1. Record Nr. UNINA9910568285503321

Titolo	Control of Smart Buildings : An Integration to Grid and Local Energy Communities / / edited by Anuradha Tomar, Phuong H. Nguyen, Sukumar Mishra
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2022
ISBN	981-19-0375-1
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (277 pages)
Collana	Studies in Infrastructure and Control, , 2730-6461
Disciplina	333.7962
Soggetti	Sustainable architecture Automatic control Electric power production Renewable energy sources Sustainable Architecture/Green Buildings Control and Systems Theory Electrical Power Engineering Renewable Energy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	An Introduction to Smart Building Energy Management -- The Influence of the Increasing Penetration of Photovoltaic Generation on Integrated Transmission-Distribution Power Systems -- Building Energy Management -- Demand-side Management And Peak Load Reduction -- Demand Response in Smart Buildings -- Building Services with the Local Energy Community- Applications -- Energy Solutions for Smart Buildings Integrated with Local Energy Communities -- Advanced Technologies for Smart Building Management: Linking Building Components and Energy Use -- Applications to Building Services with the Local Energy Community -- Optimization in Grid-Interactive Buildings -- Cost-Benefit and Short-term Power Flow Analysis of Grid Integrated Residential Photovoltaic-Battery Energy System.
Sommario/riassunto	This book provides an overview of how efficient building energy management can be done, considering the increasing importance of renewable energy integration. It also includes the grid-interactive

building, their control, energy management, and optimization techniques to promote better understanding among researchers and business professionals in the utility sector and across industries. This book is written and edited by leading specialists active in concurrent developments in smart building management, renewable energy research, and application-driven R&D. The experiences and research work shared help the readers in enhancing their knowledge in the field of renewable energy, power engineering, building energy management, demand, and supply management and learn the technical analysis of the same in an insightful manner. Additionally, established and emerging applications related to applied areas like smart cities, the Internet of things, machine learning, artificial intelligence, etc., are developed and utilized to demonstrate recent innovations in smart building energy management.