

Building Energy Simulation Using DesignBuilder(TM)

HVAC and Renewable Energy

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, variable refrigerant-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.

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, variable refrigerant-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.



362,50 €

362,50 € (zzgl. MwSt.)

vorbestellbar, Erscheinungstermin ca. Oktober 2026

Artikelnummer: 9781032913889

Medium: Buch

ISBN: 978-1-032-91388-9

Verlag: Taylor & Francis Ltd

Erscheinungstermin: 30.10.2026

Sprache(n): Englisch

Auflage: 3. Auflage 2026

Produktform: Gebunden

Gewicht: 453 g

Seiten: 406

Format (B x H): 178 x 254 mm

