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Joshua Kaplan '11: When green isn't green (and when it is)

By:

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Green is catching on. Corporations of all kind are jumping to make themselves green or at least appear green. Greenwashing - the perception but not actuality of being green - is getting plenty of attention. But there is another problem getting a lot less attention - the determination of what is and isn't healthy for the environment.

Let me start with a rather unusual but straightforward example. Paul McCartney is a prominent advocate of the environment, so he got himself a hybrid. But being a celebrity who did a US concert tour sponsored by Lexus, he received a \$158,000 Lexus LS 600h for free. And he received it almost immediately; it was shipped in the hold of a cargo jet from Japan to Britain. That works out to driving the car around the world 300 times. That car could run on nothing and never make up for its carbon debt. So on the whole - anything but green.

Of course most of us don't have hybrid sedans shipped half way around the world in the hold of a cargo jet. But at around \$5,000 a piece, some Americans are starting to install home wind turbines. Which is a good thing - sometimes.

For the many city dwellers becoming interested in wind turbines, they're likely to do more harm than good. While much of the countryside provides strong, consistent winds, urban environments, with their varying roof heights and obstructed air paths, provide choppy inconsistent winds that result in little electrical generation. A recent British study found that the construction and transportation of wind turbines for urban use could lead to negative carbon savings.

Companies are adapting to the home market by infusing artistic elements into their turbines. The New York Times reported a few weeks ago on a San Francisco resident who installed two turbines atop his roof and now his envious neighbor is thinking of following suit. Upsettingly, innovations like urban wind turbines are a growing "green" trend that isn't green at all.

On to a much more mundane purchase - compact fluorescent light bulbs. They use about a quarter of the electricity of their traditional incandescent counter parts. However, crucial to their operation is a small amount of very environmentally unfriendly mercury. This is a great example of how it can be difficult to determine whether or not something is eco-friendly.

In a world filled with renewable energy, mercury would not be a concern with regard to incandescent bulbs. However, with half of the country's power coming from coal-fired power plants, the situation is the reverse. Over the entire lifetime of a compact fluorescent bulb, an incandescent bulb would have spewed out 9.65 mg more of mercury into the atmosphere as an effect of the mercury in coal. Even if you vaporized the mercury from the compact fluorescent, it is still better for the environment.

No matter how you slice it, compact fluorescent light bulbs are greener with regards to electricity and mercury.

On the hybrid car front, there's a statement I hear every so often that Hummers are in fact more environmentally friendly over their entire lifetime than Priuses. This comes from a lengthy report by CNW Marketing Research, which had such assumptions as the average Hummer being driven 379,000 miles over its lifetime and only 109,000 for the Prius. If you change around the miles driven, and well you should - the Prius's hybrid technology has a 150,000-mile warranty in California - then so do the conclusions. The only world in which a Hummer is green is an imaginary one.

The study and its rebuttals bring up the point that it's not always easy figuring out what is and isn't green. Sure, a Hummer outgreening a Prius strikes most of us as absurd - but what about the diesel sipping, non hybrid 65mpg Ford Fiesta ECONetic? Well frankly, no one in the general public has any idea and that's the problem.

The Prius puts out slightly more carbon dioxide per mile, but the average consumer couldn't even begin the calculations to account for all of the construction, components, and transportation of the two cars. As consumers, we could never really determine whether either car was more eco-friendly, no matter how many studies are published. Unlike with the Hummer and the Prius, common sense and limited knowledge of cars will be useless.

Determining if something is truly green can include obvious examples like shipping a hybrid via cargo jet, to far more complicated matters of car comparisons and wind turbines. The latter comparisons involve complex and extensive assumptions and analysis that can be rebutted a week later with no consumer any wiser. Next time you read about some new eco-friendly innovation, make sure you keep this in mind.

Joshua Kaplan '11 is waiting for his wind-powered Hummer.

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