DESCRIPTION

The definitive textbook for Power Systems students, providing a grounding in essential power system theory while also focusing on practical power engineering applications.

*Electric Power Systems* has been an essential book in power systems engineering for over thirty years. Bringing the content firmly up-to-date whilst still retaining the flavour of Weedy's extremely popular original, this *Fifth Edition* has been revised by experts Nick Jenkins, Janaka Ekanayake and Goran Strbac. This wide-ranging text still covers all of the fundamental power systems subjects but is now expanded to cover increasingly important topics like climate change and renewable power generation. Updated material includes an analysis of today's markets and an examination of the current economic state of power generation. The physical limits of power systems equipment - currently being tested by the huge demand for power - is explored, and greater attention is paid to power electronics, voltage source and power system components, amongst a host of other updates and revisions.

- Supplies an updated chapter on power system economics and management issues and extended coverage of power system components. Also expanded information on power electronics and voltage source, including VSC HVDC and FACTS.
- Updated to take into account the challenges posed by different world markets, and pays greater attention to up-to-date renewable power generation methods such as wind power.
- Includes modernized presentation and greater use of examples to appeal to today's students, also retains the end of chapter questions to assist with the learning process. Also shows students how to apply calculation techniques.
ABOUT THE AUTHOR

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Nick is a Professor at the Cardiff School of Engineering. He is also the Director of the Centre for Integrated Renewable Energy Generation and Supply (CIREGS) at Cardiff University and is a special advisor to a House of Commons Select Committee (Innovation, Universities and Skills) in regard to their enquiries into Renewable Energy-Generation Technologies. He has set the Engineering Council examination on Power Systems for ten years.

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Goran is Professor of Electrical Energy Systems at Imperial College, London. He is also the Director of the DTI Centre for Distributed Generation and Sustainable Electrical Energy, the Convener of CIGRE International Working Group on Economics of Integration of Distributed Generation and a member of the Executive Team of the IEE Professional Network on Power Trading and Control. He is a co-author of 3 books and has published more than 100 scientific papers.

NEW TO EDITION

Updated material includes an analysis of today’s markets and an examination of the current economic state of power generation. The physical limits of power systems equipment - currently being tested by the huge demand for power - is explored, and greater attention is paid to power electronics, voltage source and power system components, amongst a host of other updates and revisions.

Designed to be more reader-friendly, this edition puts greater emphasis on providing a thorough theoretical grounding in power engineering basic principles (including electromagnetism, network analysis and control theory) before moving onto the practical applications, which is still the primary focus of the book. The inclusion of more examples, the highlighting of advanced topics and the guiding of students through the steps of applying calculation techniques, all contribute towards making this Fifth Edition the ultimate learning resource.
FEATUR ES

• A new edition of a well established and widely used textbook, featuring broad, comprehensive coverage of power system analysis and power system technologies including electromagnetism, network theory and control systems.

• Supplies an updated chapter on power system economics and management issues and extended coverage of power system components. Also expanded information on power electronics and voltage source, including VSC HVDC and FACTS.

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