，同时兼顾其他工程学科专业的本科生或研究生。

本系列教材，既可采用作为相应课程的教材或教学参考书，也可提供作为工作于各个技术领域的工程师和技术人员的自学读物。

<<发电、运行与控制>>

作者简介

Allen J.Wood : 美国Rensselaer Polytechnic Institute电力工程研究生部客座教授 , Power Technologiien , Inc. ( 纽约 ) 资深独立顾问。  
曾任美国电气及电子工程师学会 ( IEEE ) 电力工程教育委员会主席。

## 书籍目录

Preface to the Second Edition  
 Preface to the First Edition  
 1 Introduction 1.1 Purpose of the Course 1.2 Course Scope 1.3 Economic Importance 1.4 Problems: New and Old Further Reading  
 2 Characteristics of Power Generation Units 2.1 Characteristics of Steam Units 2.2 Variations in Steam Unit Characteristics 2.3 Cogeneration Plants 2.4 High-Temperature Moderated Nuclear Reactor Units 2.5 Hydroelectric Units Appendix: Typical Generation Data References  
 3 Economic Dispatch of Thermal Units and Methods of Solution 3.1 The Economic Dispatch Problem 3.2 Thermal System Dispatching with Network Losses Considered 3.3 The Lambda-Iteration Method 3.4 Gradient Methods of Economic Dispatch 3.5 Newton's Method 3.6 Economic Dispatch with Piecewise Linear Cost Functions 3.7 Economic Dispatch Using Dynamic Programming 3.8 Base Point and Participation Factors 3.9 Economic Dispatch Versus Unit Commitment Appendix 3A: Optimization within Constraints Appendix 3B: Dynamic-Programming Applications Problems Further Reading  
 4 Transmission System Effects 4.1 The Power Flow Problem and Its Solution 4.2 Transmission Losses Appendix: Power Flow Input Data for Six-Bus System Problems Further Reading  
 5 Unit Commitment 5.1 Introduction 5.2 Unit Commitment Solution Methods Appendix: Dual Optimization on a Nonconvex Problem Problems Further Reading  
 6 Generation with Limited Energy Supply 6.1 Introduction 6.2 Take-or-Pay Fuel Supply Contract 6.3 Composite Generation Production Cost Function 6.4 Solution by Gradient Search Techniques 6.5 Hard Limits and Slack Variables 6.6 Fuel Scheduling by Linear Programming Appendix: Linear Programming Problems Further Reading  
 7 Hydrothermal Coordination 7.1 Introduction 7.2 Hydroelectric Plant Models 7.3 Scheduling Problems 7.4 The Short-Term Hydrothermal Scheduling Problem 7.5 Short-Term Hydro-Scheduling: A Gradient Approach 7.6 Hydro-Units in Series (Hydraulically Coupled) 7.7 Pumped-Storage Hydroplants 7.8 Dynamic-Programming Solution to the Hydrothermal Scheduling Problem 7.9 Hydro-Scheduling Using Linear Programming Appendix: Hydro-Scheduling with Storage Limitations Problems Further Reading  
 8 Production Cost Models 8.1 Introduction 8.2 Uses and Types of Production Cost Programs 8.3 Probabilistic Production Cost Programs 8.4 Sample Computation and Exercise Appendix: Probability Methods and Uses in Generation Planning Problems Further Reading  
 9 Control of Generation 9.1 Introduction 9.2 Generator Model 9.3 Load Model 9.4 Prime-Mover Model 9.5 Governor Model 9.6 Tie-Line Model 9.7 Generation Control Problems Further Reading  
 10 Interchange of Power and Energy 10.1 Introduction 10.2 Economy Interchange between Interconnected Utilities 10.3 Interutility Economy Energy Evaluation 10.4 Interchange Evaluation with Unit Commitment 10.5 Multiple-Utility Interchange Transactions 10.6 Other Types of Interchange 10.7 Power Pools 10.8 Transmission Effects and Issues 10.9 Transactions Involving Nonutility Parties Problems Further Reading  
 11 Power System Security 11.1 Introduction 11.2 Factors Affecting Power System Security 11.3 Contingency Analysis: Detection of Network Problems Appendix 11A: Calculation of Network Sensitivity Factors Appendix 11B: Derivation of Equation 11.14 Problems Further Reading  
 12 An Introduction to State Estimation in Power Systems 12.1 Introduction 12.2 Power System State Estimation 12.3 Maximum Likelihood Weighted Least-Squares Estimation 12.4 State Estimation of an AC Network 12.5 State Estimation by Orthogonal Decomposition 12.6 An Introduction to Advanced Topics in State Estimation 12.7 Application of Power Systems State Estimation Appendix: Derivation of Least-Squares Equations Problems Further Reading  
 13 Optimal Power Flow 13.1 Introduction 13.2 Solution of the Optimal Power Flow 13.3 Linear Sensitivity Analysis 13.4 Linear Programming Methods 13.5 Security-Constrained Optimal Power Flow 13.6 Interior Point Algorithm 13.7 Bus Incremental Costs Problems Further Reading Appendix: About the Software  
 Index

<<发电、运行与控制>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介, 请支持正版图书。

更多资源请访问:<http://www.tushu007.com>