

Fuel Cells: Residential Applications

“My power went out last night and my alarm clock didn’t go off...” Imagine never being able to use that excuse again. Fuel cells are currently being developed in sizes appropriate for use in residential applications (3-10 kW).



Residential fuel cell systems can be operated to provide primary or backup power for the home. They can run independently or in parallel to an existing power grid.

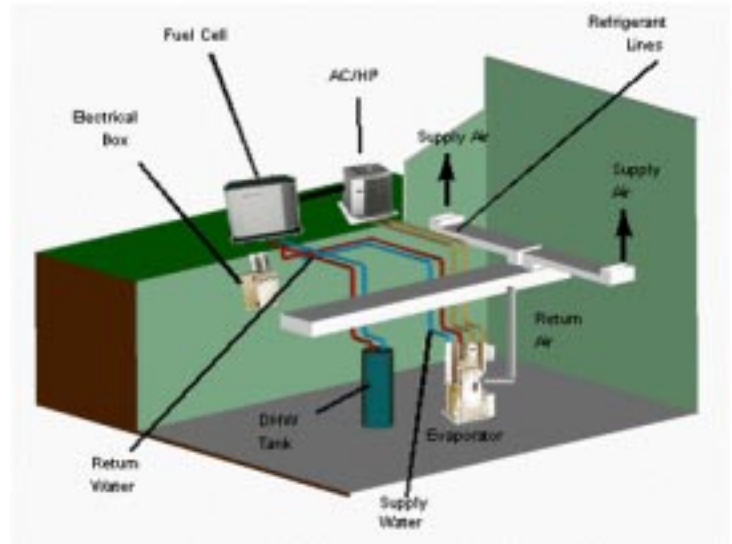
A fuel cell power system for a residence could be located in the basement or backyard, taking up about as much space as an ordinary refrigerator, and providing clean, quiet, reliable power.

Because fuel cell systems with “fuel reformers” can extract hydrogen for the fuel cell from a variety of conventional sources, existing infrastructures such as natural gas pipelines and propane distribution systems can be used.



A variety of ownership and leasing options may be available, so consumers may buy these units outright, lease them from a utility company or other entity, or use power distributed by a third party that

owns the units. Consumers may also be able to sell excess power produced by fuel cell units back to their electric utility companies.



There are several companies currently working on residential fuel cells, including Fuel Cell Technologies, IdaTech, Nuvera, Plug Power, Proton Energy Systems, ReliOn, and Teledyne. Demonstration units are being tested around the country by fuel cell manufacturers in cooperation with local governments and/or utilities. According to Allied Business Intelligence, Inc., the current \$40 million stationary fuel cell market will grow to more than \$10 billion by 2010.

For more information about residential fuel cells, visit our web site at www.usfcc.com.

Propane for Residential Fuel Cells

Many fuel cell manufacturers are considering the use of propane as a hydrogen-carrier fuel for rural and remote residential fuel cell applications. The early-adopter target market for propane fuel cells therefore consists of widely dispersed homes and small businesses that already use propane and are located far from power lines and natural gas mains.