

## Energy Power Risk

Derivatives, Computation and Optimization

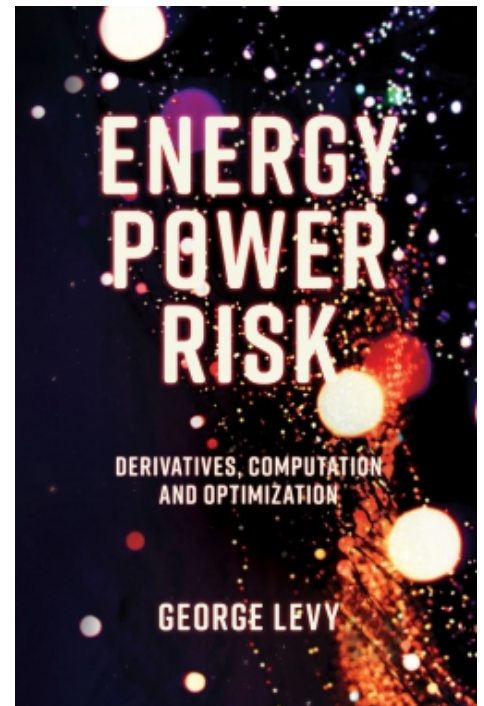
George Levy

### About the Book

*Energy Power Risk: Derivatives, Computation and Optimization* is a comprehensive guide presenting the latest mathematical and computational tools required for the quantification and management of energy power risk. Written by a practitioner with many years' experience in the field, it provides readers with valuable insights in to the latest practices and methodologies used in today's markets, showing readers how to create innovative quantitative models for energy and power risk and derivative valuation.

The book begins with an introduction to the mathematics of Brownian motion and stochastic processes, covering Geometric Brownian motion, Ito's lemma, Ito's Isometry, the Ornstein Uhlenbeck process and more. It then moves on to the simulation of power prices and the valuation of energy derivatives, before considering software engineering techniques for energy risk and portfolio optimization. The book also covers additional topics including wind and solar generation, intraday storage, generation and demand optionality.

Written in a highly practical manner and with example C++ and VBA code provided throughout, *Energy Power Risk: Derivatives, Computation and Optimization* will be an essential reference for quantitative analysts, financial engineers and other practitioners in the field of energy risk management, as well as researchers and students interested in the industry and how it works.



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