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Nota di contenuto	Contents; Preface; 1. A Survey of Electricity and Related Markets; 1.1 The electricity markets; 1.1.1 Electricity contracts with physical delivery .; 1.1.2 Financial electricity contracts; 1.2 The gas market; 1.2.1 Futures and options on gas; 1.3 The temperature market; 1.4 Other related energy markets; 1.5 Stochastic modelling of energy markets; 1.5.1 Spot price modelling; 1.5.2 Forward and swap pricing in electricity and related markets; 1.6 Outline of the book; 2. Stochastic Analysis for Independent Increment Processes; 2.1 Definitions 2.2 Stochastic integration with respect to martingales 2.3 Random jump measures and stochastic integration; 2.4 The Levy-Kintchine decomposition and semimartingales; 2.5 The It Formula for semimartingales; 2.6 Examples of independent increment processes; 2.6.1 Time-in homogeneous compound Poisson process; 2.6.2 Models based on the generalized hyperbolic distributions; 2.6.3 Models based on the Variance-Gamma and CGMY distributions; 3. Stochastic Models for the Energy Spot Price Dynamics; 3.1 Introduction; 3.2.1 Geometric models; 3.2.2 Arithmetic models

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Sommario/riassunto

The markets for electricity, gas and temperature have distinctive features, which provide the focus for countless studies. For instance, electricity and gas prices may soar several magnitudes above their normal levels within a short time due to imbalances in supply and demand, yielding what is known as spikes in the spot prices. The markets are also largely influenced by seasons, since power demand for heating and cooling varies over the year. The incompleteness of the markets, due to nonstorability of electricity and temperature as well as limited storage capacity of gas, makes spot-forward
