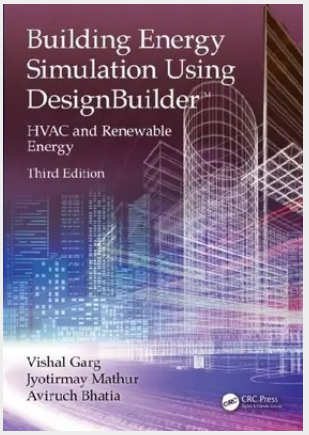
Garg / Mathur / Bhatia

# Building Energy Simulation Using DesignBuilder(TM)

HVAC and Renewable Energy




**147,50 €**
147,50 € (zzgl. MwSt.)

*vorbestellbar, Erscheinungstermin ca. Mai 2026*

This book focuses on heating, ventilation, and air conditioning (HVAC) systems and photovoltaics as a medium to improve energy efficiency and energy generation, respectively. It covers heating and cooling design including simulating different types of HVAC systems from the lens of energy efficiency, and evaluation of the impact of photovoltaics for energy generation. It elaborates upon the cost–benefit analysis, sensitivity assessments, addressing uncertainties for different building components, building energy code compliance for HVAC systems. It also features simulation project case studies. It also does the following: • Explains simulation of different types of air conditioning systems such as unitary, variablerefrigerant-flow, and centralized • Explores the analysis of individual components of centralized HVAC systems • Covers the simulation of on-site photovoltaic systems by looking at their placement and its effect on energy generation • Encompasses cost analysis, sensitivity evaluations, and uncertainty analysis for different building components • Inculcates real-life examples and exercises for application and reinforcement of concepts It is aimed at students, researchers in building energy (simulation)/building design courses, energy simulation professionals, architects, and so forth.

Building Energy Simulation: A Workbook Using DesignBuilder concludes with this second volume of the comprehensive, tutorial-based energy simulation training series. This advanced volume focuses on mechanical systems and economic analysis, covering air-conditioning design, photovoltaic integration, and project costing methodologies. It includes topics on simulating HVAC components such as chillers, boilers, air handling units, heat recovery systems, and HVAC controls. This volume also addresses advanced topics like integrating thermal storage for demand response, renewable energy integration, cost-benefit evaluations, sensitivity and uncertainty analysis.Features: - Focuses on learning building energy simulation while being interactive through examples and exercises. - Explains the building physics and the science behind the energy performance of buildings. - Encourages an integrated design approach by explaining the interactions between various building systems and their effect on energy performance of building. - Discusses a how-to model for building energy code compliance. - Provides hands-on training of building energy simulation tools: DesignBuilder(TM) and EnergyPlus. This book is intended for students and researchers in building energy courses, energy simulation professionals, and architects.

**Artikelnummer:** 9781032908755
**Medium:** Buch
**ISBN:** 978-1-032-90875-5
**Verlag:** Taylor & Francis Ltd
**Erscheinungstermin:** 12.05.2026
**Sprache(n):** Englisch
**Auflage:** 3. Auflage 2026
**Produktform:** Kartoniert
**Gewicht:** 453 g
**Seiten:** 406
**Format (B x H):** 178 x 254 mm



**Kundenservice Verlag Dr. Otto Schmidt KG**
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)