

## Hydrogen Power

Hydrogen is quickly becoming an alternative energy. It can be used to power many vehicles and other devices. It's a very basic element because it only contains one proton for every atom. The only thing that's stopping us from using hydrogen in abundance is that a good way to transport it has not been found. A second problem is trying to get hydrogen in a pure form. The last problem is the high cost of building hydrogen batteries.

As much as hydrogen is very good for the environment, there are also quite a few negatives. Pipes have yet to be built to transport hydrogen around. Nathan Glasgow, a consultant at the Rocky Mountain institute puts it this way: "We have to find a way to move it around." A second problem is that it's impossible to find hydrogen by its self as a natural element. It always is attached to a second element, like carbon. Once its split however, it can be used to carry energy, which is very similar to what electricity does. Also, there is the problem of building hydrogen batteries. The hydrogen batteries are very expensive, which is why they haven't been used in cars as much.

There are also many huge positives to using hydrogen. Those include how much more efficient they are compared to traditional engine and how they are completely pollution free. Since about half of the hydrogen refueling stations are in California, it shows that once you begin making hydrogen by itself, it's easy to use in a wider area. You will also find that hydrogen is much easier to use than traditional electricity. It's also better for the environment because it's emissions are released in water because the emissions of hydrogen mix with oxygen to form water.

There is two ways to produce hydrogen. One is called steam reforming and it makes up about 95% of the hydrogen produced in the U.S.A. It's not very expensive and makes it easy to get hydrogen in a pure form. What it does is it separates the carbon atoms from the hydrogen atoms, which allows it to be used in cars and other devices. The issue with it is that it results in greenhouse gases, which is currently linked to global warming. Since it causes greenhouse gases, it defeats the purpose of using hydrogen as a way to prevent global warming. The other one is called electrolysis. The main way it works is that it takes water, which has hydrogen and oxygen, and separates the two. The only issue with it is that it's very expensive; not many people use it. It only makes up the remaining 5% of pure hydrogen.

In the end, we see that many people could benefit from the use of hydrogen. It helps the environment greatly because of low emissions. It also helps the environment because it's emissions are in the form of water. However, you can't find it in nature without it being attached to other elements. That can be bad for the environment once you try to separate it from the carbon. Once it becomes much more widely used, and a good cheap way is found to transport hydrogen, it will be possible to use Hydrogen more widely in cars and other vehicles. Hydrogen is a huge positive once it becomes more widely used due to the fact that a pipe system needs to be established for hydrogen to be widely used.

[http://www1.eere.energy.gov/hydrogenandfuelcells/education/basics\\_fuelcell.html](http://www1.eere.energy.gov/hydrogenandfuelcells/education/basics_fuelcell.html)

[http://tonto.eia.doe.gov/kids/goodstuff.cfm?page=hydrogen\\_home-basics-k.cfm](http://tonto.eia.doe.gov/kids/goodstuff.cfm?page=hydrogen_home-basics-k.cfm)

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[http://spaceresearch.nasa.gov/general\\_info/17apr\\_zeolite\\_lite.html](http://spaceresearch.nasa.gov/general_info/17apr_zeolite_lite.html)

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