

Re: How many hydrogen cars on the road in the US today?

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- *From:* Williamknowsbest <William.Mook@xxxxxxxxx>
 - *Date:* 29 May 2007 19:17:46 -0700
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On May 29, 6:50 pm, Eeyore <rabbitsfriendsandrelati...@xxxxxxxxxxxxx> wrote:

Williamknowsbest wrote:

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Williamknowsbest wrote:

Burning gasoline puts a specific amount of heat in your engine. If I can put the same amount of heat into your engine heat that would cost you \$3 to buy in the form of gasoline – at a cost of less than fifteen cents – clearly that cuts to the chase doesn't it?

You simply can't though. Furthermore you're evading the numbers.

Efficiency (power plug to wheels)

Hydrogen car with ICE ~ 6%
Hydrogen car with fuel cell ~ 12%

Electric car ~ 70–80%

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It's a no-brainer really !

Graham, you're the one with no brain. Where are the costs? If I buy a battery powered car for \$65,000 – and I have to replace a \$50,000 battery every 2 years or 800 charge cycles – whichever comes first – I'm not ahead even if it only costs \$0.08 per kWh to recharge it.

I just did some sums.

Okay.

15kWh will be enough electricity for most ppl's daily run. I can readily support those numbers.

I'd like to see that. 15kWh by the way is less than 1/2 gallon – less than 2 liters – of petrol. What are people riding on their daily run? Electric wheelchairs?

You can buy – on ebay today – a 4.56Wh NiMH battery for about 50 pence.http://cgi.ebay.co.uk/50-AA-3800mAh-Ni-MH-Rechargeable-Battery_W00Qit...

Why not get a real reference –

<http://www.allaboutbatteries.com/Battery-Energy.html>

NiMH costs about \$0.99 per Watt-hour – so 15kWh will cost about \$15,000

15kWh worth of those will cost you £1645.

You're off by a factor of 5.

With a 1000 cycle lifetime you'll need to replace them about every 3 years at an annual cost of £548.

Alright – for a stinking HALF GALLON of gas storage capacity – you're paying according to your numbers about \$1,000 a year – and according to real numbers about \$5,000 per year – JUST FOR THE BATTERY

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Very acceptable costs.

IF you were able to drive ALL YEAR wherever you wanted just like you did with your present car – SURE! But you're not going to do that on 15kWh. LESS THAN 2 liters of petrol. NO WAY.

The cost of the electricity to recharge them is relatively peanuts of course. About £1.50. And that's good for about 50 miles.

What are moving 50 miles? This is equivalent to 120 mpg. What is your electric utility rates? \$0.08 per kWh is pretty cheap. I bet you pay more. But even at this rate you're paying \$2.67 per US gallon – which isn't peanuts. The only reason its peanuts is you rigged the numbers – you forced everyone to use only ONE HALF GALLON OF GASOLINE PER DAY!

How long does your trip take? An hour? A half hour? Let's say you motor out and motor back and you take an hour total. Right? SO you're burning energy at a rate of ONE HALF GALLON PER HOUR. That's 60 MJ per hour. 1 MJ per minute and 16.7 kW – That's 22 horsepower.

So, this is what you're having us ride? A 22 hp automobile and we're limited to one hour a day. If you grant us 2 hours a day – hp level drops to 11 hp.

Why not just put a motorbike engine in a golf cart and get the same effect? A HALF GALLON OF GAS even at \$5 per gallon, would only cost \$2.50 per day – would be \$913 per year – and the car would certainly be cheaper than today's models – and you wouldn't be throwing away poisonous and limited amounts of heavy metals – An ultralight car with a 22 hp engine – that carried one half gallon of gas – and got 120 mpg – would be superior in every way to your ponderous golf cart that was inferior in every way.

300 days @ 50 miles (15,000 miles p.a.) = £450 of electricity. Plus allowance for battery replacement @ £548 = annual 'car fuel bill' of £998.

The numbers using real numbers are 6x higher than that for your car – and if you had a real car they'd be 4x higher still – so your whole analysis is flawed.

Consider that if you reduced a normal car to the performance of the electric car you're contemplating – you could run it on a half gallon per day – it would be a 22 hp model, that would be ultra-light – and weigh far less than the battery powered monstrosity you're

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contemplating – and you wouldn't have to throw away a deadly battery every 3 years. You'd use only 182 gallons of gas in a year – and you'd be WAY ahead of the poor sots who had to deal with batteries every 3 years.

Comparable gasoline cost (UK) ~ £1900.

Not if you use only 182 US gallons a year you don't pay anywhere near that.

That's a very healthy saving running an EV.

Bullshit – not in a head to head comparison of comparable cars.

Compare apples to apples to get a real picture.

There's the 22 hp model – 120 mpg – half gallon gas tank

There's the 110 hp model – 24 mpg – 10 gallon gas tank

10 gallons of gas equivalent in batteries costs about \$300,000 – using the batteries you've chosen. That's \$100,000 per year – and they weigh a tremendous amount – and they take up gobs and gobs of space. You'd need to build the care like a mini-van – with most of the back seating replaced with battery packs.

So, even then performance would suffer since performance is power to weight ratio.

Sorry Graham try again.

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