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Nota di contenuto	Part I: Energy Security -- Chapter 1. Sustainable Energy Security For India—An Indicator-Based Approach -- Chapter 2. The Tertiary Economy: A Threat to the Global Economy -- Chapter 3. Measuring Energy Security of China -- Chapter 4. Financial Issues Affecting Energy Security -- Chapter 5. Leveraging Renewable Energy Certificate Market

for Attaining Sustainable Energy Security for India -- Part II: Energy Analysis and Modeling -- Chapter 6. Energy Concepts for Smart Cities -- Chapter 7. Low-carbon planning in a resource-constrained electricity system: A case study from India -- Chapter 8. Useful Work Transitions in Portugal, 1856–2009 -- Chapter 9. Energy Consumption In Tunisia Over 1990–2008: A Decomposition Analysis Using Logarithmic Mean Divisia Index Technique -- Chapter 10. Access and Transition to LPG Cooking Fuel by Households in Rural India: An Assessment of Policy and Action -- Chapter 11. Domestic Energy Consumption Pattern in Maharashtra -- Part III: Energy Technology Assessment -- Chapter 12. Environmental Life Cycle Analysis of Non Conventional Thin-Film Photovoltaics: the Case of Dye-Sensitized Solar Devices -- Chapter 13. A critical analysis of nuclear power development in India and Uranium demand forecast: A case study -- Chapter 14. A life-cycle assessment of Nuclear Electricity Systems -- Chapter 15. Adoption of smart grid technologies by electrical utilities in India: An exploratory study of issues and challenges -- Chapter 16. Adoption of Renewable Energy Technologies in Indian Railways: A Case Study of Two Workshops -- Part IV: Energy–Environment–Economy Nexus -- Chapter 17. Rebound Effect and Structural Change -- Chapter 18. Understanding the Formation of Costs and Environmental Impacts Using Exergy-Based Methods -- Chapter 19. Does energy intensity affect labour productivity in Indian firms? Preliminary estimates -- Chapter 20. Environmental Performance of Coal Power Generation in China -- Chapter 21. Characterizing Energy Poverty: Implications For Energy Access Policies -- Chapter 22. Development of power market in India—Opportunities and challenges -- Chapter 23. Changing Scenario of Indian Electricity Supply Industry: Study of Short-Term Power Market in India -- Chapter 24. Some Arguments for an Integrated Tool in Economic and Energy Valuation -- PART V: Energy Efficiency and Renewable Energy -- Chapter 25. Stakeholders' Perceptions of Bioenergy—Global Coverage and Policy Implications -- Chapter 26. Agricultural Residue-based Power Generation: A Viable Option in India -- Chapter 27. Energy dependence and potential for renewables: Analysis of future trends and potential for renewable energy development in Cambodia and Laos -- Chapter 28. Trade and Investment in Renewable Energy Technologies: A Study of BRICS -- Chapter 29. The Role of Biotechnology in Energy and Environment -- Part VI: Energy and Sustainability -- Chapter 30. Integration of emission reduction and environmental management goals for sustainable urban development -- Chapter 31. Microalgae for Sustainable Energy Production? -- Chapter 32. Energy sustainability issues in agriculture: Lessons from Developed and Developing countries.

Sommario/riassunto

This volume provides a systematic framework for energy suppliers, policy makers, academics, students, and all others interested in energy security, and analyzes key issues concerning energy, security and sustainability with the help of a wealth of data. While sustainability is the broadest objective, energy security is an important part of it, at the global, national and societal levels. The development of a sustainable, long-term solution to meeting the world's energy needs is a defining issue of our time, since central global challenges that the world faces—poverty alleviation, climate change, and environmental degradation—are directly linked to energy security. The contributions cover key issues in sustainable energy and illustrate that the insecurity of a majority of countries owes to internal factors which have more to do with market forces, inefficient technologies, lack of institutions, environmental insecurity, pricing mechanisms, etc., and less to do with

the international situation. The links between energy and development are both direct and indirect. Directly, energy provides several services and utilities to maintain human well-being, and also does so indirectly through stakeholders. This volume addresses both the direct and indirect links and provides sustainable alternatives, helping readers to better grasp the resilience of both socio-economic and resource sub-systems in the process. The issues affecting energy supply and demand, including technology portfolios, environmental considerations and consumer attitudes are thoroughly discussed. One of the critical questions that arises is how to facilitate energy investment. The investment climate and the key issues involved are analyzed, including: the capital flows with reasonable and stable investment frameworks, timely decision-making by governments, and open markets. The broad objective of the volume is to foster a deeper understanding of the concept of energy security and to identify the methods of analysis, policy initiatives and future research needed to generate a balanced pattern of energy use and mitigate its impact on humanity and the environment.