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Autore	Hootman Thomas
Titolo	Net zero energy design [[electronic resource]] : a guide for commercial architecture // Thomas Hootman
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ISBN	1-118-34849-4 1-118-34516-9 1-283-64490-8 1-118-34848-6
Descrizione fisica	1 online resource (463 p.)
Disciplina	690/.520286
Soggetti	Architecture and energy conservation Commercial buildings - Energy conservation Commercial buildings - Environmental aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Net zero energy building overview -- The case for net zero energy buildings -- Defining net zero energy -- Building industry trends and standards -- Project conception and delivery -- The objective of net zero energy -- Project conception -- Project planning -- Project team selection -- Delivery methods -- Risks and rewards -- Integrated process -- Integrated delivery and management -- The project delivery phases -- Integrated design methods -- Building energy modeling -- Energy -- Energy basics -- Energy use intensity -- Energy targets -- Energy and thermal comfort -- Design fundamentals -- Energy design conditions -- Climate assessment -- Site assessment -- Building massing and geometry -- Building type and program -- Passive architecture -- Passive design -- Design science -- Building envelope -- Passive strategies -- Energy efficient building systems -- Active systems -- Basic concepts -- HVAC overview -- Low energy distribution -- Low energy primary equipment -- Domestic hot water -- Lighting -- District energy -- Renewable energy -- Renewable energy basics -- Solar power -- Solar thermal -- Wind -- Hydro -- Geothermal -- Biomass -- Fuel cells and hydrogen -- Economics --

Financial considerations -- Financial models -- Financial analysis --
Net zero energy and the real estate market -- Operations and
occupancy -- Building operations -- Plug loads -- Green behavior --
Net zero energy performance plan -- Net zero energy -- Net zero
energy balance -- Net zero energy measures -- Carbon neutrality --
Case study -- DOE/NREL research support facility.

Sommario/riassunto

Conveniently organized and packed with robust technical content and clear explanations of key principles. Written by an architect who is the director of sustainability at a global architecture firm, Net Zero Energy Design is a practical guide for architects and related construction professionals who want to design and build net zero energy commercial architecture. It offers no-nonsense strategies, step-by-step technical analysis, and valuable examples, in addition to developed case studies. With a focus on application in a variety of building types and scales, the book al
