

## Re: Solar-hydrogen home power system?

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boB

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Amortization or no amortization, fossil fuels will eventually not be an option and hydrogen may be the way to go...

By then, it may be too late and we'll get hydrogen by electrolyzing with electricity made from nuclear power plants until something else can be done. Sounds kind of what the government would want us to do anyway.

boB

On Tue, 9 Nov 2004 15:29:08 GMT, "Fred McGalliard"  
<frederick.b.mcgalliard@boeing.com> wrote:

>

> "Don W." <dNOSPAMwiddersAHotmail.com> wrote in message  
> news:teSdnRFrlpmijhPcRVn-3g@comcast.com...

>...

>> 1. The infrastructure for making, storing and using hydrogen is  
>> extraordinarily expensive. It would be more economical to buy a 5 kW  
>> refrigeration unit to turn the garage into cold storage than to purchase  
>> and maintain an electrolyzer, hydrogen storage system and fuel cell or  
>> convert the family auto to run on hydrogen.

>

> We have three major options that change this relationship.

> A. Do it all at home, no grid, no share, no neighbors.

> B Share with neighborhood.

> C Share with the whole world, as far as the grid reaches.

> A platinized electrode system operated at 10,000 psi and 300C, with forced  
> circulation and gas separation, some kind of high quality membrane, all the  
> stuff you need to make an efficient electrolyzer, is certainly expensive. It  
> might be quite practical for B or C. Imagine you put your extra 5KW on the  
> grid and it goes to a local electrolyzer. You get back the electricity, or  
> perhaps the H2 or even a synthesized fuel made from the H2. Now this is a  
> possible system, but right now you have the extra power in your personal A  
> system. You could run your lights during the day, wasting the power, let it  
> heat the photo cells, wasting the power, or you could do something with it.  
> What could you do with it that returns the most to you? I think there is no  
> polite answer to that. Charging up a battery powered car is about right for

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>most folk (assuming you already have taken care of the night time demand  
>storage), but if you want to store power for the long cold winter, things  
>ballance differently. For that application you will need more thought. In  
>that case, even H2 might be a worthy investment. BTB, I am assuming that the  
>bank size is to provide a better match to the house needs during spring and  
>fall, so we can't just sell off the extra cells, or never buy them to begin  
>with. We would need to make something with the extra electricity that is as  
>precious in 6 months as heat and light in the middle of winter. A battery  
>bank big enough to do that seems out of line. Option C permits a large hydro  
>storage to be considered at least. I think for someone stuck with option A,  
>hydrogen should be considered. Easier than building a full fuel synthesis  
>plant and making oil.

>

>>

>> 2. Hydrogen is inefficient energy storage. The fact that Alex wants to  
>> store the energy implies he has some need for the energy. It is more  
>> efficient to use the energy directly (or store it in good batteries) than  
>> to produce, store and use hydrogen.

>

>Right, but also wrong for the same reasons you gave about amortization etc.  
>Because the only reason to save the extra is that the system is sized to  
>meet demands off the peak season, and that means storage for months, not  
>hours. Batteries are great for that, but very expensive. So you have a  
>suitable technical solution, but it demands too much of the community  
>resources (and in this case that is easily seen in just how expensive a  
>battery pack is to run a house for a month). Frankly I think most of this  
>simply makes the point that you can't have a technological life, with all  
>it's benefits, without a community to share the costs of things like a fuel  
>synthesis plant.

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