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Sommario/riassunto

A comprehensive resource that provides the basic concepts of electric power systems, microeconomics, and optimization techniques Electricity Markets: Theories and Applications offers students and practitioners a clear understanding of the fundamental concepts of the economic theories, particularly microeconomic theories, as well as information on some advanced optimization methods of electricity markets. The authors - noted experts in the field - cover the basic drivers for the transformation of the electricity industry in both the United States and around the world and discuss the fundamentals of power system operation, electricity market design and structures, and electricity market operations. The text also explores advanced topics of power system operations and electricity market design and structure including zonal versus nodal pricing, market performance and market power issues, transmission pricing, and the emerging problems electricity markets face in smart grid and micro-grid environments. The authors also examine system planning under the context of electricity market regime. They explain the new ways to solve problems with the tremendous amount of economic data related to power systems that is now available. This important resource: . Introduces fundamental economic concepts necessary to understand the operations and functions of electricity markets. Presents basic characteristics of power systems and physical laws governing operation. Includes mathematical optimization methods related to electricity markets and their applications to practical market clearing issues Electricity Markets: Theories and Applications is an authoritative text that explores the basic concepts of the economic theories and key information on advanced optimization methods of electricity markets.

