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Soggetti	Renewable energy resources Buildings - Repair and reconstruction Buildings—Repair and reconstruction Energy consumption Sustainable development Energy systems Sustainable architecture Renewable and Green Energy Building Repair and Maintenance Energy Efficiency Sustainable Development Energy Systems Sustainable Architecture/Green Buildings
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Major Renovation and Deep Energy Retrofit -- Deep vs. Shallow Energy Retrofit -- Development of the DER Scope from the Business Perspective -- Cost Effectiveness Calculation in the Real Estate Sector -- International Regulation Framework -- Income Related Real Estate Evaluation: Gross Rental Method (GRM) and Discounted Cash-Flow Method -- DER and Green Building Values in Public and Non-public Sectors -- Increasing Available Floor Space -- Conclusions: Life Cycle Cost Analysis and Optimization -- Financing Instruments -- Loan

Financing, Credit Lines, Revolving Funds, Preferential Loans -- Soft Loans / Dedicated Credit Lines -- Project Finance, Non-Recourse and Recourse Finance — Refinancing of ESCO -- Forfeiting -- Performance Based Financing Instrument -- Business Models – Definitions and Introduction -- Energy (Saving) Performance Contracting (Private Funding) Model EPC/Energy Savings Performance Contract (ESPC) -- Blended Funding (Public and Private Combined Funding) -- Advanced DER EPC Business Model -- A Tools for Investors -- Conclusions.

Sommario/riassunto

This book provides detailed information on how to set up Deep Energy Retrofits (DERs) in public buildings, and shares in-depth insights into the current status of the major technologies, strategies and practical best practice examples of how to cost-effectively combine them. Case studies from Europe are analyzed with respect to energy use before and after renovation, reasons for undertaking the renovation, co-benefits achieved, resulting cost-effectiveness, and the business models employed. The building sector holds the potential for tremendous improvements in terms of energy efficiency and reducing carbon emissions, and energy retrofits to the existing building stock represent a significant opportunity in the transition to a low-carbon future. Moreover, investing in highly efficient building materials and systems can replace long-term energy imports, contribute to cost cutting, and create a wealth of new jobs. Yet, while the technologies needed in order to improve energy efficiency are readily available, significant progress has not yet been made, and “best practices” for implementing building technologies and renewable energy sources are still relegated to small “niche” applications. Offering essential information on Deep Energy Retrofits, the book offers a valuable asset for architects, public authorities, project developers, and engineers alike.
