1. Record Nr. UNINA9910639891403321

Autore	Ozarisoy Bertug
Titolo	Handbook of Retrofitting High Density Residential Buildings : Policy Design and Implications on Domestic Energy Use in the Eastern Mediterranean Climate of Cyprus / / by Bertug Ozarisoy, Hasim Altan
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-031-11854-5
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (942 pages)
Disciplina	970.00497 696.095693
Soggetti	Architecture Buildings - Environmental engineering Sustainable architecture Buildings Buildings - Design and construction Building Physics, HVAC Sustainable Architecture/Green Buildings Building Types and Functions Building Construction and Design
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Energy efficiency directives and policy aspirations in retrofit interventions -- Chapter 3. Methods and Tools -- Chapter 4. The significance of occupancy patterns and household habitual adaptive behaviour on home energy performance -- Chapter 5. A field study investigation to assess on households' thermal discomfort and overheating risk of buildings -- Chapter 6. A field study investigation on the regression forecasting "neutral" adaptive thermal comfort -- Chapter 7. A Developing a novel methodology to calibrate building energy performance of social housing estates – Building diagnostics, energy audit and energy forecasting -- Chapter 8. A novel methodological framework for building optimization of social housing estate – Policy design and life

cycle cost impact analysis of retrofit strategies -- Chapter 9. Developing an evidence-based energy policy framework to asset robust energy performance evaluation and certification schemes -- Chapter 10. Conclusions and future recommendations.

Sommario/riassunto

This book investigates energy use and measures to improve the energy efficiency of public housing, using post-war social housing development estates in Cyprus as its example. On this Mediterranean island, which experiences hot and humid temperatures throughout the year, residential buildings need to adapt to the climate to improve the thermal comfort of their occupants. The book assesses the domestic energy use of inefficiently built residential tower blocks and their occupants' thermal comfort by considering the significant impact of overheating risks on energy consumption and occupants' thermal comfort and well-being, with the intention of evaluating the current energy performance of base-case representative residential tower blocks (RTBs). In particular, considering the cooling energy demand in the summer, using Famagusta, Cyprus as a case study. It seeks to identify the impact of occupancy patterns and habitual adaptive behaviour of households on home energy performance in orderto provide bases for the information needed to calibrate building energy performance of targeted households.