Hydrogen Fuels ? Essay, Research Paper

Why are we as Americans so afraid to change? even if it is a change for the

better? the world has been using oil coal and other petroleum products to power

just about everything that moves for the last 150 years. yet most cars in the

united states only get 10-20 miles a gallon and even the “good” ones can get

only a petty 20-50 miles a gallon. so why do we put up with the inefficiency

when there are far better alternatives out there? Such as hydrogen, which was

discovered hundreds of years ago. Hydrogen has long been known for its explosive

propeties (with air) and abundance in the universe (in other forms i.e. water

on earth, and its form in space is a gas). Hydrogen can do just about everything

conventional fuels can do but better.

Hydrogen can be “packaged” in several ways, as a fuel gas in a H2/02 powered

engine or the newly devised solid state pellet of hydrogen isotopes that

contains about the equivalent of 5000 cubic feet of hydrogen and is broken down

and releases gas into the second chamber where it goes to the engine for use.

There are many ways to get pure hydrogen out of many compounds using methods

such as electrolysis and chemical reactions. One of the easiest ways is using a

chemical reaction. Simple chemicals (aluminum,sodium hydroxide, and water) can

be reacted in the home to produce heavy hydrogen to power your furnace or your

hot water heater . No electrical power at all is required. The reaction also

gives off a tremendous amount of heat. Even the waste heat could be captured for

heating the house. The resulting sodium aluminate is harmless and could be

collected at recoiling centers for complete acid/base neutralization. This way

is a simpler way than electrolysis produce hydrogen for heating the home,

because in a automobile it would be harder to do.

Electrolysis is another way to produce hydrogen electronically. It is a way that

I am more familiar with because I do it quite a bit in my room and have done

several experiments with it. Electrolysis will produce a 2:1 ratio of hydrogen

to oxygen out of water. higher voltages will give you faster collection. With a

12-volt battery it took around a half an hour to get a quarter of a mountain dew

bottle filled with a catalyst of a small amount of Baking Soda. I used it

because it was cheap and I knew it worked. Another time I used a 75 volt / 2 amp

power supply with a catalyst of 2 drops of sulfuric acid to a pint of water and

the result was very differing from the last time. I filled the whole mountain

dew bottle in less than 6 minutes. All of that gas came from a little less than

a drop of water(when I light it off there was only a little spec of water on the

inside of the bottle)I can only gasp thinking that that was only 75 volts and

voltage can get into the billions of volts. Although electrolysis is not the

most efficient way to produce hydrogen it certainly deserves recognition for

working and I am sure sometime soon someone will discover a way to produce the

same amount of H2 and O2 with less power and time either with a new catalyst or

a more efficient power supply.

One reason that hydrogen power has not taken off is that there are thousands of

jobs in the petroleum and coal fields. Really who would want to own a car that

requires about 20-30 cents per mile in gas expenses when you could basically

pull up to the water hose every month and fill your tank with something about 20

cents every 2000 or so miles?? So demand for petroleum products would sky dive

and thousands of jobs would be lost and no one except the water company, car

alternator/generator company and the battery company would profit from it.

People would also so angry about losing their jobs over such a change and

boycott the automotive companies making hydro-cars and cause havoc for the

people trying to “upgrade” us to a better system of working. I mean everything

in a car has changed but the engine stays essentially the same. It’s commonly

known that large oil companies have been paying off the auto makers to keep all

cars under the 40 mile per gallon range. There are a few exceptions and all they

really changed was the size of the car. Every engine has the capability to get a

hundred miles per gallon and up with modifications to the carburetor and other

internal parts of the engine. Only half of the gas that goes into the chamber

actually gets burned and the rest goes right out your tail pipe, and they call

them efficient??

You would figure that when NASA uses it in the space shuttle for fuel to lift a

122 foot long craft plus a gigantic fuel tank (the solid boosters help also) it

has to be working right. And no one ever whines about pollution either unless

they are totally nieve because the only pollution from the shuttle (besides the

boosters) is water vapor. It takes a lot of energy to get water from water to H2

and O2 and it takes a lot of energy to get it back to water also, in other words

a spark (which is a very hot burning spec of flint but it doesn’t hurt us

because it doesn’t have a very long life and is small) or a flame and it takes

it on an explosive ride back to water vapor. It is weird that way I guess

because, if you burn a cup of gasoline you can’t just capture the soot (carbon)

and residues and other “by-products” and apply electricity to it and instantly

have what you started with. So basically hydrogen is a forever renewable

resource that is non-polluting

Politically oil is the source of all evil. We went to war for it and said it was

for another reason, yeah right. If we where ever to switch suddenly from

petroleum to an alternative energy like hydrogen we could expect an immediate

political or military threat because that is just like making the oil

corporations go bankrupt, instantly. It would be especially hard on a country

that has oil for its main export like Kuwait or Iraq, And it would be the stock

market crash all over again for us also. It will probably take a very dramatic

threatening event to make us switch from fossil fuels, like running out of them.

The world will eventually realize the potential of hydrogen and put it out there,

but it may come very late like when gas will cost 3.95 a gallon but it will

happen, it just has to. People will have no choice but to change or, well, walk.

It is time that we upgrade, we do not drive “Horseless Carriages” anymore so we

shouldn’t use ones fuel. We call ourselves “high tech” when we are using hundred

year old technology in our “high tech” things. Airplanes have gone from the

“June Bug” to the F-22 fly by wire fighter in around a hundred years so why

can’t cars and heaters and powerplants do the same?? As a globel society we need

to upgrade.