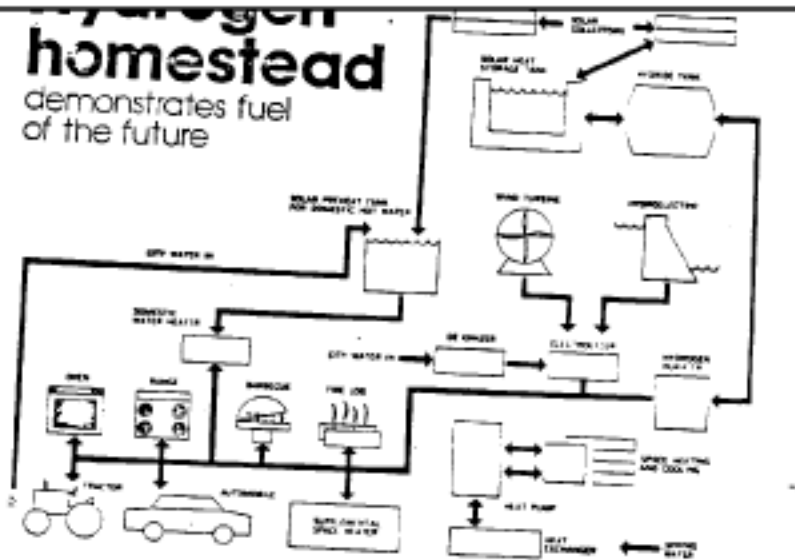


Hydrogen homestead

demonstrates fuel of the future



The Homestead's hydrogen is produced by an electrolyzer (shown far right). Present energy source is local utility. Future plans call for wind turbine or small-scale hydroelectric plant. Hydrogen is stored in hydride tank (left) that from solar collectors liberates hydrogen as it is needed for steam-heating, charging hydride tank in car and tractor, and water into steam heating. A heat pump, which uses varying weights of heavy glass containing liquid ammonia, circulates heat of home's glass containing liquid ammonia. The ammonia is heated, which causes electrolyzer and hydride tank. See Solar Catalogue made by Solar Electric 14023 Maple, West Branch, Ia. 52256 for cost and more.

The most abundant element can cook your food, heat your house, and fuel your car

By RICHARD STEPLER

Hydrogen is like any other large, common, heavy, gaseous element. In fact, it's so ordinary we're not showing you a photo of it. What is unusual about the house is that it's powered by hydrogen. And this house is just the first in what's planned to be a total hydrogen community.

In our March 1973 issue we described the "hydrogen economy" of the future. "Storable, Renewable Hydrogen Power". In this solar house, hydrogen is generated from a variety of sources including the sun, wind and tide, and hydroelectric, steam, and nuclear plants would fuel vehicles, heat houses, power industries, and even provide a raw material for manufacturing synthetic products. This would be a clean society, so said. The only product of combustion of hydrogen with air is water vapor, provided the combustion temperature is not high enough to cause nitrogen in the air to form oxides of nitrogen.

One of the research organizations mentioned in that story, Helix Energy Corp. of Davis, Calif., was experimenting with hydrogen-powered cars. Since then...



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Helix has converted solar to fuel to fuel its house, its taking the standard building results that was featured in Helix's 1973 solar parade.

Now Helix has taken the first step in creating what may be the world's first hydrogen home. It's a cluster of some 30 houses plus a small industrial park, all powered by hydrogen.

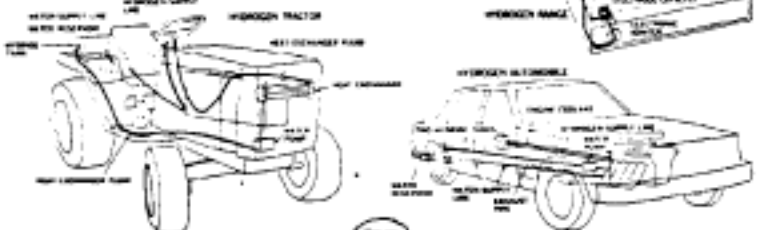
For the present, the Helix house is powered by electricity, using power from the local utility. Future plans call for a small hydroelectric plant (see "Water Power," 15 May 1977) and a wind turbine. Ultimately, Helix plans to generate hydrogen with a small-scale nuclear plant; the company will construct nearby. In the process, which is being through production and is being operated. The solar and water with carbon is from carbon dioxide. The hydrogen released is a gas, which is used.

The Helix house is built on a well-insulated, two-story house. Helix, which is built with a hydrogen storage tank in the wall. In the house, a hydrogen tank is used. In the house, it is used. Hydrogen enters the tank at 400 psi and is absorbed by the hydride tank as a gas. To release the hydrogen, you need heat. In the house...



Hydrogen burner on Tappan range has steel mesh that glows when heated to show burner is on. Hydrogen tank is connected. Standard burner is at rear.

Gateway tank shows cross of metal mesh that glows when heated to show burner is on. Hydrogen tank is at rear. Heat is applied, methane releases gas.



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