

Whole House Heat Loss Gain Worksheet

 Summer Attic and Whole-house VentilationProceedings of a Workshop Held on July 13, 1978 at the National Bureau of Standards, Gaithersburg, MarylandEnergy Efficient ResidenceResearch ResultsWashington : U.S. Department of Housing & Urban Development, Office of Policy Development & Research, Sept. 1981.The Solar HousePassive Heating and CoolingChelsea Green Publishing

Published in association with the International Solar Energy Society, this four-volume set focusses on the latest research and development initiatives of experts involved in one of the fundamental issues facing society today: the global energy problem.

Microgeneration – producing energy for the home, in the home – is a substantial improvement over the current centralised and detached energy model employed the world over. Domestic Microgeneration is the first in-depth reference work for this exciting and emerging field of energy generation. It provides detailed reviews of ten state-of-the-art technologies: including solar PV and thermal, micro-CHP and heat pumps; and considers them within the wider context of the home in which they are installed and the way that they are operated. Alongside the many successes, this book highlights the common pitfalls that beset the industry. It offers best-practice guidance on how they can be avoided by considering the complex linkages between technology, user, installer and government. This interdisciplinary work draws together the social, economic, political and environmental aspects of this very diverse energy 'genre' into a single must-have reference for academics and students of sustainability and energy related subjects, industry professionals, policy makers and the growing number of energy-literate householders who are looking for ways to minimise their environmental footprint and their energy bills with microgeneration.

Energy Efficient Residence

NBS Building Science Series

Proceedings of the Biennial Congress of the International Solar Energy Society, Hamburg, Federal Republic of Germany, 13-18 September 1987

NBS Special Publication

Mechanical and Electrical Equipment for Buildings

Sustainable Design and Manufacturing 2019

Nowadays there is an ever growing awareness regarding inevitable importance of sustainable development and its sub topics such as environment protection, ecology, resource saving, energy efficiency, etc. Due to massive and rapid development in recent years, this topic is getting more crucial in developing countries for instance Iran. It is getting more obvious that most of the development activities in absence of precise analysis of current conditions, as well as impact of natural resources. The resources that is essential for further development of the country. Therefore, It is necessary to deal with sustainable development and environmental issues from the broader perspective, where includes items underlying immediate causes of environmental impact and at the same time tries to improve them. Sustainability or sustainable development is an umbrella covering many issues and aspects, among them energy, which is the key item, because energy consumption of buildings could have an impact on environment more than other aspects. Considering the huge portion of energy consumption in construction industry and housing sector, paying special attention to improvements in this sector is essential. Following this goal, the aim of this publication is to highlight procedures and practices which promote sustainable construction that is about creating a better quality of building and more healthy places to live in. Procedure of sustainable design includes various approaches and methods to develop energy efficient and environmentally sensitive buildings. Such approaches and methods demonstrate how to design, develop and construct all buildings in general and residential buildings in particular. Among various approaches towards sustainability, "Passive solar strategies" are well-known thanks to their cost efficiency and context friendliness of its principals and measures. The approach of passive design (architectural) strategies could be considered as the most applicable approach for resource saving and sustainability, thinking about special situation of Iran in particular and the Mena region in general. Such an approach requires paying special attention to climate, social characteristics of current or prospective inhabitants, topographical-physical characteristics as well as architectural characteristics of the understudied area. The relationships and interactions among society, building and its architecture and climate is "Site-specific" and dynamic. Therefore, they should be studied and properly analyzed throughout a specific project process for each certain place. The most expecting outcomes are precise definitions of passive design strategies, generally for buildings in MENA Region and especially for Iran. This publication is prepared in the young cities project framework, as the reasonable outcome of the developed pilot projects. The book starts with introducing the target group, related definitions and a brief overview on a conventional approach and its impact on environment. This chapter ends up with a brief review on benefits of applying sustainable guidelines. As the next step, after analyzing the climate and its relationship with thermal comfort and building, the main principals of passive solar design are introduced. The selected principles are: orientation, day-lighting, shading, thermal mass, insulation and ventilation. After a brief introduction of the principals, each one is explained in detail through its general principles and design strategies. Sustainable construction is examined based on its main pillars: construction systems, building elements, ecological building materials, and applicable measures for building physic. Construction systems are sorted out in six main groups as: block work- brick infill, block work- lightweight block infill, conventional panels, light weight steel frame, tunnel form structural system and precast modular. All selected systems are introduced based on following factors: brief description of the building concept, factory production, insulation, wastage, finishes, labor, installation, transport- lifting, services, hydronic cooling/ heating and safety. Then main building elements are examined. Here the elements are limited to: foundations, walls, floors, roofs, doors and windows. After a short description, different types of each element are introduced. Ecological building materials are investigated in chapter four. To find a base to compare, several common criteria are selected such as: embodied energy, pollution and waste, local production, reusability and recyclability, durability and interdependency. Applicable measures for building physic are examined in chapter five. The selected main measures are as follows: insulation, glazing, thermal mass, day-lighting, shading, ventilation and air-tightness. After describing the general principles of each measure, several recommendations in frame of design considerations are provided. Die enorme Bedeutung nachhaltiger Projekte wie Umweltschutz, Ökologie, sparsamer Umgang mit Rohstoffen, Energieeffizienz usw. dringt immer stärker in unser Bewusstsein. Aufgrund der massiven und rasanten Entwicklung in den Schwellenländern, z. B. Iran, gewinnen Umweltschutz und Nachhaltigkeit immer mehr an Relevanz. Ein einseitiges Wirtschaftswachstum, ohne Berücksichtigung ökologischer und klimatischer Bedingungen, verursacht die Zerstörung der Umwelt und Rohstoffe, Ressourcen, die für die weitere Entwicklung der Länder unverzichtbar sind. Es ist unumgänglich, sich umfassend mit nachhaltiger Entwicklung und ökologischen Aspekten auseinanderzusetzen, die unmittelbaren Auswirkungen auf die Umwelt zu erfassen und gleichzeitig Möglichkeiten einer Optimierung aufzuzeigen. Nachhaltigkeit und Umweltschutz erfassen eine Vielzahl von Themen und Aspekten, u. a. den Energieverbrauch; ein wesentlicher Faktor, da der Energieverbrauch in Gebäuden den größten Einfluss auf die Umweltbilanz hat. In Anbetracht des enormen Energieverbrauchs in Bauwirtschaft und Wohnungsbau ist es unerlässlich, gerade in diesem Bereich eine Optimierung in der weiteren Entwicklung zu verfolgen. Diesem Ziel folgend, werden in dieser Publikation Verfahren und Methoden, für nachhaltige Bauweisen, unter Berücksichtigung einer besseren Bauqualität und gesundheitlicher Aspekte, erläutert. Die Maßnahmen nachhaltigen Designs beinhalten verschiedene Ansätze und Methoden, energieeffiziente und umweltfreundliche Gebäude zu entwickeln. Sie zeigen Entwurf, Konstruktion und bauliche Ausführung von Gebäuden im Allgemeinen und Wohngebäuden im speziellen. Neben den verschiedenen Ansätzen sind die „passive solar strategies“ die wohl namhaftesten Methoden, da diese sehr rentabel und daher für Bauherren attraktiv sind. Angesichts der speziellen Situation im Iran im Besonderen und der MENA-Region im Allgemeinen, könnten die passiven Design- (Architektur-) Strategien als eine der am besten anzuwendenden Methoden für Rohstoffeffizienz und Nachhaltigkeit betrachtet werden. Dies setzt eine besondere Berücksichtigung des dortigen Klimas, der sozialen Charakteristiken derzeitiger oder zukünftiger Einwohner als auch der topographisch-physichen und architektonischen Charakteristiken der betroffenen Region voraus. Beeinflussung und Beziehungen zwischen Gesellschaft, Gebäuden, Architektur und Klima sind „lokal spezifisch“ und dynamisch. Deshalb sollten diese Faktoren für jeden Standort neu geprüft und analysiert werden. Die Resultate dieser Analysen, allgemein für Gebäude in der MENA-Region und im Besonderen im Iran, zeigen deutlich die Überlegenheit von passiven Designstrategien. Diese Publikation ist das Resultat der entwickelten Pilotprojekte im Rahmen des Young Cities-Projektes. Sie beginnt mit der Vorstellung der Zielgruppe, relevanten Definitionen und einem kurzem Überblick des konventionellen Ansatzes und dessen Einfluss auf die Umwelt. Das Kapitel endet mit einem kurzen Rückblick über den Nutzen nachhaltiger Bauweise. Nach Analyse des Klimas und seine Beziehung zu thermischem Komfort und Gebäuden werden die wichtigsten Prinzipien passiver Solarenergie vorgestellt: Orientierung, Tageslicht, Schatten, thermale Masse, Isolierung und Ventilierung; ihre Grundlagen und Designstrategien detailliert erläutert. Nachhaltige Konstruktion und deren Hauptpfeiler, Baustysteme, Bauelemente, ökologische Bauelemente und anwendbare Maßnahmen für die Bauphysik, werden anschließend beleuchtet. Dabei wurden die Konstruktionssysteme in sechs Hauptgruppen gegliedert: Ziegeleinfillung, leichtgewichtige Ziegeleinfillung, klassische Füllwände, leichtgewichtige Stahlrahmen, tunnefförmige Strukturssysteme und vorgefertigte Modelle. Anhand folgender Faktoren werden diese eingehend dargestellt: Baukonzepts, Fabrikproduktion, Isolierung, Abnutzung, Verarbeitung, Arbeitsaufwand, Installation, Transport-Beförderung, Services, hydronische Kühlung/Heizung und Sicherheit. Die Hauptbauelemente wie Unterbau, Wände, Boden, Dächer, Türen und Fenster werden beschrieben und verschiedene Baureihen dieser vorgestellt. Das vierte Kapitel befasst sich mit ökologischen Baumaterialien. Um hierbei eine vergleichbare Basis zu finden, wurden gemeinsame Kriterien ausgewählt: graue Energie, Verschmutzung und Abfall, lokale Produktion, Wiederverwendung und Recycling, Nachhaltigkeit und Interdependenzen. Im fünften Kapitel werden anwendbare Maßnahmen für die Bauphysik, wie Isolierung, Lasur, Wärmemasse, Tageslicht, Schatten, Ventilation und Luftdichte, untersucht, deren Grundlagen beschrieben und Empfehlungen bezüglich der Gestaltung präsentiert. Discusses the measurement and control of air moving inside buildings and between the inside and outside in 17 papers and discussions from a symposium in Dallas/Fort Worth in October 1993. After an overview of the subject, covers air movement, ventilation, and indoor air quality; window air leakage.

PRINT READING FOR ARCHITECTURE AND CONSTRUCTION TECHNOLOGY, 3E provides the knowledge and skills needed to accurately interpret blueprints for residential and light commercial construction. This easy-to-use text explores all facets of print reading, with examples and illustrations taken from actual architectural prints.

Readers are provided with the information they need to create high-quality, standardized real world working drawings. In addition, this edition is fully updated with CADD-generated print reading examples, illustrations, and exercises that comply with the highest industry standards of computer-aided design and drafting. **Important Notice:** Media content referenced within the product description or the product text may not be available in the ebook version.

Guideline for sustainable, energy efficient architecture and construction

Modern Hydronic Heating: For Residential and Light Commercial Buildings

Advances in Solar Energy Technology

Strategies, Technologies, Examples

Creating Passive Houses for Better Living

ARS.

The sixth edition of The Construction of Houses builds on the success of the previous five editions. The book provides a comprehensive introduction to the principles and processes of the construction of houses and their services. As such it is aimed at providing a broad understanding of domestic building construction for students as part of their academic studies and as a useful information source for practitioners. The existing chapters have all been updated and most of them expanded to take account of changes to dwelling house construction since the last edition and there are new chapters on 'Modern Methods of Construction' and 'Regulatory controls and building standards'. Additionally, many new and/or updated photographs and diagrams have been added. As with the previous editions, the authors have concentrated on presenting current mainstream approaches to the construction of houses. The detailed, yet accessible, text that is supported by hundreds of coloured photographs and diagrams provides clear explanations of the many complex processes that go into the building of a house. A deeper insight into modern construction is also given by the book's consideration of historical building techniques from the 18th century onwards in order to illustrate how and why we build houses in the way we do now.

From simple applications to multi-load and multi-temperature systems, this one-of-a-kind, comprehensive text prepares readers to use the latest hydronics to create systems that deliver the ultimate in comfort, reliability and energy efficiency. Abundantly illustrated with product and installation photos and hundreds of detailed, full-color schematics, MODERN HYDRONIC HEATING, Fourth Edition, transforms engineering-level design information into practical applications useful for technical students and heating professionals alike. The revised edition features the latest design and instalion techniques for residential and light commercial hydronic systems, including use of renewable energy heat sources such as air-to-water and geothermal heat pumps, hydraulic separation, variable speed circulators, distribution efficiency, heat exchangers, buffer tanks, heat metering, hydronic cooling, system balancing and proper system documentation. Anyone involved in the heating trade will benefit from this preminent resource of the North American heating industry, which is equally well-suited for formal education courses, self-study or on-the-job reference. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

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The Homeowner's Handbook to Energy Efficiency

Residential Energy Conservation

Airflow Performance of Building Envelopes, Components, and Systems

Masonry Heaters

Marshall and Worthing's The Construction of Houses

A Guide to Big and Small Improvements

Since the spread of classical design and construction amongst the upper echolons of British society in the late seventeenth century, traditional construction methods have largely fallen by the wayside. Centuries later, as the construction industry faces up to its environmental responsibilities, this book explores its rich and ancient tradition to provide tried and trusted solutions to modern day construction problems. By way of introduction, the ancient and historical lifestyles that dictated the nature of traditional construction are explored, before focussing on its health and ecological benefits. As well as cultural background, this book includes a detailed scientific description of traditional building materials and their constituents which draws a sharp contrast with modern petrochemical-based materials. The studies of traditional buildings included reveal the sustainability of features such as natural ventilation and breathing walls, and comparisons with modern construction methods show how they could prevent 'sick building syndrome'. The author argues that maintenance for long life, by contrast with the modern concept of life-cycle costing, is at the nub of sustainability and underlies the contribution traditional building construction can make to tackling climate change. Over 250 original photos, and over fifty bespoke diagrams illustrate the features, techniques, and characteristics of traditional construction that could make such a valuable contribution to the industry today. The inclusion of a close study of how these methods relate to British building regulations makes this book a practical guide for construction professionals, as well as an authoritative resource for students and policy-makers.

This introduction to historic preservation goes well beyond the Secretary of the Interior's Standards for Rehabilitation and shows how wood, stone, masonry, and metal were used in the past and how adaptive re-use can be employed to bring modern amenities to historic structures. The book covers all aspects of the exterior and interior building fabric, including windows, roofing, doors, porches, and electrical and mechanical systems for both residential and small-scale commercial buildings. Richly illustrated with photographs showing typical elements of historic buildings, decay mechanisms, and remediation techniques, the book also contains a variety of useful case studies and features a companion Website that offers dozens of additional images and resources. Masonry Heaters is a complete guide to designing and living with one of the oldest, and yet one of the newest, heating devices. A masonry heater’s design, placement in the home, and luxurious radiant heat redefine the hearth for the modern era, turning it into a piece of the sun right inside the home. Like the feeling one gets from the sun on a spring day, the environment around a masonry heater feels fresh. The radiant heat places better on the skin. It warms the home both gently and efficiently. In fact, the value of a masonry heater lies in its durability, quality, serviceability, dependability, and health-supporting features. And it is an investment in self-sufficiency and freedom from fossil fuels. The book discusses different masonry heater designs, including variations extant in Europe, and explains the growth of their popularity in the United States beginning in the late 1970s. For the reader who may be familiar only with open fireplaces and metal woodstoves, Masonry Heaters will bring a new understanding and appreciation of massive heat storage and gentle-but-persistent radiant heat. Masonry heaters offer a unique comfort that is superior to that from convection heat from forced-air systems, and more personal than that offered by “radiant” floors. As Matesz demonstrates, the heat from the sun or from a masonry heater is genuine heat instead of just insulation against the loss of heat. Those who are looking to build, add onto, or remodel a house will find comprehensive and practical advice for designing and installing a masonry heater, including detailed discussion of materials, code considerations, and many photos and illustrations. While this is not a do-it-yourself guide for building a masonry heater, it provides facts every heater builder should know. Professional contractors will find this a useful tool to consult, and homeowners considering a new method of home heating will find all they need to know about masonry heaters within these pages.

Designing, Building, and Living with a Piece of the Sun

Renewable and Distributed Energy Technologies, Policies and Economics

Solar Energy Houses

An Experimental Study

Providing for energy efficiency in homes and small buildings

Print Reading for Architecture and Construction Technology

Positive energy homes enable people to live healthy and comfortable lives with energy left over to share. Creating a house you love that produces surplus energy is surprisingly easy with a thorough understanding of how buildings work and careful attention to detail in construction. The Passive House standard, with its well-proven track record, forms the basis for creating positive energy homes. This book explores the Passive House 'fabric first' approach, as well as the science and practicalities of effective ventilation strategies, smart options for heating and cooling, daylight harvesting, and efficient lighting and appliances. Positive Energy Homes provides home owners world-wide, architects and builders with an understanding of the principles and technical details of building these houses.

Master the skills most important for drawing, detailing, and designing residential structures with RESIDENTIAL DESIGN, DRAFTING, AND DETAILING, 2E. This step-by-step presentation centers exclusively on residential, familiarizing readers with standard construction practices involving wood, engineered materials, steel, and concrete as well as the latest green concepts and alternative materials. Updates throughout this edition reflect the latest standards, codes and guidelines, including the 2012 International Residential Code. Readers concentrate on CAD techniques using the guidelines from the United States National CAD - Standard-V5. Professional examples from architects, engineers, and designers as well as activities using actual architectural drawings and designs place readers into the role of professional CAD technicians. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Shows how to make houses more energy efficient with projects ranging from simple fixes to large-scale renovations.

Domestic Microgeneration

Structure, Prospects and Policies

Construction Management: Residential, Loose-leaf Version

Cooling and Heating Load Calculation Manual

UK Energy

Sun Power

Parks face intense pressure from both environmental and developmental perspectives to conserve biodiversity and provide economic opportunities for rural communities. These imperatives are often in conflict, while potential solutions may be subject to theo

It has its expertise in designing HVAC systems for residential buildings, offices, medical facilities. During our posting in HVAC systems, we have learned a lot about the HVAC system, from the main reason for employing HVAC to goals HVAC should be accomplished, we have learned about components found in every HVAC system along with types of air conditioning systems for better understanding of working of each component. Not just the study of systems but also the study of their governing refrigeration cycle gave us an insight into the purpose of each component. Special attention was given to the study of pumps because it has its application not only in HVAC but also in Waste Water Treatment, Fuel transportation, Industrial purposes. Therefore, we have studied all pump types and areas of their application.

This proceedings volume brings together selected peer-reviewed papers presented at the 2014 International Conference on Frontier of Energy and Environment Engineering. Topics covered include energy efficiency and energy management, energy exploration and exploitation, power generation technologies, water pollution and protection, air pollution and

Design with Climate

Simplified Design of HVAC Systems

Historic Preservation Technology

The Solar House

An Introduction to the Applications of Solar Energy

Positive Energy Homes

A practical overview of what to consider when designing a building's heating, cooling, ventilating and humidifying systems along with their space, power, control and other requirements. Includes the latest concepts, applications, basic design problems and their solutions. Packed with examples to facilitate understanding.

Passive solar heating and passive cooling—approaches known as natural conditioning—provide comfort throughout the year by reducing, or eliminating, the need for fossil fuel. Yet while heat from sunlight and ventilation from breezes is free for the taking, few modern architects or builders really understand the principles involved. Now Dan Chiras, author of the popular book The Natural House, brings those principles up to date for a new generation of solar enthusiasts. The techniques required to heat and cool a building passively have been used for thousands of years. Early societies such as the Native American Anasazis and the ancient Greeks perfected designs that effectively exploited these natural processes. The Greeks considered anyone who didn't use passive solar to heat a home to be a barbarian! In the United States, passive solar architecture experienced a major resurgence of interest in the 1970s in response to crippling oil embargoes. With grand enthusiasm but with scant knowledge (and sometimes little common sense), architects and builders created a wide variety of solar homes. Some worked pretty well, but looked more like laboratories than houses. Others performed poorly,

overheating in the summer because of excessive or misplaced windows and skylights, and growing chilly in the colder months because of insufficient thermal mass and insulation and poor siting. In The Solar House, Dan Chiras sets the record straight on the vast potential for passive heating and cooling. Acknowledging the good intentions of misguided solar designers in the past, he highlights certain overheating—and entirely avoidable—errors. More importantly, Chiras explains in methodical detail how today's home builders can succeed with solar designs. Now that energy efficiency measures including higher levels of insulation and multi-layered glazing have become standard, it is easier than ever before to create a comfortable and affordable passive solar house that will provide year-round comfort in any climate. Moreover, since modern building materials and airtight construction methods sometimes result in air-quality and even toxicity problems, Chiras explains state-of-the-art ventilation and filtering techniques that complement the ancient solar strategies of thermal mass and daylighting. Chiras also explains the new diagnostic aids available in printed worksheet or software formats, allowing readers to generate their own design schemes.

*The definitive guide to environmental control systems, updated with emerging technology and trends The Interactive Resource Center is an online learning environment where instructors and students can access the tools they need to make efficient use of their time, while reinforcing and assessing their understanding of key concepts for successful understanding of the course. An access card with redemption code for the online Interactive Resource Center is included with all new, print copies or can be purchased separately. (**If you rent or purchase a use book with an access code, the access code may have been redeemed previously and you may have to purchase a new access code ISBN: 97811189616-4). The online Interactive Resource Center contains resources tied to the book, such as: Interactive Animations Interactive Self-tests Interactive Flashcards Case Studies Respondus Testbank (instructors only) Instructor's Manual (over 200 pages) including additional resources (Instructors only) Roadmap to the 12th Edition (Instructors only) Student Guide to the Textbook Mechanical and Electrical Equipment for Buildings, Twelfth Edition is the industry standard reference that comprehensively covers all aspects of building systems. With over 2,200 drawings and photographs, the book discusses basic theory, preliminary building design guidelines, and detailed design procedure for buildings of all sizes. The updated twelfth edition includes over 300 new illustrations, plus information on the latest design trends, codes, and technologies, while the companion website offers new interactive features including animations, additional case studies, quizzes, and more. Environmental control systems are the components of a building that keep occupants comfortable and help make the building work. Mechanical and Electrical Equipment for Buildings covers both active controls, like air conditioners and heaters, as well as passive controls like daylighting and natural ventilation. Because these systems comprise the entire energy use and costs of a building's life, the book stresses the importance of sustainability considerations during the design process, by both architects and builders. Authored by two leading green design educators, MEEB provides the most current information on low-energy architecture, including topics like: Context, comfort, and environmental resources*

Indoor air quality and thermal control Illumination, acoustics, and electricity Fire protection, signal systems, and transportation Occupant comfort and building usability are the most critical factors in the success of a building design, and with environmental concerns mounting, it's becoming more and more important to approach projects from a sustainable perspective from the very beginning. As the definitive guide to environmental control systems for over 75 years, Mechanical and Electrical Equipment for Buildings is a complete resource for students and professionals alike.

Research Results

Passive Heating and Cooling

The Residential Energy Audit Manual

Building Materials and Structures Report

Environment, Energy and Applied Technology

Architects today incorporate principles of sustainable design as a matter of necessity. But the challenge of unifying climate control and building functionality, of securing a managed environment within a natural setting—and combating the harsh forces of wind, water, and sun—presented a new set of obstacles to architects and engineers in the mid-twentieth century. First published in 1963, Design with Climate was one of the most pioneering books in the field and remains an important reference for practitioners, teachers, and students, over fifty years later. In this book, Victor Olgyay explores the impact of climate on shelter design, identifying four distinct climatic regions and explaining the effect of each on orientation, air movement, site, and materials. He derives principles from biology, engineering, meteorology, and physics, and demonstrates how an analytical approach to climate management can merge into a harmonious and aesthetically sound design concept. This updated edition contains four new essays that provide unique insights on issues of climate design, showing how Olgyay's concepts work in contemporary practice. Ken Yeang, John Reynolds, Victor W. Olgyay, and Donly Lyndon explore bioclimatic design, eco design, and rational regionalism, while paying homage to Olgyay's impressive groundwork and contributions to the field of architecture.

Sun Power: An Introduction to the Applications of Solar Energy, Second Edition is a non-technical introduction to the wide range of solar energy applications. It has been extensively updated and enlarged to include new sections on passive solar heating and cooling and an examination of the social, legal and environmental issues concerning solar technology and utilization.

Practical construction details of several modern solar systems are included together with methods of assessing their economic viability. Contains an extensive bibliography of over 600 references.

This book provides a detailed assessment of the current UK energy situation, future needs and energy policies. Past policies have often taken too little account of uncertainty, and have therefore quickly become outdated. The book concludes that the need for a positive energy policy is increasingly urgent. The book is in three parts. The first part sets the UK in the world energy context, reviews the history of UK energy policy and institutions, and describes the current pattern of fuel use. The second part contains detailed analysis and discussion of UK energy demand and supply. The third part of the book reviews policies for energy conservation and discusses the overall energy prospects for the UK. The concluding chapter examines energy policy objectives, relating them to the problems and issues identified in the book. The authors are amongst the leading authorities on UK energy, and are co-authors of Energy Economics (also published by Cambridge University Press).

Summer Attic and Whole-house Ventilation

Passive Design Ideas for the Energy Conscious Architect

Bioclimatic Approach to Architectural Regionalism - New and expanded Edition

Proceedings of a Workshop Held on July 13, 1978 at the National Bureau of Standards, Gaithersburg, Maryland

Proceedings of the 2014 International Conference on Frontier of Energy and Environment Engineering (ICFEEE 2014), Taiwan, December 6-7, 2014

A Primer

This volume consists of 52 peer-reviewed papers, presented at the International Conference on Sustainable Design and Manufacturing (SDM-19) held in Budapest, Hungary in July 2019. Leading-edge research into sustainable design and manufacturing aims to enable the manufacturing industry to grow by adopting more advanced technologies, and at the same time improve its sustainability by reducing its environmental impact. The topic includes the sustainable design of products and services; the sustainable manufacturing of all products; energy efficiency in manufacturing; innovation for eco-design; circular economy; industry 4.0; industrial metaboliism; automotive and transportation systems. Application areas are wide and varied. The book will provide an excellent overview of the latest developments in the Sustainable Design and Manufacturing Area.

Traditional Construction for a Sustainable Future

Heating Ventilation Air Conditioning and Refrigeration

A Small Home of Your Own

Retrofitting an Existing Wood-frame Residence for Energy Conservation

AIR DISTRIBUTION IN ROOMS Ventilation For Health and Sustainable Environment Volume II

Residential Design, Drafting, and Detailing