

## Making Hydrogen

Different size commercial units

[http://www.distributed-energy.com/hydrogen\\_generation/onsite.html](http://www.distributed-energy.com/hydrogen_generation/onsite.html)

smallest is:

[http://www.distributed-energy.com/hydrogen\\_generation/onsite/hogen\\_gc.html](http://www.distributed-energy.com/hydrogen_generation/onsite/hogen_gc.html)

proton

[http://www.distributed-energy.com/technology\\_generation.html](http://www.distributed-energy.com/technology_generation.html)

<http://www.fuelmaker.com/>

Today any vehicle that has an engine capable of burning natural gas can burn hydrogen with a few optimizing adjustments. Furthermore Natural gas vehicles can often be purchased from municipalities and car rental facilities that cycle them out for public sale with relatively low mileage.

Is it possible to build your own refueling station right now? Absolutely! With enough time and money you could buy solar panels, an industrial [electrolyzer](#) and a [FuelMaker](#) and assemble a system for refueling in your garage! Will it be cheap to be the first one on your block with a solar-hydrogen refueling fuel station? Not a chance. Our scientifically engineered Excel chart showing the cost benefit-relationship for such a project indicates you'd have to put about 1,567,291.03 miles, (your mileage may vary) on a vehicle to break even on the refueling station costs! This of course is a tongue in cheek example, but hydrogen refueling stations, or any other kind of fuel station for that matter, are designed for numbers of vehicles. For fun sometime hang out at a busy gas station and count the number of cars serviced by one gasoline pump in a day. One attractive concept advocated by AHA and others is for a Hydrogen refueling station to be incorporated into a Renewable Energy Industrial Park or Community Energy Center where it is treated as a common resource, perhaps in a shared

membership arrangement. Such an installation would not only support a small fleet of vehicles, but could also be integrated into the local power grid. In the immediate future there is no "turn-key" small-scale solar-electrolyzer- fuelmaker system available for an individuals home, but recent news stories featured on the American Hydrogen website and others hint at such a future. As with most technologies, miniaturization of hydrogen refueling components, perhaps using nanotechnologies, will make such appliances practically affordable. Maybe someone reading this very article may take it upon himself or herself to invent such an integrated device and make it available to the public.

Back to the project, if you are interested in converting a car to hydrogen, one of the first things to do is become knowledgeable before investing your time and money.

We recommend reading as many reference materials as you can or contacting a business in your area that specializes in CNG or hydrogen conversions There are a few hydrogen conversion companies out there. Utility companies usually have natural gas powered vehicles in their fleets and progressive municipalities often run CNG vehicles. Any of these may have resource people you can go to for questions. Some Community Colleges in California have courses on gaseous fuel conversions and maintenance. In California, as in other states, there are transit agencies and school districts that have natural gas busses. Canada has numerous CNG vehicle fleets and a strong hydrogen community. [Hydrogen Early Adopters \(h2EA\) Program](#) Buying a natural gas vehicle might be a good first step since the gaseous fuel system is already in place and hydrogen and natural gas can

be mixed in the same tank. Read up on studies that have been done - available through [NREL](#). Here are a few other links to get you started.