

Re: Fuel Cells in a Hydrocarbon Economy

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- *From:* "quasarstrider" <quasarstrider@xxxxxxxx>
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Bob Eld wrote:

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Secondly from the time of Hero to Newcomen in the 17th century, there was NO development of engines of any kind so it is nonsense to suggest that the steam engine was in development

Denis Papin. Thomas Savery.

for 1600 years. It was not. Thirdly, I did not even mention reciprocating

Perhaps not uninterruptedly for 1600 years. The Roman Empire did collapse.

Greek fire was the stuff of legends. As was Roman... err... Portland cement concrete.

Not to mention later inventions such as Damascus steel.

Some inventions progress faster than others, not all problems are as easily solved.

Granted, this means fuel cells are pointless right now. Does not mean they will

always be pointless however.

steam engines in my above post. I was commenting turbine development from the time of Parsons in the late 19th century, about 120 years. All of the blather about hydrogen that you mention is just that, blather. There is no commercial hardware that you can go by at anything close to a reasonable price. They have been touting this for many years and still no reality, it's

I never said there was any at a reasonable price. Heck, not even the Honda people

marketing that car claim that. I did mention I believe batteries will win out long term anyway.

Existing markets for mobile electronics provide the funding for those

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to move forward.

all talk. In the mean time other competition is racing ahead. Yes you can actually go by hybrid vehicles with batteries as that technology outpaces fuel cells and hydrogen. Flex fuel engines burning ethanol or E85 are becoming a reality and any diesel engine will burn bio-diesel oil. Hydrogen is nothing but a destroyer of other forms of energy such as natural gas or electricity, and therefore, will always suck hind tit.

If hydrogen is hard to store, ethanol is hard to produce. Sugar cane is the only economically viable means to produce it I know of. It does not grow everywhere.

It uses too much land area. Brazil has all that land area for sugar cane and still

they use ethanol for like 10% of their oil needs:

<http://www.eia.doe.gov/emeu/cabs/Brazil/Oil.html>

Cellulosic ethanol is still a pipe dream.

Biodiesel would be interesting if it wasn't for the fact you need too much land area to grow it as well. Even if you use palm trees. Maybe it can be used for critical users, like the military or aviation since it is so high-density, but still, not cheap for a mass market. Algae are still a pipe dream.

I am sick and tired of the energy destroyer fallacy. The second law of thermodynamics states you cannot do energy conversion without increasing entropy. and losing energy. It does not matter if you lose some energy producing hydrogen.

We lose some energy producing electricity and yet we do it. Why?

Because electricity is convenient. It can be easily converted into motion by an electric engine, or into light by bulbs, powers refrigerators, etc. Can be transmitted over wires.

Just one problem: it is not easy to store for mobile applications like cars.

What does matter: is hydrogen the cheapest way to create usable energy for mobile applications or not? If it is, energy loss be damned!

My bets? Oil will last longer than some people give it credit for. Then we will use

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Fischer–Tropsch from coal, bitumen, tar sands, heavy oil, natural gas, you name it.

Expensive oil means more hybrid vehicles. Which means more batteries used, which

pushes up battery R&D funds, which ramps up new battery technology.

Batteries in

hybrids progressively get more capacity until the internal combustion engine is

expensive dead weight. Result: electric vehicles.

Electricity will come from coal, wind, nuclear, solar, hydro. In no particular order.

It will depend on local conditions.

Oh, right... The lottery numbers for next week are:

<EOT>

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