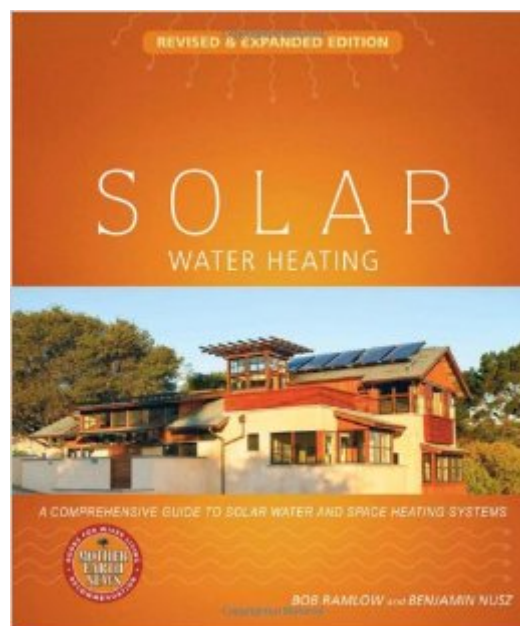


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# Solar Water Heating--Revised & Expanded Edition: A Comprehensive Guide To Solar Water And Space Heating Systems (Mother Earth News Wiser Living Series)



## Synopsis

Heating water with the sun is a practice almost as old as humankind itself. *Solar Water Heating*, now completely revised and expanded, is the definitive guide to this clean and cost-effective technology. Beginning with a review of the history of solar water and space heating systems from prehistory to the present, *Solar Water Heating* presents an introduction to modern solar energy systems, energy conservation, and energy economics. Drawing on the authors'™ experiences as designers and installers of these systems, the book goes on to cover: Types of solar collectors, solar water, and space heating systems and solar pool heating systems, including their advantages and disadvantages System components, their installation, operation, and maintenance System sizing and siting Choosing the appropriate system This book focuses on the financial aspects of solar water or space heating systems, clearly showing that such systems generate significant savings in the long run. With many diagrams and illustrations to complement the clearly written text, this book is designed for a wide readership ranging from the curious homeowner to the serious student or professional. Bob Ramlow has been involved in renewable energy system sales, installation, and manufacturing since 1976. He is an IREC/ISPQ certified solar thermal independent master trainer and a NABCEP certified solar thermal installer. He writes and teaches workshops about solar energy. Benjamin Nusz has worked as an installer, site assessor, designer, and consultant for solar thermal systems. He currently trains renewable thermal technicians at Mid-State Technical College in Wisconsin.

## Book Information

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## Customer Reviews

Despite Federal tax credits (up to 30% of the total cost, including installation) for solar water heating there's a lack of information on the subject. For a handyman with good plumbing skills, or a homeowner wanting to learn about solar water heating, this is the best book available. After a history of solar water heating in the US, the book describes various systems that use the sun to heat and store water. Climate, freeze conditions, water quality and amount of sunlight available are some of the factors considered in choosing a system, and the book describes them all. Individual components are detailed in a logical, straightforward way. It's obvious the authors have extensive practical knowledge. The writing style is informal and easy to read. Besides all the solar water heating information, this book also has a good section on radiant floor heating, detailing the use of PEX tubing to heat a concrete slab. The book uses a lot of drawings to demonstrate how things work. More actual photographs of systems and components would have been helpful. I also wish the authors would have included brand names and sources for equipment. The industry still suffers from the stigma of poorly designed systems of the 1970's and 80's. Some reassurances from the authors regarding which component manufacturers are good would have been nice. For the past five years, I've lived with a solar water heating system I bought as a package and installed myself. I've been happy with all the "free" hot water it's provided. If this book had been available when planning my system I would have had a much better idea of what I was doing. Having all the components matched and sized with specific instructions gave me a lot of confidence during installation. In my opinion, for the neophyte, a component package is a good way to go. For anyone planning a residential sized solar water heating system, this is the best book available. It's an excellent guide, whether you decide to choose the individual components yourself, buy a package, or hire a contractor to install a turnkey system. If you're a contractor or someone wanting to get into the solar water heating business, "Solar Hot Water Systems - Lessons Learned 1977 to Today" (Tom Lane) is very good, but the amount of technical detail implies you already have a good working knowledge of plumbing and roofing. [...] Good luck getting into hot water!

Not being a plumber I can't say this book will be as much value to someone with those skills. He covers the systems so thoroughly that I would imagine if you had the plumbing ability this book

would be all you need to get started. I was a little frustrated having read the first chapter only to find out that several systems described in detail the author would never recommend using. I was thinking to myself why did I waste time reading about those. But that's where the comprehensive part comes in. And by knowing why the author doesn't recommend those systems you get to participate in the joy of knowing everything there is to know about solar water heating. I especially enjoyed the cost analysis of the hot water systems vs. gas and electric, as well as the discussion of using solar heated water to provide whole house heating.

This book takes a tutorial approach, providing an overview behind the impetus of solar hot water systems, the various systems available and their applicability, and provides a good deal of "how to" information regarding installation. This is the kind of treatment of material that I most prefer when attempting to learn for the purpose of later application of that knowledge. It stands in contrast to books by Dan Chrias (see my reviews), who tends to provide a more overview approach to the information. Coupled with a good understanding of conventional hot water systems, this book may be enough to successfully size, install and operate a solar hot water system. It's only weakness, given its objectives and the volume of the material, is that it glosses over the techniques for system sizing, especially how to manage the relationship between demand and supply (sun availability).

This book is a very good summary of solar water heating, whether you just want hot water or you want to use it to heat your home. There are many books that contain most of this information, but this one is more up to date than others I have seen. The biggest added value is that the authors have years of experience, so they warn you about approaches which seemed like a good idea 20 years ago, but have not worked out. What is really missing for me is the information needed to design a sophisticated system. For example, they mention early in the book that some controllers can be accessed on a network. I expected to later find some description of these, or a source for them, or even just a brand name mentioned. None of that is in the book. In summary, I would highly recommend this book to someone new to the idea of solar water heating. It would probably also be good for a professional in heating or plumbing who wants to add some new business. If you are like me, and have already read and thought about this topic, what this book adds is a little disappointing.

Very good and useful book if you want to understand/evaluate offers/tenders of companies that will construct your solar water heating system. Contains all the rules of thumbs and all the subjects really you need to know (system components, scaling of the system, types of solar water heating

systems, system maintenance, system installation, cost calculations, etc.). My only real disappointment is the pervasive use of non-metric units (btu/therms, feet, gallons) throughout the book. This makes it hard to read for non-American readers. There is a unit conversion table, but it would have been better to include the second unit system between brackets or just to use the international metric system. Also a decision diagram/tree for helping to decide what type of solar heating system you would best go for depending on your climate/freezing conditions or not, etc. would have been a useful addition. This information, though, is in the text, but you just have to read it all.

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