

1. Record Nr.	UNINA9910437929803321
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Titolo	Electricity economics : production functions with electricity / / Zhaoguang Hu, Zheng Hu
Pubbl/distr/stampa	New York : , : Springer, , 2013
ISBN	3-642-40757-9
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (xv, 441 pages) : illustrations (some color)
Collana	Gale eBooks
Disciplina	333.79
Soggetti	Electric utilities Electric power consumption
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Production Functions with Electricity: The Enterprise Level -- Production Functions with Electricity: The Sectoral Level -- The Supply and Demand Models Based on Electricity Consumption -- Production Functions with Electricity: The Industrial Level -- E-GDP Functions for a National Economy -- The Characteristics of Gene in an Economy -- Energy Intensity and Electrification -- Features of Electricity Consumption During the Economic Development Stages -- Up-industrialization -- E-GDP Functions for the World and Particular Countries -- Macroeconomic and Policy Models -- Updates of the Input-output Table and the Electricity Input-output Table -- Impact Factors of Industrial Electricity Demand -- Models of Electricity with Capital and Labor.
Sommario/riassunto	Electricity Economics: Production Functions with Electricity studies the production output from analyzing patterns of electricity consumption. Since electricity data can be used to measure scenarios of economic performance due to its accuracy and reliability, it could therefore also be used to help scholars explore new research frontiers that directly and indirectly benefits human society. Our research initially explores a similar pattern to substitute the Cobb-Douglas function with the production function with electricity to track and forecast economic activities. The book systematically introduces the theoretical frameworks and mathematical models of economics from the perspective of electricity consumption. The E-GDP functions are

presented for case studies of more than 20 developed and developing countries. These functions also demonstrate substantial similarities between human DNA and production functions with electricity in terms of four major characteristics, namely replication, mutation, uniqueness, and evolution. Furthermore, the book includes extensive data and case studies on the U.S., China, Japan, etc. It is intended for scientists, engineers, financial professionals, policy makers, consultants, and anyone else with a desire to study electricity economics as well as related applications. Dr. Zhaoguang Hu is the vice president and chief energy specialist at the State Grid Energy Research Institute, China. Zheng Hu is a PhD candidate at the Center for Energy and Environmental Policy, University of Delaware, USA.

2. Record Nr. UNINA9910869165103321

Titolo

The 8th International Conference on Advances in Construction Machinery and Vehicle Engineering : ICACMVE 2023 / / edited by Saman K. Halgamuge, Hao Zhang, Dingxuan Zhao, Yongming Bian

Pubbl/distr/stampa

Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024

ISBN

9789819718764
9819718767

Edizione

[1st ed. 2024.]

Descrizione fisica

1 online resource (XXIV, 1323 p. 929 illus., 776 illus. in color.)

Collana

Lecture Notes in Mechanical Engineering, , 2195-4364

Disciplina

660

Soggetti

Production engineering
Industrial engineering
Railroad engineering
Mechanical Process Engineering
Industrial and Production Engineering
Rail Vehicles

Lingua di pubblicazione

Inglese

Formato

Materiale a stampa

Livello bibliografico

Monografia

Nota di contenuto

1. Mechanical Design and Power System Modeling -- 2. Mechanical Control and Fault Monitoring Analysis -- 3. Intelligent Manufacturing

Sommario/riassunto

This open access book presents select contributions from the 8th International Conference on Advances in Construction Machinery and Vehicle Engineering (ICACMVE 2023), focusing on the recent advances and best practices of Construction Machinery and Vehicle Engineering, related technologies and sciences to meet the challenges in mechanical design, mechanical control and smart manufacturing. The contents focus on design engineering, automation in engineering, construction machinery, intelligence applications, new energy and others. Some of the topics discussed here include advanced manufacturing technologies, industrial engineering and automation, design of mechanical systems, control engineering, automobile engineering, performance analysis of energy systems, thermal modelling and simulations of different systems, optimization and intelligence. The wide range of topics presented in this book will be useful for beginners, researchers, and mechanical engineering professionals.
