

## Re: Renewable energy alternative

**Source:** <http://sci.tech-archive.net/Archive/sci.energy/2004-07/0159.html>

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**From:** CM (CM\_at\_CM.not.really)

**Date:** 07/05/04

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>>> *As to hybrids vs all electric vehicles– the reason is that there is*  
>>> *at present no practical or economic energy storage scheme for the*  
>>> *all electric driving other than short haul–plug it in as in some*  
>>> *delivery vehicles or golf carts. Cost and weight are the*  
>>> *limitations that hybrids are intended to overcome.*  
>>  
>> *That may change soon. There are some battery technologies that could*  
>> *give adequate range if certain technical problems could be solved.*  
>>  
>> *Lithium Ion batteries can give sufficient range now*  
>> *(see <http://www.acpropulsion.com/SEMAtip2003.htm> )*  
>> *although the price is still high.*  
> -----  
> *I can see three factors to be considered :size/weight (or energy density) as*  
> *well as cost and life time (how many charge recharge cycles can be handled.*  
> *The battery on the site suggested is well on the way for energy storage*  
> *density and range. How does it fare with regard to life?*

Not sure, as LiIon batteries have only been in use for a few years, mainly in laptop computers, cell phones, digital cameras, and other high power demand portable application. So far, they appear to be fairly long lived, with many charge/discharge cycles.

LiIon batteries are rather fussy in their charging requirements. Excessively high rates of charge or discharge can cause them to overheat and possibly even catch on fire – as Apple computer found out, much to their dismay. The first Powerbooks with LiIon batteries got a bad reputation for catching on fire. With proper charge regulation, that problem can be avoided.

CM