Record Nr. UNINA9910299596603321 Autore Oladokun Michael Gbolagade Titolo Simulation-Based Analysis of Energy and Carbon Emissions in the Housing Sector: A System Dynamics Approach / / by Michael Gbolagade Oladokun, Clinton Ohis Aigbavboa Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2018 3-319-75346-0 **ISBN** Edizione [1st ed. 2018.] 1 online resource (304 pages) Descrizione fisica Collana Green Energy and Technology, , 1865-3529 Disciplina 307.1216 Soggetti Energy policy Sustainable architecture Buildings—Design and construction Building Construction Engineering, Architectural Climatic changes **Physics Energy consumption** Energy Policy, Economics and Management Sustainable Architecture/Green Buildings **Building Construction and Design** Climate Change/Climate Change Impacts Numerical and Computational Physics, Simulation **Energy Efficiency** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia General Introduction -- Energy and Carbon Emissions in Housing --Nota di contenuto The Socio-Technical Systems of Energy and Carbon Emissions in Housing -- The System Dynamics Modelling Method -- System Dynamics Application to Housing Energy and Carbon Emissions in the UK -- Simulation of Energy and Carbon Emissions in Housing -- Policy

Analysis -- Conclusions and Reflections.

Sommario/riassunto

This book describes the development of a system dynamics-based model that can capture the future trajectories of housing energy and carbon emissions. It approaches energy and carbon emissions in the housing sector as a complex socio-technical problem involving the analysis of intrinsic interrelationships among dwellings, occupants and the environment. Based on an examination of the UK housing sector but with relevance worldwide, the book demonstrates how the systems dynamics simulation can be used as a learning laboratory regarding future trends in housing energy and carbon emissions. The authors employ a pragmatic research strategy, involving the collection of both qualitative and quantitative data to develop a model. The book enriches readers' understanding of the complexity involved in housing energy and carbon emissions from a systems-thinking perspective. As such, it will be of interest to researchers in the fields of architectural engineering, housing studies and climate change, while also appealing to industry practitioners and policymakers specializing in housing energy.