
Hydrogen Today



Show Me The Hydrogen



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This is one of the AHA's 35-ton ONSI PC25A fuel cells, capable of producing 235kW of electricity from natural gas. We plan to use the reformer components and methane from landfills or dairy farm manure to set up hydrogen fueling stations.

“When there’s a huge spill of solar energy, it’s just called a nice day.” (Electronic billboard next to state capital building, Albany, NY)

“No human being is illegal.” (Elie Wiesel, Nobel Prize winner, Auschwitz survivor)

“The laws of physics prevail over the laws of Congress.” (Bill McKibben)

“People who say it cannot be done should not interrupt those who are doing it.” (George Bernard Shaw)

“Pain is temporary. It may last a minute, or an hour, or a day, or a year... If I quit, however, it lasts forever.” (Lance Armstrong)

‘We Deliver Clean Air’

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** SAFETY FIRST **

Editorial

Life is good. We haven't been foreclosed or misdiagnosed nor has our livelihood been ruined by tar balls or earthquakes and the 200,000 mile-old accelerator hasn't stuck. Recently the AHA had to move 150 tons of equipment on short notice because the storage property was being sold. An amazing amount of brainstorming, weekend hours and teamwork went into getting the job done. A major goal for next year is to find a permanent HQ and finally end AHA's diaspora. We must start demonstrating to people that hydrogen works and works safely.

The AHA is starting the New Year with a new Board of Directors and Advisory Board. Soon we'll reintroduce the popular weekend H2 engine conversion and H2 fuel classes. We're working on an all new website and we're getting requests on how to start new AHA chapters.

The August, 1975 issue of Arizona Highways magazine was devoted to solar energy. Arizona's sunshine was to free us forever from foreign oil. As soon as the oil crisis was over, of course, everyone forgot. Certainly now the time is right for Solar Hydrogen. It's time to put the AHA on page one of the history books.

It's also time for an AHA T-Shirt Design Contest. Front and/or back. Send me your entries by Feb. 28th. I haven't decided yet what the prizes will be, but they will be good. The AHA board will decide the winners. Everyone in the world is eligible.

Hydrogen on the Internet

It's estimated that just being aware of energy and water usage can result in a 4-6% savings, such as turning off lights not being used or cutting your teen's shower from thirty minutes to ten. Determine how much energy your household uses (wastes) with an energy estimator and see how much money stays in your pocket.
<http://cpsenergy.apogee.net/homesuite/calcs/appcalc/default.aspx>

Somewhere in Yokohama, Japan there is an earthquake museum. You sit down at a table in a model kitchen set on a machine and a digital display on the wall shows you the increasing intensities of shaking. At intensity 7 of the 1923 quake that devastated Tokyo, it is absolutely impossible to walk. If you live in an earthquake prone area of the United States, check out demonstrations from the Quake Cottage so you'll know what you're in for. <http://quakecottage.com>

Permaculture is such a good fit with Solar Hydrogen, that I'm surprised how many people have never heard of it. It's a lifestyle, sustainable urban farming, growing your own food, common sense and living in harmony with the bees and the rain and your neighbors. Instead of wasting heartbeats mowing your grass, visit your library or take a class from local permaculturists in raising chickens, composting, catching rainwater or growing fruit.

www.permaculture.org

www.4dirs.com/fdpc Bee Oasis, Mesa AZ

www.phoenixpermaculture.org Phoenix Permaculture Guild

Hydrogen Events

National Hydrogen Association. Fuel Cell & Hydrogen Energy Conference & Expo.

Washington, DC, Feb. 13-16, 2011. \$975, \$200 for students, \$100 one-day expo only.

www.hydrogenconference.org

Natural Gas Vehicle Institute. Natural gas fuel safety training classes, Feb. 8-11, 2011,

Downey, CA. \$400-\$700. Much of this knowledge applies to hydrogen fueling and storage.

www.ngvi.com

The Phoenix American Hydrogen Association now meets the second Thursday of every month from 6 to 8pm at Denny's restaurant, 650 N. Scottsdale Rd. in Tempe, AZ (SW Scottsdale Rd/202, one mile north of ASU light rail station). Call 480-964-0458 or 480-229-0828 for details.

The Rest of the (Hydrogen) Story

In 1886 the Southwest was troubled by Apache raids. The cavalry kept track of events by telegraph, but Geronimo quickly learned to chop down the telegraph poles. In response, the army built a string of 27 heliograph (mirror) stations stretching across New Mexico and Arizona. Information could be transmitted in minutes in Morse code across hundreds of miles using only sunlight. And now you know.... (Arizona Highways, Aug. 1975)

Books & Publications

Storms of My Grandchildren: The Truth About the Coming Climate Catastrophe and Our Last Chance to Save Humanity, James Hansen, 2009

Bloomsbury, \$25, 304 pages, ISBN 978-1-60819-200-7

James Hansen went from studying the atmosphere of Venus to studying the climate on earth and, after his grandchildren were born, to getting arrested at a coal plant protest in W. Virginia. The storms are the coming unprecedented weather disasters that will occur if warming continues, especially with the release of methane hydrates. Along the way Hansen learned why no one listened to him. Money is more important than Truth. To some, money is more important than their grandchildren.

Hilda Hydro: An Alternative Fuel Adventure, Ann Hoffmann, 2007
Wild Horses Publishing, \$6.95, 194 pages, ISBN 978-0-615-16298-0

This parable is about two young sisters who decided to drive a souped-up hydrogen fueled Ranchero from Phoenix to a family reunion in upstate New York. Through their many adventures we learn about renewable energy and that teenage ladies can accomplish whatever they set their minds to. After you read it, give it to a teen or donate it to your library.

Phil Hurley has added two more masterpieces to his do-it-yourself hydrogen ebook library.
www.goodideacreative.com/wheelockmtn.html

The Battery Builder's Book, Phillip Hurley, 2008
Wheelock Mountain, \$16.95, 7Mb, 313 pages

Lithium batteries are 'in', but it's still the lead-acid workhorses that start your car every morning or store the day's solar electricity. As always, he stresses safety. If you're a safety slob or have a heavy metal phobia, stick with your desk. This book doesn't just talk about batteries. You get the chemistry, how to design custom batteries, how to disassemble old batteries and mold the lead into a brand new battery. Understanding batteries and how to properly charge them will make the ones you have last longer. If demand keeps driving metal prices through the roof, we may soon have to build our own batteries. There is a complete material and tool source list with Internet links.

Solar Supercapacitor Applications, Phillip Hurley, 2009
Wheelock Mountain, \$16.95, 5.5Mb, 276 pages

A capacitor is two pieces of thin, closely spaced metallic plate that has the capacity to store electrons. A supercapacitor can store a LOT of electrons, making it a battery. Nice thing is, they recharge almost instantly. Hurley describes how they work and how to build a solar charger. Projects include a spot welder, a biogas cook stove for camping or disaster relief, an LED lighting system, a rocket ignition system and others. There are over 500 photos and schematics. Again, he gives sources for all materials. Supercaps used to be very expensive, but now for \$20 you can start experimenting with these remarkable devices. Learning new technologies will make you the hero when nobody else can figure out how to solve a problem.

Food, Inc., (DVD), Robert Kenner, director, 2009
Alliance Films, 91 minutes

Go to grocery. Buy food. Eat. Maybe you even go so far as to read the content labels, label that rarely list e-coli, salmonella and pesticides. Do you think you're immune? This movie tells what's gone wrong and what you can do about it.

AHA Membership Form

Name(s) _____

Address _____

City _____ State _____ Zip _____

Country _____

Telephone _____ email _____

- Regular Membership- \$39.00/year
 - New members receive a free copy of Roy McAlister's "Solar Hydrogen Civilization".
- Family Membership- \$49.00/year
- Student & Senior (60 and over) Membership- \$25.00/year
- Sustaining Membership- \$100.00/year
- Corporation/Institutional Membership- \$2500/year

Print this form and mail with your check or money order to:

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2350 W. Shangri La
Phoenix, Arizona 85028
USA

AHA publishes *Hydrogen Today* to help educate the public about new developments in renewable energy and the science and people behind them. Join us in making a better world. You can help too by writing for *Hydrogen Today*. Tell others about your grassroots alternative energy projects, either scientific or social. Review a book, product, service or event. A picture is still worth a thousand words. The range should be approximately 300-1000 words. Send to the above address or to the *Hydrogen Today* editor at bikesintl@netzero.com.

