

KP

KNOWLEDGE PUBLICATIONS

2008-2009 CATALOG Over 70 Energy Products

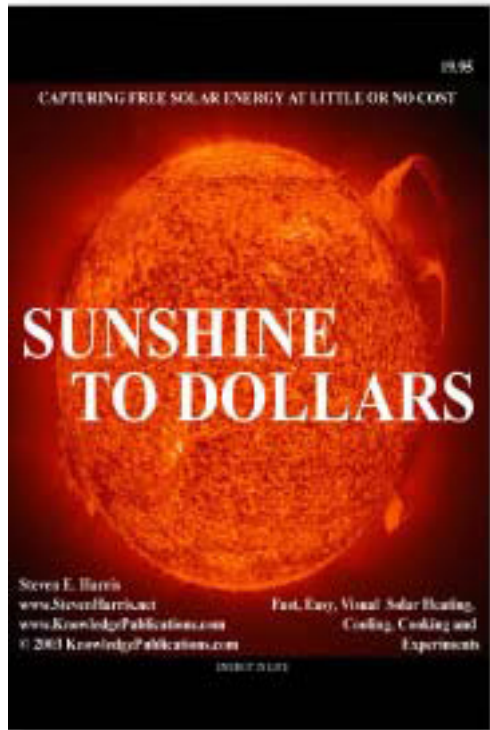
Books, DVDs, and Practical Tools
To Help You Save Money, Energy, and Fuel
For Your Home, Business, and Vehicles



THE BEST ENERGY BOOKS EVER WRITTEN

SOLAR ENERGY HYDROGEN FUEL CELLS HEATING AND COOLING FUEL MAKING MECHANICAL ENERGY

**Just in time for the cold winter months
Check out these GREAT BOOKS on Solar Heating**



Sunshine to Dollars

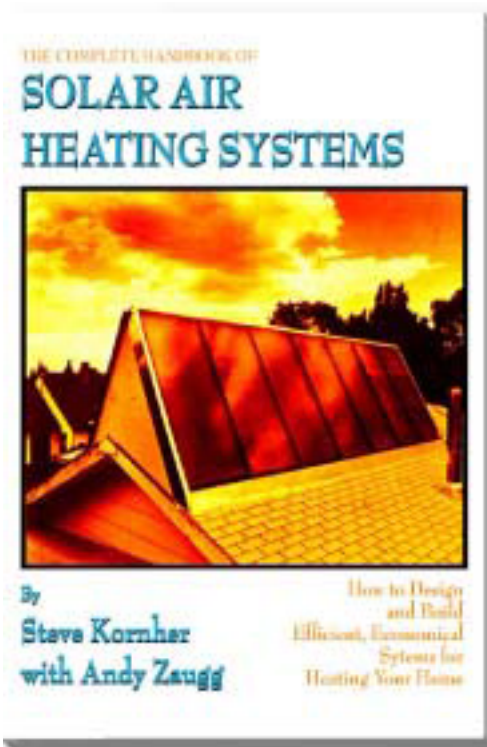
ONLY \$14.95

FREE Solar Panels, Energy, Heating and Cooking at your house. Sunshine to Dollars is one of the most unique books ever written on Solar Energy. The book not only shows how to make hot air, hot water, solar concentration to 3000 degrees Fahrenheit, water pasteurization and much more, but the author shows where to get the glass for FREE, and even where to get PV panels for free. This book will have you building solar heaters in one afternoon. This is the most "hands on" enabling book ever written in the field. Get it today. As of 11/2006 the book has been updated, edited and is now professionally perfect bound. It also includes, at no extra charge, Surviving the Blackout of 2003.

The Complete Handbook of Solar Air Heating Systems

ONLY \$29.95

Complete is the only way to describe this book. It covers all of the rules of thumb, the materials, where to get them and much, much more. Whether you're a homeowner or a contractor, this book has everything that you need to know about the construction and operation of all types of solar air heaters for space and domestic water heating. With their proven reliability and economy for both retrofit and new construction applications, solar air heaters have become one of the most popular home heating alternatives. With over 125 detailed illustrations and 50 photographs contained within 350 massive pages, The Complete Handbook of Solar Air Heating Systems can lead YOU through a variety of solar projects. If you're looking for one book that will get you into "hot air," THIS IS THE ONE!



Knowledge Publications

2008-2009 Energy Catalog

To order go to:
www.KnowledgePublications.com

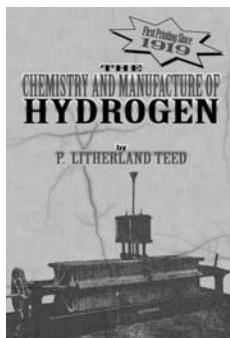


CONTENTS

HYDROGEN	1
SOLAR ENERGY	4
FUEL CELLS	6
HEATING/COOLING	7
MECHANICAL ENERGY	8
AUTOMOTIVE	10
FUEL MAKING	13
HYDROGEN ARTICLE	15

Knowledge Publications has been in business since January 3rd 2002. We are fast becoming the biggest, the best and the only place to get everything you want to know about energy in one location. These books are published, advertised and sold by energy experts. Roy McAlister has been doing hydrogen vehicles for over 40 years. Steve Harris was a development engineer for Chrysler doing vehicle development, concept and prototype vehicles for over 10 years. We select the books, we review them and bring the relevant ones for all of your energy needs. Your satisfaction is guaranteed on our products.

The Chemistry and Manufacture of Hydrogen \$19.95



Once again Knowledge Publications has reached into the past to bring to you one of the best books ever written on Hydrogen. This is the first printing of THE CHEMISTRY AND MANUFACTURE OF HYDROGEN since 1919! It begins with chapter one dedicated to the uses, discovery and occurrences in nature of hydrogen while the second chapter focuses on the chemical properties of hydrogen. The final three chapters give in depth explanations of every way to manufacture of hydrogen via chemical methods, chemico-physical methods and physical methods. This book will definitively prove to you that some of the best hydrogen experts ever were contemporaries of your grandfathers and great grandfathers. Luckily though, thanks to the reprinting of books like this, their knowledge and expertise are not lost to us. With the republication of books like THE CHEMISTRY AND MANUFACTURE OF HYDROGEN we are realizing the most fundamental purpose for producing written records: the preservation and rediscovery of knowledge.

The Chemistry and Manufacture of Hydrogen DVD \$19.95



The DVD explains the text of the book in much greater detail, not just the simple chemistry but what can be DONE with the chemistry regarding hydrogen production for car fuel and home fuel and running it in engines and fuel cells. Roy and Steve go into lots of details. Almost 4 Hours of Great Video.. Roy McAlister and Steven Harris go over the book almost page by page, covering all of the details that MATTER TO YOU ! What Roy and Steve cover in the video, if in written form, would be a book many times the size of this great book by P. Litherland Teed. Remember, Teed wrote this book for making HUGE amounts of hydrogen to fill balloons, blimps and zeppelins, that's MILLIONS of cubic feet of Hydrogen, not piddle little amounts. Of note of interest, we are working with Don L Piccard, the father of modern hot air ballooning, founder of the Balloon Federation of America and one of the FEW FAA Gas Balloon Instructors in the United States is updating the book for modern ballooning. Knowledge Publications is also sponsoring the hydrogen being used in a balloon taking 100lbs of cargo to over 100,000 feet.



Hydrogen Technology for Energy \$99.95

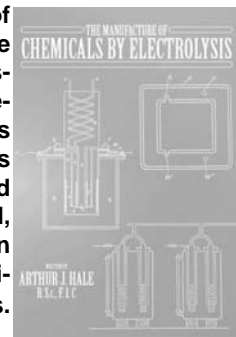


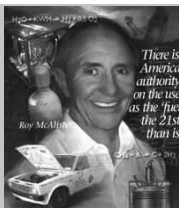
HYDROGEN TECHNOLOGY FOR ENERGY is primarily concerned with the technical aspects of storage and trans-mission systems for a proposed "hydrogen economy." Therefore, the various methods of producing hydrogen are not described in depth because they are im-portant to the hydrogen economy only insofar as the hydrogen must be produced in large quantities at reasonable cost. The first chapter describes the hydrogen economy and suggests how it can be integrated into the energy system of the United States. The next three chapters are concerned with the technology of handling the various forms of hydrogen—gaseous, liquid and solid (in the form of metal hydrides). The final chapters describe some of the work which has been done or is under-way in utilizing hydrogen as a fuel or energy storage system and delve into the safety, legal, political, socioeconomic and environmental impli-cations of a hydro-gen economy.

The Manufacture of Chemicals by Electrolysis \$12.95



Originally published in the same year as our recent popular release, The Chemistry and Manufacture of Hydrogen, Knowledge Publications now brings to you Arthur J. Hale's excellent work, The Manufacture of Chemicals by Electrolysis. With this all encompassing electro-chemistry book Hale hoped that industrial chemists would realize the importance of electrolysis in relation to the manufacture of organic materials. Hale's book begins with a great chapter on electrolytic hydrogen and oxygen. The book contains chapters on electrolytic processes such as preparation of pigments and insoluble substances as well as reduction of organic compounds. The Manufacture of Chemicals by Electrolysis also provides a detailed chapter on production of per-salts and hydrogen peroxide and another chapter which covers nitric acid, hydroxylamine, hydrosulfites and fluorine. Finally, this wonderful book includes an entire chapter on electro-osmotic and electro-colloidal processes before concluding with a chapter which reports on oxidation and substitution of organic compounds.



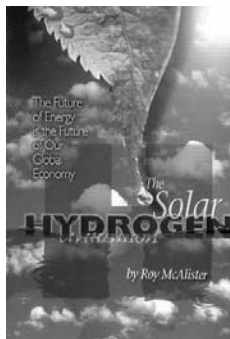


The Roy McAlister Collection

Great Books from a Great Man



Solar Hydrogen Civilization \$29.95 



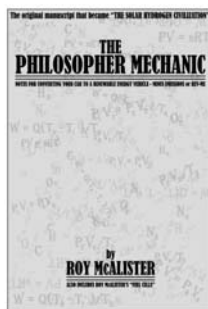
A Great Book by a Great Man. A Hydrogen World Expert and Pioneer. Roy will be known in the history of energy more prominently than Edison, Westinghouse, Tesla, Rockefeller, Carnegie and the rest combined. Roy is an expert in Inorganic, Organic, Electro, Thermal and Bio Chemistry, Newtonian and Quantum Physics, Mechanical Engineering, Civil Engineering, Material Science and Advanced Composites. He is an expert who writes, not a writer who thinks he's an expert. When you see the word CARBON, in any form, CO₂, CO etc.. I do not want you to think pollution or environment, I want you to thin MONEY. Anytime you can keep your carbon, you make money. If you could trap the CO₂ from your tailpipe or your furnace, you can SELL IT. There is a world market for CO₂, CO and C and this is nothing compared to what it WILL BE in the future. Every pound of CO₂, CO or C you trap you can sell. Remember in the 1970's plastics were the future. Today, we can say CARBON is the future. REALLY understanding the diagram to the left, and putting yourself on one of the arrows with the Carbon word on it, can make you a very wealthy person. To REALLY understand this, you will have to get the book.

Solar Hydrogen Civilization DVD \$19.95 

Finally RELEASED. This is the 4 Hour DVD with Roy McAlister and Steve Harris. They go through all of the INTERESTING parts of the book that really needed a whole chapter for themselves. Do you know what methane hydrates are? Where they are? How are these a VERY BIG part of our energy future even in a Solar Hydrogen Economy. Ever see a 90% efficient engine? Its in the book and Steve and Roy go over it in EXPLICIT DETAIL in the DVD. Yes.. no BS on this. Its a combination of an IC engine and fuel cells, and its over 90% efficient and it can be done with existing technology today...so if you are in one of those companies that does that stuff...you better think about getting the Book and DVD.



The Philosopher Mechanic \$29.95 



Finally !!! The YELLOW BOOK and the BLUE BOOK from the Hydrogen Fuel Cell ElectroChemistry DVD. Our very 1st DVD. Finally we have Roy McAlisters ORIGINAL MANUSCRIPT on doing ENGINE CONVERSION and this is what became Roys Book Solar Hydrogen Civilization ! The other part of it is going to be Roys NEW book, Renewable Energy Engines - Due out soon as well. This is the manuscript that started it all. It also has the class room fuel cell addendum with it as well.

Hydrogen Generator, Fuel Cells DVD \$9.95 

The perfect compliment to Roy McAlister's Philosopher Mechanic!!

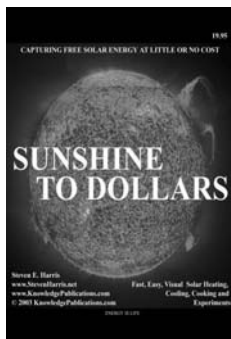
Our OLDEST and first DVD. The one that started it all. Its NOT the prettiest DVD, the new stuff is MUCH better in editing and format but this DVD lets you set in on a Hydrogen, Fuel Cell and ElectroChemistry Class given by Roy McAlister. Kind of like a fly on the wall, don't expect something ready for the discovery channel, but it has 7 hours of GREAT scientific learning and discussion in it.



SOLAR ENERGY

 Garage/Home  Engineering/Industrial  Kids/Family  Advanced Math  College Level

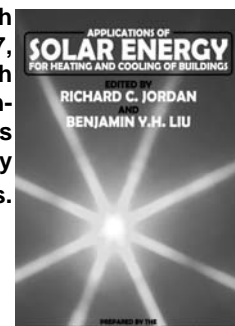
Sunshine to Dollars \$14.95



FREE Solar Panels, Energy, Heating and Cooking at your house. Sunshine to Dollars is one of the most unique books ever written on Solar Energy. The book not only shows how to make hot air, hot water, solar concentration to 3000 degrees Fahrenheit, water pasteurization and much more, but the author shows where to get the glass for FREE, and even where to get PV panels for free. This book will have you building solar heaters in one afternoon. This is the most "hands on" enabling book ever written in the field. Get it today. As of 11/2006 the book as been updated, edited and is now professionally perfect bound. It also includes, at no extra charge, Surviving the Blackout of 2003.

Applications of Solar Energy \$24.99

The American Society of Heating, Refrigerating and Air-Conditioning Engineers has sponsored research in the field of solar energy since 1949. In recognition of the growing importance of solar energy, in 1967, ASHRAE, published a volume entitled Low Temperature Engineering Application of Solar Energy, which included chapters by many of the solar pioneers who had developed and maintained the thread of continuing technical contributions upon which the vastly expanded current technical effort is based. This revised volume, entitled Applications of Solar Energy for Heating and Cooling of Buildings is greatly expanded. It includes most of the same authors but contains far more important contributions.



Solar Air Heating Systems \$29.95

THE COMPLETE HANDBOOK OF
SOLAR AIR
HEATING SYSTEMS



By
Steve Kornhar
with Andy Zaugg

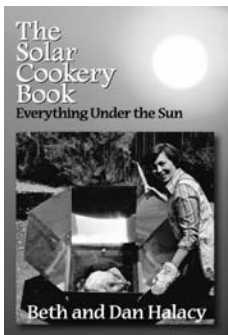
How to Design
and Build
Efficient, Economical
Systems for
Heating Your House

The Complete Handbook of Solar Air Heating Systems is incredibly detailed on HOW TO MAKE ANY solar air heater. Complete is the only way to describe this book. It covers all of the rules of thumb, the materials, where to get them and much, much more.

Whether you're a homeowner or a contractor, this book has everything that you need to know about the construction and operation of all types of solar air heaters for space and domestic water heating. With their proven reliability and economy for both retrofit and new construction applications, solar air heaters have become one of the most popular home heating alternatives.

With over 125 detailed illustrations and 50 photographs contained within 350 massive pages, The Complete Handbook of Solar Air Heating Systems can lead YOU through a variety of solar projects. If you're looking for one book that will get you into "hot air," THIS IS THE ONE!

The Solar Cookery Book \$12.95

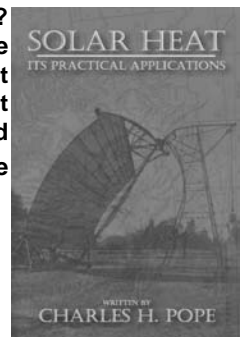


Solar Cookery is entirely about solar cooking, and describes in detail how you can make your own solar oven and reflector hot plate, and how to cook with them. This book will appeal to many kinds of people. It is for people who are interested in conservation and a wise use of our resources, plus a desire to protect the environment. It is for students who are searching for a new project for a science fair. It is also a basic information resource for students who want to learn more about the simple principles that make it possible to put the sun to work in so many useful ways. It is for campers who want a way to cook safely in wooded areas without the need for a fire, or the nuisance of waiting for a fire to get going. No smoke; no ashes. Just clean, hot heat! It is a new horizon for backyard barbecue fans and cookout specialists. It is for health advocates who are seeking ways to put their ideals to practical use. The higher nutritional value of solar-cooked food will be a delight. Perhaps most of all, it is for those who appreciate the fun and excitement of a new way of preparing food.

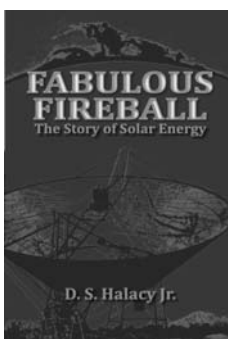
Solar Heat-Its Practical Applications \$12.99



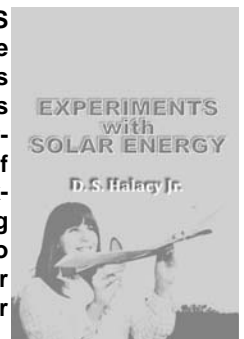
1903??
So you think solar energy is a NEW thing??? LONG LONG time ago... in a place far far away there were people who were actually educated and did not have a TV to watch, so they learned things and taught themselves. This book was written in 1903 and is the EARLIEST Solar Book we have found to date. It shows the Sun Press in Paris (france!) running on a steam driven press being powered by concentrated sunlight and more. Due to the educational value of this book, it will be at a significant discounted price



Fabulous Fireball and Experiments with Solar Energy \$19.95



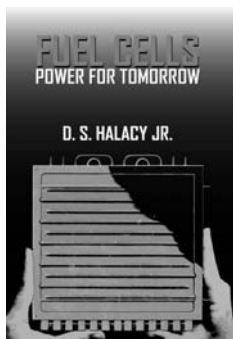
Knowledge Publications has combined Dan Halacy's fantastic books: FABULOUS FIREBALL and EXPERIMENTS WITH SOLAR ENERGY in order to provide you with one great solar energy book! It's no secret that the sun provides the energy that keeps us alive. Solar energy keeps us warm, grows our food and literally fuels all of the systems that make our lives possible; without the sun we simply could not be. Beyond the energy that is essential for these basic purposes, though, there is a massive amount of additional solar energy available to be harnessed. These books provide a great background on the scientific aspects of solar energy and invite you to have fun putting solar energy to work for you. They tell the story of solar energy, explain why it is so fascinating and challenging and will tell you how to build solar powered ovens, water heaters and furnaces. With this book you can even build solar batteries that will power a radio or a model airplane that flies on sunshine!



FUEL CELLS

 Garage/Home  Engineering/Industrial  Kids/Family  Advanced Math  College Level

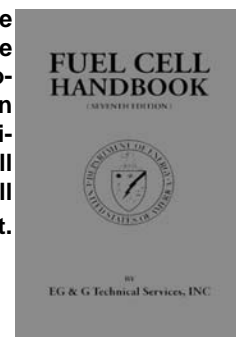
Fuel Cells: Power for Tomorrow \$19.95   



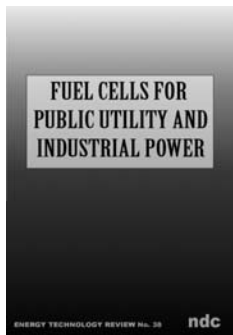
Dan Halacy is one of the great men of solar energy that were true heroes to young scientists and engineers in the solar energy era from the 1950s to the 1970s. Dan was a prolific writer and visionary. With a gifted insight into man and technology, he knew long ago where were heading. His book on fuel cells written in 1966 truly outclasses and undoubtedly outshines the palaver-filled trash that stands as the fuel cell books of today. With photos, drawings, illustrations and descriptions, Dan's book provides the in-depth details of the history, theory, operation and future of fuel cells. This book is written in simple language for all; NO PHD needed. You CAN make a Fuel Cell BIOBATTERY from reading this book or make electricity from things as simple as water, sugar and yeast. This is one of the few books in existence that explicitly gives you step-by-step instructions for making a fuel cell. You will be able to make a METHANOL FUEL CELL with this book. You do NOT need expensive and sensitive proton exchange membranes to make this fuel cell. You do not need hydrogen or oxygen; it runs on methanol and air!

Fuel Cell Handbook \$19.99   

This Handbook provides a foundation in fuel cells for persons wanting a better understanding of the technology, its benefits and the systems issues that influence its application. Trends in technology are discussed, including next-generation concepts that promise ultra-high efficiency and low cost, while providing exceptionally clean power plant systems. Polymer electrolyte, alkaline, phosphoric acid, molten carbonate and solid oxide fuel cell technology descriptions have been updated from the previous edition. Manufacturers are focusing on reducing fuel cell life cycle costs. In this edition, over 5,000 fuel cell patent abstracts and their claims have been included. In addition, the handbook features a new fuel cell power conditioning section and overviews on the hydrogen industry and rare earth minerals market.



Fuel Cells for Public Utility and Industrial Power \$99.95 



FUEL CELLS FOR PUBLIC UTILITY AND INDUSTRIAL POWER contains a massive amount of practical, down-to-earth technical information re-lating to fuel cells for power plants. Fuel cell based power plants offer one of the most interesting possibilities for fu-ture power generation. The fuel cell is potentially more efficient than conven-tional plants and since the fuel reacts electrochemically rather than by combustion, there are far less air, thermal, and noise pollution issues. This book will inform you of the many advantages of Fuel Cells like the fact that they can be air-cooled and need not be adjacent to a body of water. It also points out important considerations for Fuel Cell public utility, such as the concept of mod-ularity and efficiency considerations. With eight distinct sections ranging from "TYPES OF FUEL CELLS—THEIR OPERATION AND USE" and "ASSESSMENT OF FUELS FOR POWER GENERATION BY ELECTRIC UTILITY FUEL CELLS" to "FUEL CELLS FOR PUBLIC UTILITY APPLICATIONS—GENERAL" and "FUEL CELL POWER PLANT EVALUATION," this book makes the advantages of small-scale fuel cell power units for smaller municipalities, large office complexes and shopping centers obvious.

HEATING/COOLING

Movable Insulation \$24.95



This is entirely devoted to insulating shades, shutters, panels and curtains. It is the most comprehensive and useful book on the subject of movable insulation that you will ever find, period. The book is pure genius; it details simple methods to STOP the HEAT LOSS from your house, including effective ways to use movable insulation systems to increase your home's energy efficiency in both winter and summer, information and directions for owner-made systems, recommendations for where to get the best ready-to-but and custom-made units and instructions for determining the payback time and fuel savings that you can realize with movable insulation on your house.

How to Save Energy and Cut Costs in Existing Commercial and Industrial Buildings \$99.99

This book was written specifically for building managers and corporations. At 725 pages, this book covers a wide range of energy conservation opportunities, such as relamping changes that increase lighting efficiency without modifications to luminaries or ballasts, heat reclamation via Thermal Wheels, Run-Around-Coil Systems and Air-To-Air Heat Exchangers, cooling and ventilation through Economizer Cycle Cooling, Enthalpy Cycle Cooling, Latent Evaporative Cooling and Desiccant Dehumidification, and HVAC Systems like the Dual Duct High Velocity System. This book explains in detail every single possible method of saving money in the heating, cooling, refrigeration and ventilation of BIG office buildings or factories. Many of the practical solutions offered by this fantastic Energy Conservation Manual can be implemented RIGHT AWAY for immediate energy and financial savings.



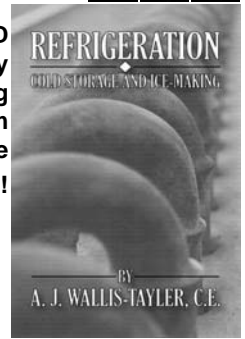
How to Really Save Money and Energy in Cooling your Home \$17.95



This book covers EVERYTHING you have NOT HEARD of for cooling your house. The illustrations simply and easily convey to you HOW your house gets hot and HOW to keep it from getting hot. The best way to keep a house cool is to keep it from getting HOT! You will slap your forehead in amazement at how easy and simple it is to keep your house cool via proper ventilation and other methods. THIS *IS* the stuff that builders and contractors DO NOT DO. Don't think that because you have a "Ridge Vent," that's as good as it gets. This book will save you MONEY on your AC BILL faster and quicker than anything else you have seen. If you are one of those \$250+ a month Summer AC bill people, GET THIS BOOK.

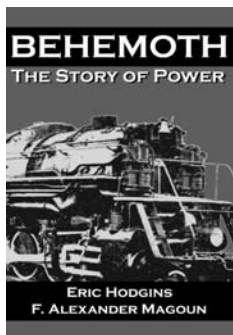
Refrigeration-Cold Storage and Ice Making \$27.95

ITS SUMMER TIME...want to be cool ?? This classic text has about EVERY single way of making COLD in the old days. Compression cycle, evaporation cycle, vacuum of water, coolants and YES.. very detailed on Ammonia Absorption cooling. It even has details on COMPRESSED AIR COOLING (making cold from compressed air, which was the FIRST A/C made). Also contains details on making ice from water and sulfuric acid (no the acid does not touch the water) The book is THICK and its detailed. The book is over 600+ Pages !!!



MECHANICAL ENERGY

Behemoth-The Story of Power \$14.95



This book is CRITICAL to the success of your energy business. Behemoth: The Story of Power is from the time of Hero. This book is THE book on the history of energy and power. It includes who did it and why; what problems they faced and how they were solved. The business model of James Watt in this book is better than the business model of most modern fuel cell companies. This is a story of the evolution and growth of energy that hardly anyone really understands. Every alternative energy project, EVERY ONE of them has FAILED; died in flames, because those doing it did NOT understand the true evolution of energy which is so finely illustrated in this book. If you want to be in the energy field, you'd better know Hero, Papin, Newcomen, Savory, Watt, Otto and Diesel.

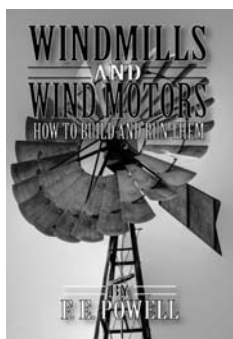
Mechanical Movements Powers and Devices \$19.95



Mechanical Movements is a great work of reference for inventors and experimenters, mechanical students, artisans and any workingman with an inquiring mind and the ambition of an engineer. For anyone with a real interest in mechanical thought and work, this book will fully explain mechanical movements, devices used in constructive and operative machinery and the Mechanical Arts. Mechanical Movements will be your valued mechanical dictionary, commencing with a rudimentary description of the early known mechanical powers and detailing the various motions, appliances and inventions used in the mechanical arts through to present times.



Windmills and Wind Motors \$14.95

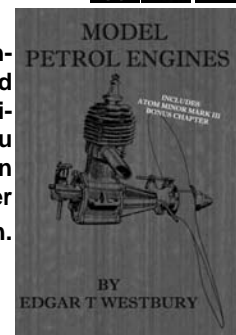


It is more than a little strange that amateur engineers often neglect the windmill. Wind-power is free, and while it is admittedly erratic it must surely appeal to the mechanical mind as a labor saver and valuable renewable energy resource. Windmills and Wind Motors presents a series of practical, original designs that can be used for model-making, experimentation, or even for the more practical purpose of power production. The book is a must have for wind-energy enthusiasts of all ages and knowledge levels. If you want to guide your child to an A+ in this year's science fair, get this book! If you believe in the potential of wind power and want to experiment with it in your own back yard, get this book! Finally, and perhaps most importantly, if you want to build your own power producing wind-energy-plant in order to curtail those skyrocketing energy costs, get this book! This excellent little book provides you with all the information you need to complete exciting and educational home-wind-energy projects!

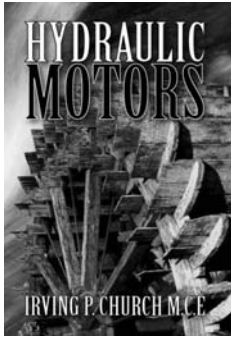
Model Petrol Engines \$19.95



THE object of this book is simply to assist readers to produce model petrol engines. Whether one wishes to start from first principles, and design the engines throughout, or to construct engines to well-tryed designs which have been proved successful (and suitable for production with the average model engineer's equipment and facilities), this book will prove helpful. Oh what a treasure of a little book.. so you think fuel cells are great little power machines?? well.. these little internal combustion engines that can fit in the palm of your hand CAN run off hydrogen and other flammable gases and produce all the power you want, and you can actually make them yourself and fix them.. etc... This is a how to book. hands on.



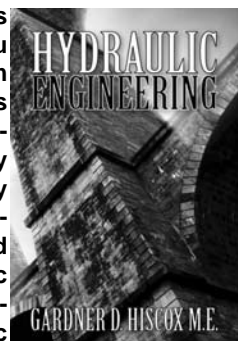
Hydraulic Motors \$19.95



This book is about every method of turning water into rotary horsepower. This book is not about the hydraulic power like what makes garbage trucks and construction equipment function. Hydraulic in this sense is WATER. This book is ALL ABOUT WATER POWER. It is incredible in its depth on water turbines and the whole variety of wheels that are in this field. It covers ALL of the paddle wheels, overshot, under-shot, small, large, optimized and simple ones, from highly balanced water turbines to the most efficient pelton wheels. This book covers the math, the science and the engineering needed to design and make any of the above. If you want to design and make a new water turbine and sell it, this IS the book. If you want to make a SIMPLE turbine to capture water power for home, this is the book. If you want to make an old fashioned water wheel for yourself, a demonstration, a museum or to just rebuild one then this is the book. Also covered are hydraulic PISTON motors. At 270+ pages with BEAUTIFULLY illustrated images and drawings, this book is highly visually-oriented. This book and Hydraulic Engineering complement each other perfectly.

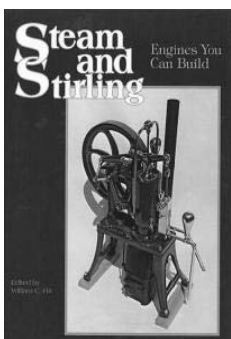
Hydraulic Engineering \$19.95

Hydraulic Engineering has EVERYTHING to do with water throughout the hydrosphere of the planet. This book is all about water flowing, tides, sea power, rivers, canals, pipes, ditches and fluid dynamics. If you have a river or a stream or a lake or live near the ocean and you want to try to capture water power from it, then this book tells you how to measure, direct, funnel and flow your water. It covers the mathematics in detail and it backs up the math with illustrations. You don't just get the formula to find out the pressure and the flow of a jet of water with 20 feet of head pressure above it; Hydraulic Engineering actually illustrates the differences between pressure and flow for you. With 315 pages, this book is beautifully illustrated and incredibly well-written just like Hydraulic Motors. Hydraulic Engineering also covers irrigation and the watering of crops in explicit detail, as well as water use in gold mining. It is a joy to read and a book that makes your imagination run. If you like water power, get both of these books. Hydraulic Motors covers water flowing on the earth, rivers, dams and more, but not anywhere close to the EXPLICIT detail of this book. This book DOES cover SOME of the wheels, motors and turbines of Hydraulic



Motors, but in nowhere near the detail. These books complement each other beautifully yet each stands alone as a phenomenal source of water power information, which is why you can buy them separately or together in a Combo bargain pack..

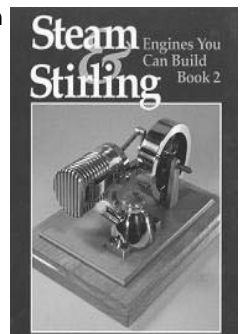
Steam and Stirling Engines You Can Build: Vol 1 \$41.95



Steam and Stirling—Engines You Can Build, provides the specific “how-to” details that amateur machinists and tinkers need to complete great live steam power projects. With hundreds of sketches and photos, blow-by-blow instructions and explicit design information you will be able to easily build and use, completely functional Half-Horse Marine Engines, Steam Turbines, Opposed Piston Steam Engines, V-4 Oscillating Cylinder Engines, and many more fascinating contraptions. This book opens up to the thrill of building something that actually works, it's yours by just following the directions! If you are a complete novice in this field, pick one of the simpler projects for your first attempt and gradually work your way through the others as your skill, abilities and confidence increase. One thing is absolutely certain, you are sure to find countless pleasurable hours in your workshop with the projects in this book.

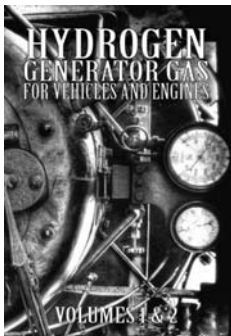
Steam and Stirling Engines You Can Build: Vol 2 \$41.95

Steam and Stirling Engines You Can Build, Book 2, is much bigger than its predecessor. It is packed with far more projects, designs and techniques, yet it offers that same superior level of description providing hundreds more photos and sketches along with the extremely detailed instructions and guidance that the first book is famous for. The projects are written by 22 different authors with some designs based on prototypes while others are originals. The level of difficulty ranges from the very simple projects like the Simple Steam Engine and the Stirling Hot Air Engine can be completed with little more than a drill press and hand tools, to very sophisticated designs like the Duplex Pump. Also included in this sequel are some interesting articles on heating like Andy Sprague's exact instructions, with photos and a sketch that will show you how to easily build a Simple Alcohol Burner and another excellent article which discusses how to use propane gas to fire your engine including updates from author Chris Leggo, based upon new findings. This book truly spares no detail you'll even find a wide range of fine techniques for everything from creating more satisfactory lubrication to making a wood flywheel and roll forming copper boiler heads.



AUTOMOTIVE

Hydrogen Generator Gas Volumes 1&2 \$19.95

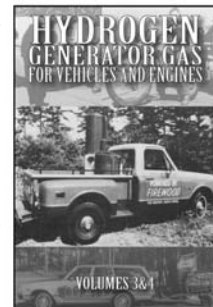


Producer gas is generated from solid fuels such as wood, charcoal, coal, peat and agricultural residues. Although it has been used to power internal combustion engines since their invention, it has been largely overlooked for the past 50 years. However, during the early 1940s, when petroleum supplies for civilian use ran out in Europe, Asia and Australia, producer gas was responsible for putting trucks, buses, taxis, tractors and other vehicles back on the roads, and boats back on the rivers. In 1938, Europe operated about 9,000 gas producer buses and trucks, and there were almost none on any other continent. By 1941, though, about 450,000 vehicles were in operation in all parts of the world, and by 1942, the number had grown to approximately 920,000. Gas producers were then in use not only in land vehicles, but also in boats, barges and stationary engines. By 1946, more than a million motorized devices around the world operated on producer gas. Although the use of producer gas in the 1940s contributed to saving millions of people from starvation in Europe and Asia alone, the world has largely forgotten all about this excellent source of energy.

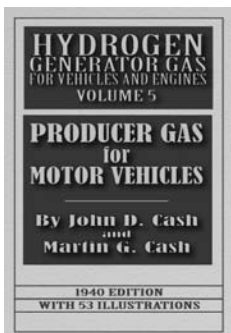
HYDROGEN GENERATOR GAS FOR VEHICLES AND ENGINES: Volumes 1 and 2 contains two great, complimentary works on the subject of Producer Gas. Each volume covers significant subject areas relevant to Producer Gas. The first volume in this book is entitled "PRODUCER GAS: ANOTHER FUEL FOR MOTOR TRANSPORT." As the title indicates, this volume will guide you through everything you need to know about Producer Gas from its history to its economics. The second volume, "PRODUCER GAS VEHICLES" is obviously of equal importance for anyone who wishes to have a complete understanding of the true potential of Producer Gas.

Hydrogen Generator Gas Volumes 3&4 \$29.95

A GASIFIER converts solid fuel to gaseous fuel. A Gasifier System includes the gasification reactor itself, along with the auxiliary equipment necessary to handle the solids, gases, and effluents going into or coming from the Gasifier. **HYDROGEN GENERATOR GAS FOR VEHICLES AND ENGINES Volume 3, Construction of a Simplified Wood Gas Generator for Fueling Internal Combustion Engines in a Petroleum Emergency**, is an emergency technology assessment sponsored by the Federal Emergency Management Agency (FEMA) to develop detailed, illustrated instructions for the fabrication, installation, and operation of a Biomass Gasifier which is capable of providing emergency fuel for vehicles such as tractors and trucks in the event that normal petroleum sources were severely disrupted for an extended period of time. Volume 4, **The Handbook of Biomass Gasifier Engine Systems**, was initially prepared by the Solar Energy Research Institute (SERI) under the U.S. Department of Energy Solar Technical Information Program. While it was originally intended as a guide for the design, testing, operation and manufacture of small-scale (less than 200 kW) gasifiers, a great deal of the information will be extremely useful to YOU for all levels of biomass gasification. Recently, there has been expanding interest in small scale gasification around the world. We have combined these works and republished them as **HYDROGEN GENERATOR GAS FOR VEHICLES AND ENGINES: Volumes 3 & 4** to help fill the continuing needs and desires for information in this fascinating field.

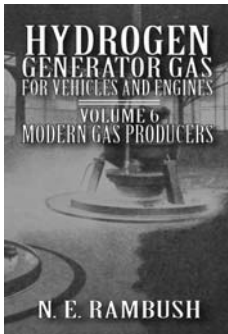


HGG Vol 5: Producer Gas for Motor Vehicles \$19.95



Motor fuel is viewed by most people today as an absolute modern necessity. Without it, transport seems paralyzed, and without transport, industry cannot function. Certainly, under present conditions, cities cannot be fed and rural industries cannot be maintained without the use of motor vehicles and one does not need to be an alarmist in order to visualize a variety of circumstances which could drastically constrict the supply of oil from overseas. However, we do have a natural substitute for our imported motor fuel—at least one (probably more). The purpose of Volume 5 of the **HYDROGEN GENERATOR GAS FOR VEHICLES AND ENGINES** series is to set forth the possibilities of an often underestimated fossil fuel substitute: Producer Gas. This Volume, entitled, **Producer Gas for Motor Vehicles**, not only details Producer Gas possibilities, but also clearly explains the methods by which Producer Gas can be brought into use in a national emergency.

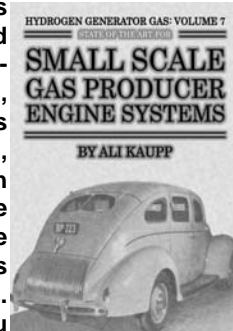
HGG Vol 6: Modern Gas Producers \$27.95



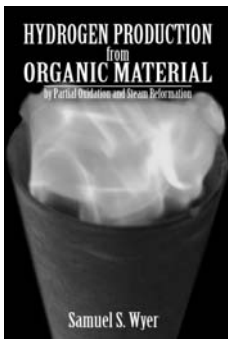
When N. E. Rambush wrote Modern Gas Producers he set out to describe the specific features of each design which had been built and worked for producer gas production. Accordingly, in many cases this book explains certain special designs, in as much detail as it describes those designs which are far more commonly employed in practice. Hydrogen Generator Gas for Vehicles and Engines Volume 6 begins with general remarks while the main body of the text is divided into four parts. Part one, entitled Theory, is dedicated to the principles underlying the formation of producer gas and important factors in gas production. Part two concentrates on the plant providing in depth detail on a wide range of gas producer types. Parts three and four address working producer gas plants, and outline producer gas utilization respectively. This great addition to the Hydrogen Generator Gas series contains over 80 valuable tables and over 350 images of useful drawings diagrams, etc...

HGG Vol 7: Small Scale Gas Producer Engine Systems \$29.95

Besides gasoline and diesel oil, generator gas has been used to drive internal combustion engines almost since their invention. The generation of generator gas from wood and coal has been reliable and inexpensive compared to the use of gasoline and diesel oil for a long time but was generally only accepted during emergencies and war times. Although more than one reason accounts for this phenomenon, one of the most significant factors has been the required skill necessary to operate a generator gas engine system. With chapters on the history generator gas engines, the chemistry of gasification, fuel, internal combustion engines and much more Small Scale Gas Producer Engine Systems, the seventh volume in the Hydrogen Generator Gas series, will help you to overcome that factor through knowledge and learning. The construction of a small gasifier including the purification system does not require sophisticated equipment or highly skilled mechanics, and although a generator gas engine system is built as a unit and fine tuned for successful operation, it is not necessary to develop special engines. Existing internal combustion engines can be used with few modifications. This great book will guide you to an in depth understanding of the gasification of coal and biomass, a valuable technology that is more than a century old, and will allow you to become thoroughly knowledgeable about the utilization of hydrogen generator gas in engine systems.



*Hgg Vol 8: Hydrogen Production from Organic Material \$24.95

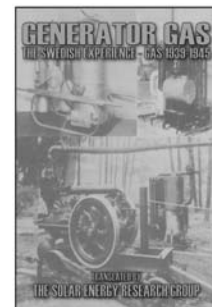


With the first four chapters written specifically for the benefit of readers who may not be familiar with the fundamental laws and definitions of physics and applied chemistry which make up the foundation of HYDROGEN-BASED ENERGY PRODUCTION, this book begins by providing YOU with the fundamental knowledge upon which any rational discussion about Hydrogen Science must be based. The first chapter acts as an excellent introduction to physical laws and definitions, covering important points such as the distinction between a vapor and a gas, Joule's law of gases and the flow of gases. Chapter Two includes explanations of chemical laws and definitions, such as the Law of Multiple Proportion, temperature of combustion and destructive distillation. Chapter Three discusses thermal and physical calculations, including carbon-ratios and composition of gases by weight and heat carried away by products of combustion. The fourth chapter covers commercial gases, with definitions of several gases such as olefiant gas, hydrocarbons and coke-oven gas, with a comparison of commercial gases, including tabulated data. Following the four chapters of basics, Chapters 5-29 contain in-depth information about the classification manufacture utilization and efficiency of specific combustible gases as well as extensive explanations of a wide variety of "Gas-Producers." References are cited in the text by means of their bibliographical serial numbers, and these are given in Chapter 30. This book was written by a great man named Samuel S. Wyer. We have republished his work, "A Treatise on Producer-Gas and Gas-Producers" as, "Hydrogen Production from Organic Material by Partial Oxidation and Steam Reformation." We know you will enjoy it.

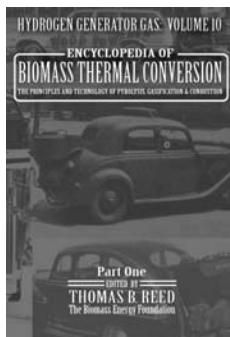
With the first four chapters written specifically for the benefit of readers who may not be familiar with the fundamental laws and definitions of physics and applied chemistry which make up the foundation of HYDROGEN-BASED ENERGY PRODUCTION, this book begins by providing YOU with the fundamental knowledge upon which any rational discussion about Hydrogen Science must be based. The first chapter acts as an excellent introduction to physical laws and definitions, covering important points such as the distinction between a vapor and a gas, Joule's law of gases and the flow of gases. Chapter Two includes explanations of chemical laws and definitions, such as the Law of Multiple Proportion, temperature of combustion and destructive distillation. Chapter Three discusses thermal and physical calculations, including carbon-ratios and composition of gases by weight and heat carried away by products of combustion. The fourth chapter covers commercial gases, with definitions of several gases such as olefiant gas, hydrocarbons and coke-oven gas, with a comparison of commercial gases, including tabulated data. Following the four chapters of basics, Chapters 5-29 contain in-depth information about the classification manufacture utilization and efficiency of specific combustible gases as well as extensive explanations of a wide variety of "Gas-Producers." References are cited in the text by means of their bibliographical serial numbers, and these are given in Chapter 30. This book was written by a great man named Samuel S. Wyer. We have republished his work, "A Treatise on Producer-Gas and Gas-Producers" as, "Hydrogen Production from Organic Material by Partial Oxidation and Steam Reformation." We know you will enjoy it.

HGG Vol 9: Generator Gas-The Swedish Experience \$34.95

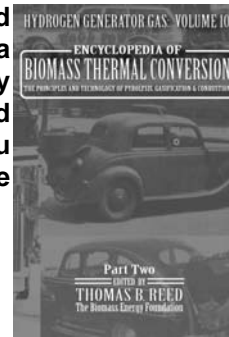
Generator Gas The Swedish Experience 1939-1945 summarizes the scientific, technical and commercial information developed during World War II. While the world's fossil liquid fuel supplies were being used to make war around the globe Sweden, cut off from fossil fuels, converted 40% of its entire motor vehicle fleet to burning wood. The gas generator for motor vehicles was developed at an astonishing speed during the war years. Once again we face a period when fossil liquid fuels are increasingly expensive. Because of economic and national security reasons many nations may well decide that they simply must find substitutes for fossil liquid fuels. Knowledge Publications has republished this book because the information that it contains can potentially save the enormous cost of rediscovering the data and experience gained by Sweden from 1939-1945. This work, which was translated by the Solar Energy Research Group, will enable anyone that is engaged in gasifier projects to build upon knowledge which the Swedes procured long ago.



HGG Vol 10: The Encyclopedia of Biomass Thermal Conversion \$34.95



The latest volume of the bestselling Hydrogen Generator Gas for Vehicles and Engines series is so big we had to relase it in TWO PARTS! The Encyclopedia of Biomass Thermal Conversion contains the principles and technology behind Pyrolysis, Gasification and Combustion. Edited by Thomas B. Reed from eh Biomass Energy Foundation this volume contains everythgin you need to know to run your automobile on wood gas. If you own the rest of the HGG series this book is a must have for your collection.



Hydrogen Car and Multi-Fuel DVD \$24.95



Run an engine on hydrogen, natural gas, gas, diesel, propane, alcohol, etc. Drive on 75 cents per gallon natural gas. Drive on hydrogen, or hydrogen mixed with other fuels such as alcohol, natural gas, propane, diesel (yes, diesel and H2 in a "gasoline" engine), or turpines. Run on hydrogen and veggie oil, or used French fry oil AND hydrogen in a "gasoline" engine. This DVD title tells it all! It is not just a DVD on engines and hydrogen; it's a DVD on hydrogen and other fuels in a regular engine. Click on [DETAILED INFO](#) for great details and free audio. DVD is 3.5 hours long.



Alcohol Can Be a Gas!

BOOK \$46.95 DVD \$24.95 GET BOTH FOR \$66.90



Hey... do you remember that famous guy back in the 1970's, 80's that did all of that GREAT stuff for Mother Earth News on ALCOHOL FUEL ? That's David Blume! ..and THIS IS HIS NEW BOOK.

It not only covers making alcohol from corn, but from other crops, from cellulous by acid hydrolysis, from cellulous by enzymes and more. It covers the production of Methane from the digestion of waste, so this book is more than just alcohol.

YES... and there is a DVD with the book. See David Blume give a riveting 2 Hour 40 Minute presentation about alcohol fuel in 2004 in Marin County California. The

nation's first driver owned coop was organized as a result! This professionally filmed talk starts with the amazing history of alcohol as the first auto fuel, and covers a wide range of topics exploding the myths told about alcohol, a primer on how to produce it, car conversion methods, tax credits available, and far far more. The DVD is indexed so you find what you are looking for easily. Also included is a 6 minute

segment showing all the steps in making fuel. This DVD is all you have to hand to that naysaying know it all at your next party to blow their mind.

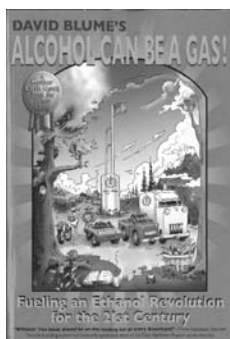


FUEL MAKING

 Garage/Home  Engineering/Industrial  Kids/Family  Advanced Math  College Level

Alcohol Can Be a Gas!

BOOK \$46.95 DVD \$24.95 GET BOTH FOR \$66.90    



Hey... do you remember that famous guy back in the 1970's, 80's that did all of that GREAT stuff for Mother Earth News on ALCOHOL FUEL ? That's David Blume! ..and THIS IS HIS NEW BOOK.

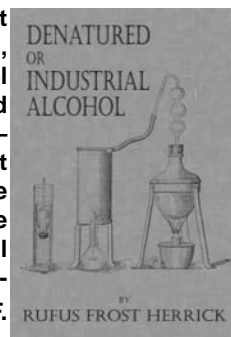
It not only covers making alcohol from corn, but from other crops, from cellulous by acid hydrolysis, from cellulous by enzymes and more. It covers the production of Methane from the digestion of waste, so this book is more than just alcohol. YES... and there is a DVD with the book. See David Blume give a riveting 2 Hour 40 Minute presentation about alcohol fuel in 2004 in Marin County California. The nation's first driver owned coop was organized as a result! This professionally filmed talk starts with the amazing history of alcohol as the first auto fuel, and covers a wide range of topics exploding the myths told about alcohol, a primer on how to produce it, car conversion methods, tax credits available, and far far more. The DVD is indexed so you find what you are looking for easily.



Also included is a 6 minute segment showing all the steps in making fuel. This DVD is all you have to hand to that naysaying know it all at your next party to blow their mind.

Denatured (and) Industrial Alcohol \$24.95   

Every Single Way of Making Alcohol on an Industrial Scale—or small scale. 516 Pages of knowledge that covers fermentation, the organisms, source material, mashes, crops to use, yield, formulas, distillation, byproducts, heat measurement, usage in engines and much more. The book covers the usage of alcohol for cooking, heating and illumination, just to name a few. It even has details on converting sawdust and other organic material to a form that can be digested by alcohol yeasts to make ETHYL Alcohol. Yes!—Ethanol from sawdust, dead trees, newspaper, cellulose etc... Making alcohol will be an important part of a hydrogen generation system that Roy McAlister and I will be detailing in a future DVD. You will be able to make H2 from alcohol that is made to hydrogen boost turbines or methane. With this book, we made alcohol, distilled it and burned it in 7 days! NO, it is not illegal. It is illegal in most places to distill alcohol for human consumption. You do NOT drink DE-natured alcohol. If you are going to seriously distill alcohol, it is easy to get a still permit from the ATF.



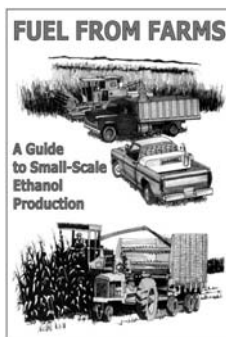
Handbook of Homemade Power \$17.95  



The Famous Mother Earth News Book from the 70's.

This book is HANDS ON. USE IT NOW. 374 jam-packed pages of do-it-at-home energy knowledge. This book is actually MUCH BIGGER and easier to read than the original paperback copy of the book. It covers wood heat and wood power, water/hydroelectric home power and RAM-pumps. The handbook also has chapters on wind power, solar energy and an extensive chapter on making and using methane. The methane chapter covers the anaerobic digestion of animal waste. We're talking digestion and methane made in pails, drums and even a propane tank. Put animal waste and water in a propane tank, keep it warm and let it digest. In a few days you can pipe the pressurized methane directly to a Colman lantern type of lamp, a stove or as a pressure feed to a compressor for a car.

Fuel from Farms \$19.95



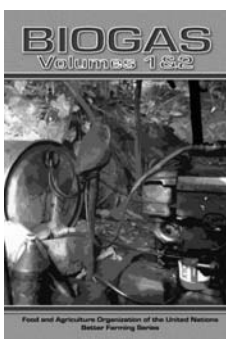
An expansion in the use of Gasahol in this country over the coming years could directly reduce U.S. reliance on oil imports in the future. We have republished this outstanding book to help fill the information void that exists with regards to fermentation ethanol. Fuel from Farms tackles the subject of fermentation ethanol in a balanced and reasoned way, with an emphasis on small scale production using farm crops as the source of raw materials. It is an essential book not only for those of you in the farming community who may be considering incorporating the production of ethanol into your normal agricultural operations, but also for owners of small businesses, investors, experimenters, and entrepreneurs. Fuel from Farms is not just about on-farm fermentation ethanol production. It also provides an overview of some of the technical and economic factors. In addition, it includes tools such as decision and planning worksheets and a sample business plan for use in exploring whether or not ethanol production is right for you. However, the book contains plenty of important specifics about production, including information on the raw materials, system components, and operational requirements. This book will provide you with an array of facts so that you can make INFORMED judgments.

Energy for Rural Development \$19.95

ENERGY FOR RURAL DEVELOPMENT: Renewable Resources and Alternative Technologies for Developing Countries focuses on small-scale energy technologies, not based on conventional fuels that are candidates for rural and village use in developing countries. It also examines the ways in which their candidacy may be affected by technological and economic constraints, present and future. The technologies that this book presents are capable of improving the quality of rural and village life in situations where conventional fuels and power systems have not yet penetrated or are too expensive to become a significant factor in the foreseeable future. This book will provide you with a summary of the state-of-the-art technologies frequently suggested as solutions to rural or individual family energy needs. This book is great for evaluating the potential of each energy source in each candidate situation. PLUS – in order to get you even more information, in this book, we have included the supplement to ENERGY FOR RURAL DEVELOPMENT: Renewable Resources and Alternative Technologies for Developing Countries, which covers small, low-cost, locally-operated energy systems!



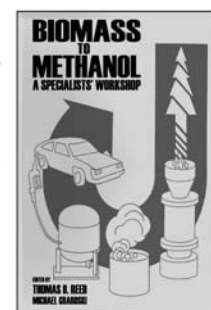
Biogas: Volumes 1 and 2 \$14.95



Biogas: Volumes 1 & 2 combines two works that truly belong together. This book will enable you to genuinely understand how to really utilize Biogas in agricultural development at the farm and family level. Volume 1: Biogas, what it is; how it is made; how to use it begins with a thorough introduction to Biogas. This volume includes the information that you need to build a small Biogas unit including what materials you will need, where to put it and how to test for leaks. It goes on to describe which waste materials you should use and how to use them. It also explains how to protect your Biogas unit from weather extremes, maintenance needs of biogas units and much more. Volume 2: building a better Biogas unit follows after Volume 1 perfectly with great insights for those who have been through the first volume and have already built, tested and used a biogas unit or two. This volume is for those who have advanced their understanding of Biogas through valuable hands experience and are ready for the next level. Even if you have built several Biogas units, Volume 2 will give you essential tips that will definitely help you to build a better unit!

Biomass to Methanol: A Specialists Workshop \$39.95

This book... *IS* for the back yard guy or the new chemistry student or for someone who really wants to understand how methanol is made and where it comes from and how it was done in the past and how its done today. This is not a 'how to' book but it IS a very detailed book. It is one of the EXCELLENT books done by the former Solar Energy Research Institute and AGAIN its our WONDERFUL FRIEND Thomas Reed who co-authored, edited and updated the book. Thomas Reed is also the man behind the Volume 4 of the Hydrogen Gas Generator Book for Vehicles and Engines Vol 3/4 that is one of our best selling books. If you love energy, you'll want EVERY book that Thomas Reed has worked on !



How to get the hydrogen you need in a tank to either boost the vehicle or to run it on pure hydrogen

by Steven Harris

1. Before you begin, remember, Roy has been doing this for over forty years and Steve has been doing this for twenty-five years. None of the under-the-hood electrolyzers out there work. Its water, not fuel. No pulse width, high voltage, low voltage, cold electricity, pointing north gadget will change the fact that the laws of physics and thermodynamics will not let it work. Period. Without exception. So avoid the scams. It will not increase your fuel economy, won't give you more power, won't do a thing, but frustrate you and waste your time and money.

2. It is possible to run an electrolyzer to make hydrogen and oxygen (separated) and then compress the hydrogen with a compressor. Even a 125psi shop air compressor and air tank will store a small amount of hydrogen. For details on making a real science-based electrolyzer, see *The Manufacture of Hydrogen by Electrolysis, Thermal Decomposition and other Unusual Methods*. It is the best book on the market. It has the science, chemistry and methods, although it is not a step-by-step how-to book. Again, this uses power from the grid or some other source to make a large amount of hydrogen, and then it's compressed and stored. It is not the same as using vehicle electrical power, made from gasoline, to run an under-the-hood electrolyzer.

3. The easiest way to get hydrogen is to go to a welding supply company and buy a cylinder of hydrogen. They will not fill up your cylinder or dive tank, and they won't sell to you unless you seem responsible and knowledgeable. You will have to rent the cylinder from them, and it will be delivered with the hydrogen in it. Or, you will have to have a truck to carry it home yourself. They will not let you take it in your car. Then, go on to Ebay and buy a Double Stage Hydrogen Regulator. Harris makes a nice one, so does Victor and a few other of the gas companies. This is for going from the 2,000-3,000psi in the bottle, down to the 1, 2, 5, 50, or 100 psi that you will want to use. You will not be able to drive your car on this cylinder. A typical cylinder is about the equivalent of half to three-quarters of a gallon of gasoline in BTU energy, and you are going to pay \$20 to \$40 per Gallon of Gas Equivalent (GGE). So you might be spending \$20 on hydrogen that has the same energy as one half-gallon of gas. It's not cheap, but it's in a cylinder, pressurized and ready for you to use. Also, if you use the hydrogen in combination with something else, such as gas, diesel, cooking oil, motor oil, etc, and you use one tenth hydrogen by BTU content, then your 1/2 GGE of hydrogen will combine with about five gallons of your other fuel, which you could hopefully get for free. So, you could get five gallons for about \$20 in cost, which is cheaper, but

still in the experimenting and learning phase.

4. The cheapest and easiest way of making hydrogen is to make it from biomass, including wood, brush, grass, and manure. We suggest starting with wood. The Hydrogen Gas Generator Series we sell are the best books available on this. In this case, Volume 3 & 4 (one book) and Volume 6 are best suited for this project. These books are about what used to be called "producer gas," the partial oxidation of organic material. To make producer gas, you use heat and air to split apart the organic molecule into carbon monoxide, hydrogen, methanes and other similar molecules, which is great because they all burn. Since you are using atmospheric air, there will be a nitrogen component, which will lower the fuel value of your gas, but that's not too important since this fuel is virtually free. This is a good place to start. The input of your compressor will replace the "car engine" that is in the diagrams in these books. It will suck the gas air through the reformer where it will partially oxidize the wood, and then it will go through the clean up process, which is detailed in the book. Then the Nitrogen (N), Hydrogen (H₂), Carbon Monoxide (CO) and the other gases will be compressed. You can start by doing this with a standard 125psi shop compressor.

5. After you have done this with air and wood, then you can move on to two areas that will give you hydrogen and carbon monoxide, without the nitrogen component. There are two ways of doing this, and both are detailed in the books, *The Chemistry and Manufacture of Hydrogen Book, DVD and Chemical Educator and Industrial Hydrogen*. More of the chemistry and energy balance is detailed in *The Manufacture of Hydrogen by Electrolysis, Thermal Decomposition and Other Unusual Methods*. If you can only afford one of these books, then just get *The Chemistry and Manufacture of Hydrogen*, and get the DVD if you can. The two ways of getting the better gas are the following: get a column of charcoal, carbon, coke, or coal in an insulated tube and ignite it. Blow air up into it to get it really hot, at least 2,000 degrees Fahrenheit, and then shoot steam up into it until the temperature falls to about 1,600 degrees. The gas that is coming out of the tube while the temperature falls from 2,000 degrees to 1,600 degrees will be mostly hydrogen with some carbon monoxide and a little carbon dioxide. Then stop the compressor and you start to blow the air again and get it heated up to about 2,000 degrees again, and shoot steam into it again, and then compress the gas coming out. You cycle this over and over until you are out of fuel (charcoal, carbon, etc.). The second way of doing this is

similar, but very different chemistry. You fill the tube full of iron. This can be turnings from a lathe or screws, nuts, etc. It can be anything with a high surface area to volume ratio. The iron is in a tube, just like the carbon was in the previous example. Now, you make another tube and this is filled up with junk carbon and biomass. Light the biomass, and pass air through it till it's nice and hot. Once this is hot, it will be producing mostly carbon monoxide and nitrogen from the air. Then, pass this gas into the tube full of iron and you get it hot, 2,000 degrees or more if you can. Once the iron is hot, you then pass in pure steam. This does an oxidation of the iron with the water, and the result is very pure hydrogen. You do this until the temperature falls into the 1,600 degree to 1,800 degree range, when you then pass the hot carbon monoxide and nitrogen through it again. The carbon monoxide will reduce the iron oxide that was formed from turning hydrogen back into iron. This is how steel is made. So to summarize, you get iron hot, pass steam over it, and make rust and hydrogen. The rust stays behind, while the hydrogen is compressed, and then you pass hot carbon monoxide over the rust to turn it back into iron. Then you repeat the cycle over and over. The iron will not go away, because you are only oxidizing and reducing the surface. You will need to add more junk biomass to the carbon monoxide generator as you go along.

6. People ask me over and over how to compress hydrogen to 3,000psi or more. The answer is easy. You get a compressor! The compressor is a SCUBA/Dive compressor used for compressing air into scuba tanks. In fact, you can use SCUBA tanks for storing hydrogen, aluminum or steel, both work fine. The only problem is that a small compressor costs around \$3,000. That's for a small one, not a big one, which is why we suggest you start small, with small amounts of gas and a standard shop-type air compressor. You can also fill up several air tanks with gas and then use a 3,000psi compressor to move it into a high-pressure tank, because the gas producer might make a lot more gas than the small SCUBA compressor can handle at once, since small SCUBA compressors are about 3.5 cubic feet a minute (CFM).

So, you think this is too hard? Tough. You are in the Model T era of hydrogen right now. You have to make your tools, that make your tools, that allow you to do your experiments. What I just outlined are the easiest ways to start to make hydrogen. There is nothing to say that a person of talent and ambition cannot start to make a world of hydrogen from free biomass. Every bit of hydrogen you make can be sold or used in some form. If you have energy for sale and it's cheaper than what is on the market now, there will be interested customers.

If you want cheaper fuel for your car right now, you only have two "easy" answers. One is to use natural gas in the vehicle, and the other is to make your own alcohol. There are more details on alcohol elsewhere in this article, and in our catalog.

STOP MAKING IT HARDER THAN IT IS

People are constantly trying to make it harder than it is to run a car on hydrogen or another alternative fuel. Its not hard, but there are quite a few details involved. Lets look at it from a different point of view. Do you know what the the first internal combustion engine was? It was the cannon, except it only ran for a half cycle, because it threw it's piston away with every shot. All you have to do to run an engine is to put in a flammable mixture of fuel and air, and ignite it. You have to time your injection of fuel, and then ignite it at a specific point. The mixture will explode, and make work against the piston and push it down and make force against the crank shaft, which then moves the vehicle through the drive train. Then the exhaust gases are pushed out, and more air and fuel are sucked in. The air and fuel are then compressed and ignited, and this repeats itself over and over. This is what a 4 cycle engine does. It is also called the "Otto Cycle." The fuel can be gasoline, alcohol, hydrogen, methane, propane, butane, carbon oxide-if it burns with air, you can put it into the engine. However, it has to be done with the correct air-to-fuel ratio, and it's combustion characteristics determine if it works and how well it works. Horse manure and air burn well, but far too slowly to inject horse manure and air into an engine cylinder, and to compress and ignite it. The same is true of diesel fuel or oil and air sprayed into a 'gasoline' engine cylinder. It just does not have the "volatility" of the lighter vapor pressure fuels mentioned above.

The best fuel-to-air ratio and the amount of energy in the fuel is what determines how much power your engine will have. The more fuel and air you can fit into the cylinder the more powerful it will be, and thus the further your "cannon ball" will be thrown. In a normal engine, you can fit more fuel into a cylinder with liquid gasoline than you can with gaseous natural gas. A gas takes up more room than a liquid does, which is why some people say a "normal" natural gas or propane engine is "under powered" compared to a gasoline engine. Now, there are exceptions to this. Engines with much higher compression ratios can be used, as well as what is termed "direct fuel injection into the cylinder," but these are not items that are on the market and easily available. If you are a mechanic, you can change the compression ratio of your engine, which is an excellent application for alcohol fuels. Direct cylinder fuel injectors are not really available now, but do not stop doing what you can do today, because you are focused on what you want tomorrow.

This is one trick you have never seen in the media or on TV before. I am going to tell you how to improve your fuel economy in your car right now. This will give you 5 to 15 more Miles Per Gallon (MPG), depending on your vehicle and how you are driving. If you like this, send it to your friends. Post it on your blog. Tell others.

WHO IS TELLING YOU THIS AND WHY DOES IT WORK?

Steven Harris was a development engineer at Chrysler Corporation for 10 years, working on research and development from pre-theme approval to production. Mr. Harris is also the founder of KnowledgePublications.com, the largest alternative and renewable energy-only publishing company in the United States, and it's growing. Its safe to say that Mr Harris lives, eats, and breathes energy and transportation. What I am about to tell you is something we did on every test to either reduce or increase the work of the engine, depending on the test. When we worked with the vehicles we had special gages, display boxes and computers that told us every single thing the vehicle was doing, over 250 different number-vehicle speed, engine speed, engine load, air temp, air pressure, mass flow rate of the air, exhaust gas temps, spark timing, fuel injector timing and length, fuel rail pressure, exhaust gas oxygen, etc. During my ten years there, I spent most of that time in and with the vehicles in testing. Many years staring at these numbers, parameters, and calibrations.

WHAT YOU HAVE NEVER HEARD BEFORE

Idle in Neutral. Yes, it is that easy to save a bunch of fuel. When you are driving down the road, and you see a stop light ahead, the first thing you do is start to coast to the light. As you start coasting, shift the vehicle from drive to neutral, and use the brake to slow down as you approach the stop light or stop sign. While you are sitting at the light, leave the vehicle in neutral. When the light changes, shift to drive and accelerate. When coating down hill, shift to neutral. When waiting for a train, shift to neutral. When in line at the drive through, shift into neutral. Every chance you can, shift into neutral and let your momentum or gravity carry the vehicle forward.

WHY DOES THIS WORK SO WELL?

Get into your vehicle and start it. Put your foot on the brake, and shift the vehicle into drive. Most vehicles have an RPM gage on the dash, look at it. You'll see it idle between 700 and 800 RPM's. Now, shift the engine into neutral, and you'll immediately see the RPM gage drop to between 500 to 700 RPM's. It's that easy. If you had a vacuum gage, also called a Manifold Absolute Pressure (MAP) gage, you'd see that drop as well. The MAP is the "load" on the engine. Everything the engine does is determined by two parameters, the speed and the load. The speed is the RPM, and the load is the "vacuum" or the "MAP." Why is the speed and the load lower when you are in idle than when you are in drive? On an automatic vehicle, you have an automatic transmission between the engine and the axle and wheels. Between the transmission and the engine is a big donut-shaped container called a torque converter. It is full of transmission fluid, and it is the fluid coupling that connects the spinning engine to the spinning transmission. When you are in drive, at a stop

light with the brake depressed, the engine is spinning on its side of the torque converter and it is "sheering the fluid," or making the heavy fluid in the torque converter move. The fluid moves around and tries to turn the transmission side of the torque converter. Think of yourself running in place in mud up to your knees. That's what this is doing. When the vehicle is in neutral, the engine is not "sheering" or moving the fluid in the transmission, and this is a lot less load on the engine when you are sitting still. So if you do a lot of city driving or stopping, doing this will save you a lot of gas. If you are on the highway all the time, this won't save you much. Remember when you are stuck in traffic on the highway to shift into neutral.

SAVING FUEL ON THE HIGHWAY

There is one other thing about the transmission and saving fuel when driving on the highway. It's something that not many of you have heard of, but its called "torque converter lockup" or simply "lockup." Think of the torque converter as two fans in a bath of heavy oil. The engine spins one "fan" which moves the heavy fluid, which spins the other "fan" that is connected to the transmission, which spins the axle, and thus spins the wheels. Modern vehicles, when driving at a constant speed for quite a few seconds, will "lockup" the torque converter. What this does is it physically links the two fans together. It's a direct connection to each other, and not just a connection through a heavy fluid. Think of yourself running, not in mud, and your running shoes pushing directly against the pavement. Now, the second you tap the brake or you change speed the lockup is "disconnected," and you're running in the mud. So, when driving on the highway, the best thing to do is use the cruise control, because this takes your foot out of the system and you should stay in lockup mode as much as possible. If you have a very good "code" reader to read the OBD II codes via the connector under your steering wheel on 1996 and newer vehicles, you can find and read the code that indicates "lockup" in the transmission. If you are very good, you can feel it when it locks up.

WHAT YOU'VE HEARD A MILLION TIMES THAT WORKS

Air up your tires to the manufacturer's recommended pressure that is on the inside of your door, not what is on the tire. This requires a long explanation, but it has to do with vehicle handling and safety. Having your tires at their maximum pressure seriously helps your fuel economy. Tires are not round. They flatten on the bottom as they spin, because of the weight of the vehicle. This flat part that you can see on any car tire is called the "contact patch." If you put too much pressure in your tires (70, 90psi), then what you do is decrease the size of your contact patch, and thus you have less stopping ability, less turning ability, and an over stressed tire. Also, if you are filling it up way too high, then the tire is prone to blow instantly when you hit a rock, curb, or bump, and then

you could find yourself in a "severe handling situation." So, do not over-inflate your tires. Also, the easier a car "breathes" and "exhales" the more efficient the engine is, so putting a clean air filter in your vehicle will make it breathe easier and give you better fuel economy.

WHAT YOU'VE HEARD THAT DOES NOT WORK

Every single "underhood" electrolyzer, water gas or brown gas gadget, gas tank pill, tornado air spinner, or any other insert in the air intake, acetone, toluene, fuel heater, etc, will not work. Do not waste your time.

OVER UNITY STUPIDITY

Lots of people out there will tell you they can make energy out of nothing. They tell you they have a device that puts out more energy than it uses, and you can use the surplus to run your car, boat, home, business, etc. They are lying. If they had access to free energy, they would use it to make manufacture products more cheaply than anyone else, and maximize their profits. These machines are simply an impossibility due to the laws of thermodynamics. Do not waste your time or your money.

YOU CAN USE ALCOHOL IN YOUR CAR TODAY - NO MODIFICATIONS

Alcohol is easy to make, very easy. You can make it with two pails and a fish heater. Want the details for free? See the Free Section of www.KnowledgePublications.com. It is legal to make fuel alcohol. The permit from the federal government is free, the state permit is usually either free or around \$25. Almost every single car in the USA can run on an alcohol mixture right now. I've run it in a 2007 Ford Focus, a 2001 Jeep, a 1993 GM Pickup, and in our alcohol discussion group on yahoo there is a long list of vehicles that people have run using a 50/50 alcohol and gas mixture. Most of them are experimenting and using E85 and Gasoline. The gas you use at the pump right now is 10% ethanol, and what people are doing is adding some E85 to their tank to move that to 20% ethanol. Then on the next fill-up, they go to 30% E85, and then 40%, and then 50%. Each time they evaluate their car as they drive it. Does it drive fine? What is my gas mileage? Does the check engine light come on? Do I have any problems cold starting? Now, with E85 at about 80% the price of gasoline, and having about 70% as much energy, do you save money? Not really. You've moved your octane rating up to about 100 by adding the 50% E85, and some cars really respond well to that, and give you much better gas mileage. The other benefit is that the E85 did not come from the OPEC. The real benefit is that you have just proven to yourself, that you can run 50/50 gasoline and alcohol in your car. So, when you make your own alcohol, you won't be hesitant to pour it in your tank with gasoline, because you have already done it. You know that it works,

and works well.



Alcohol Can Be a Gas is one of the best books ever written on the subject of alcohol fuel. No, you do not need to make it from corn, but you can and the book shows you how to. The thing is you can make it from corn or wheat that is not animal edible. Tons of corn get spoiled every year by a variety of factors-fungus, moisture, etc. It's available for bargain prices, but only in the country or major farming areas.

City people we have many sources of free starch for making alcohol. Donuts are one of David Blume's favorite free sources of feedstock. After donuts are two days old, they cannot be sold and are thrown away. Donuts make a great source of starch to covert to sugar, and then ferment into alcohol. The same goes for bakeries that sell fresh bread. Call any bakery outlet and ask them how much they are selling farm bread for. You can also use "pastry droppings," from bread plants and other bakeries. This is dough and flour that is dropped on the floor, or from batches that went wrong. It's not baked yet, and it's a great feedstock. Even if it's baked, or burned, it will work fine as a starch feedstock. Free fuel is all around you, you just need to know where to ask and you'll get it free or cheap. You just might be solving someone's problem for them. Also, don't forget to barter. A donut shop owner might ask you why he should give you old donuts, and you could tell him you'll give him one quarter of the alcohol you make from his donuts. Show up with five gallons of free alcohol for his car, and he'll be happy. You can bet that you'll get every bit of scrap he has. People talk, and people talk in their business, and I'm sure you'll be getting other donut shop owners calling and asking, "Do you want some donuts?" Most donut stores and bakeries are still privately owned. Even for bigger places like Panera, there is always a manager in charge, and they might want to put fuel in their tank as well. Most of the time, you'll find that they will give you their old baked goods, if Second Harvest or one of the other food charities does not pick up the food. The food charities get first pick, and you will get second pick. You'd be surprised at how much food still goes to waste in the USA.

- Steven Harris 2008

WOOD GAS STOVE



Skeptical? Confused? Think its too hard? How can it work? It Does.

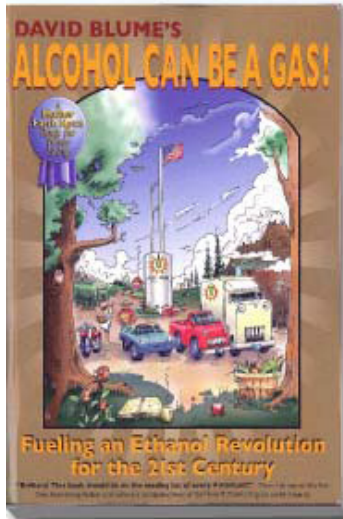
..and Here it is. As simple as it gets. This is a biomass stove. It uses the EXACT same principles in ALL these books. It gasifies through heat wood, twigs, chips etc.. into a wood gas that is dominated by hydrogen, methane and other flammable gasses and then it immediately burns those gasses to make a great heat for cooking and camping. This little stove is a 10,000 BTU stove... that's not a small one.. its more heat than the burner on your kitchen stove (5,000 to 8000 BTUs). Block off the extra air holes at the top of the stove and you have a gas generator. If this powered cities and generators 100 years ago, if it can be made into a simple stove.. then I think you might be able to do it to make fuel for your home, car or generator or what ever you have in mind. For those of you who do glass work, small foundry work or ceramics, the gas produced from free stuff like wood will run your gas furnace / kiln VERY VERY well and save you a LOT of money.

Wood Gas Stove
Retail: \$55.00



www.KnowledgePublications.com
2008-2009 Catalog

Visit our website at www.KnowledgePublications.com to order all of the books, DVD's and additional items found in this catalog. There you will find online and mail order instructions, current shipping prices, announcements, a free section and special package deals. All prices in this catalog are current as of August 1st 2008. Pricing and availability are subject to change.



David Blume's **ALCOHOL CAN BE A GAS!**

Hey... do you remember that famous guy back in the 1970's, 80's that did all of that GREAT stuff for Mother Earth News on ALCOHOL FUEL ?

**That's David Blume!
and THIS IS HIS NEW BOOK.**

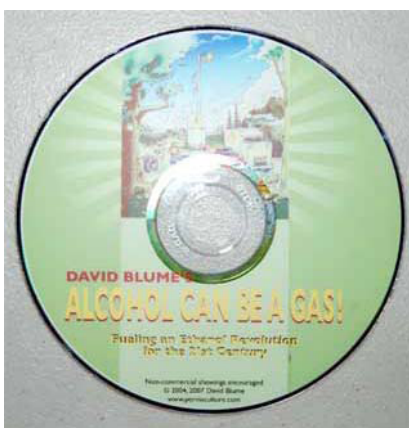
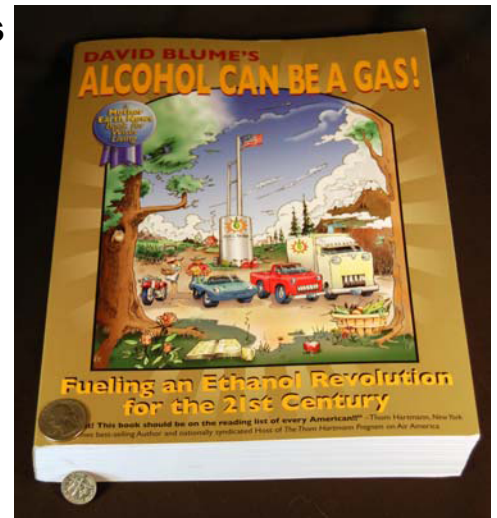
Go to: www.KnowledgePublications.com/announce/09102007.htm to find more information and to order this great book before anyone else can. Only from Knowledge Publications.com

**THIS IS A MONSTER BOOK. 8.5x11 OVER 600 Pages
Look at the Quarter and Dime on the cover!!**

**Wonderfully Illustrated, Detailed Photographs, Step by Step,
Easy To Follow, Easy to Understand**

**It not only covers making alcohol from corn, but from other
crops, from cellulose by acid hydrolysis, from cellulose by
enzymes and more.**

**It covers the production of Methane from the digestion of
waste, so this book is more than just alcohol.**



YES... and there is a DVD with the book.

See David Blume give a riveting 2 Hour 40 Minute presentation about alcohol fuel in 2004 in Marin County California. The nation's first driver owned coop was organized as a result! This professionally filmed talk starts with the amazing history of alcohol as the first auto fuel, and covers a wide range of topics exploding the myths told about alcohol, a primer on how to produce it, car conversion methods, tax credits available, and far far more. The DVD is indexed so you find what you are looking for easily. Also included is a 6 minute segment showing all the steps in making fuel. This DVD is all you have to hand to that naysaying know it all at your next party to blow their mind.

**For More Information, Pictures and Ordering please go to:
www.KnowledgePublications.com/announce/09102007.htm**

NEW!

Additional article by Steven Harris

Includes information on “How to get the hydrogen you need to either boost your vehicle or run it on pure hydrogen”



To order go to our website:
www.KnowledgePublications.com

PSRT STD
US POSTAGE PAID
TURTLE CREEK, PA
PERMIT NO. 02