

# LOW CARBON ENERGY TECHNOLOGIES IN SUSTAINABLE ENERGY SYSTEMS

EDITED BY GRIGORIOS L. KYRIAKOPOULOS

*Provides a technical and economic foundation for researchers and practitioners seeking to scale-up innovative low carbon energy technologies into sustainable energy systems*

## Key Features

- Combines socio-cultural perspectives, environmental sustainability, and economic feasibility in the analysis of low carbon energy technologies.
- Assesses regulatory governance impacting the environmental protection and the social cohesion of environmentally directed energy markets.
- Reviews the carbon trade exchange, attributing economic value to carbon and enabling its trading perspectives by individuals, energy and industrial policy makers, companies or countries investing in low carbon technologies.

*Low Carbon Energy Technologies for Sustainable Energy Systems* examines, investigates, and integrates current research aimed at operationalizing low carbon technologies within complex transitioning energy economies. Scholarly research has traditionally focused on the technical aspects of exploitation, R&D, operation, infrastructure, and decommissioning, while approaches which can realistically inform their reception and scale-up across real societies and real markets are piecemeal and isolated in separate literatures. Addressing both the technical foundations of each technology together with the sociotechnical ways in which they are spread in markets and societies, this work integrates the technoeconomic assessment of low carbon technologies with direct discussion on legislative and regulatory policies in energy markets. Chapters address issues, such as social acceptance, consumer awareness, environmental valuation systems, and the circular economy, as low carbon technologies expand into energy systems sustainability, sensitivity, and stability. This collective research work is relevant to both researchers and practitioners working in sustainable energy systems. The combination of these features makes it a timely book that is useful and attractive to university students, researchers, academia, and public or private energy policy makers.

## About the Editor

**Grigorios L. Kyriakopoulos** is a doctor in the School of Electrical and Computer Engineering, National Technical University of Athens, Greece. He (co)authored 55 papers at 34 journals, 11 invited book chapters, and 30 papers at conferences, all received more than 800 citations. He is the reviewer of 3800 manuscripts at 260 journals. His research interests are Engineering, Environmental Systems and Remediation, Energy, and Renewable Energy Sources.



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