

## Re: solar cells toxic

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**From:** quibbler (quibbler247\_at\_yahoo.com)

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In article <68a6629.0406270156.265190d8@posting.google.com>, bri1600bv@hotmail.com says...

> quibbler <quibbler247@yahoo.com> wrote in message

news:<MPG.1b47daa9851ce1a298987b@news.individual.net>...

>> In article <68a6629.0406260919.54e3c52f@posting.google.com>,

>> bri1600bv@hotmail.com says...

>>> I was responding to people who insisted that solar is "100% benign" as

>>> in pure as the driven snow.

>>

>> Well, as usual, you make the mistake of assuming that PV is the only  
>> kind of solar power available. How about solar concentrators that just  
>> use a reflective surface, fresnels, etc? How about low temperature  
>> solar thermal, which essentially just uses insulated glass boxes? All  
>> of these materials are commonly used in every day life and none are  
>> particularly harmful.

>>

>

> Solar thermal? OK, you can use it to heat water, it might be more

> expensive,

More expensive than what? It can be less expensive than buying fuel oil over the course of perhaps one year.

> but if all you're doing is heating water that's a small %

> of electricity needed.

Fortunately that's not all that's being done. Concentrators can produce large amounts of electricity in appropriate locations.

> You haven't solved much.

>

> There is an actual solar thermal electricity plant in CA in the Mojave

> desert.

There have been several.

> In perfect conditions it generates power that 3x as expensive

> as coal.

Perhaps you're exaggerating a bit. The SEGS continued to get progressively more competitive. However, uncounted in the market price is the lower externalities that the solar plants produce for the environment.

> *Uses a very large amount of land*

Actually the amounts of land are not significant given the amount of available land. Even within a desert region, these plants are often built in some of the most lifeless and inhospitable regions.

> *and some (yuck!)*

> *"chemicals".*

Only if they get released, which doesn't happen often with SEGS, but does happen continuously with coal.

>

>

>

>> *I was basically saying that nuclear*

>> *produces wastes that are manageable,*

>>

>> *Maybe, but they are orders of magnitude more dangerous and expensive to*

>> *deal with compared to many types of solar power applications.*

>>

>

> *Mercury emissions are orders of magnitude less dangerous than spent fuel rods?*

Tiny quantities of mercury will seldom kill you, but various radioactive waste could quite easily be fatal. I accept that there are certain reasonable levels of pollution which can be diluted in the air or water and not be highly dangerous. Hopefully we can continue to scrub the worst kinds of pollutants and have reasonable safe emissions standards.

> *Spent fuel rods which can be reprocessed?*

Yes, it would appear that way. However, it looks like the nuclear industry, in their vast concern for the environment has decided that it's cheaper to just chuck the rods than to perform remanufacturing.

> *CO2 which may*

> *cause global warming is less expensive to deal with than a few tons of*

> *nuclear waste?*

Well, the coal industry and most right wingers don't seem to be too worried about CO2 and global warming :) You mean those people are lying and only the tree-hugging nuclear power industry is brave enough to stand up to them?

- > *I think you underestimate the sheer amount of coal used in the*
- > *country. The US uses 1 billion tons of coal per year. 10 million*
- > *train car loads. Stretched end to end it would be a coal train*
- > *stretching for 70,000 miles (assuming 150 cars per mile). Do you*
- > *think the environmental degradation (including "mountain top removal"*
- > *in WV) of that as well as the mercury emissions and soot are easier on*
- > *the environment than say, 100,000 tons of uranium ores which produces*
- > *say 1,000 tons of uranium a year?*
- >
- > *Which is easier on the environment, wastes from 1 billion tons of coal*
- > *or 1,000 tons of refined uranium?*

Why don't you ask some of the people who lived around Chernobyl, presuming you can still find one who is alive? I wonder if they would have rather suffered potential mercury emissions from a coal plant as opposed to the millions of curies of fallout that blanketed their homes, schools, etc.

- > >
- > > *which is all you can ask for*
- > >
- > > *Not quite. Clearly we could ask for a smaller volume of waste and for*
- > > *the waste to be lower level. If fission is all we can ask for then why*
- > > *are people trying to implement new technologies like fusion? It might*
- > > *be that fission waste is manageable, in theory, but that doesn't mean*
- > > *that best practices are always followed. As I like to tell the super-*
- > > *optimistic fission advocates, if you think nuclear power is so safe then*
- > > *why don't you take a job as a uranium miner or in a position where you*
- > > *have to handle nuclear waste on a daily basis. Would you want your*
- > > *children or relatives to be uranium miners or nuclear waste handlers?*
- > > *Are you so confident of the safety of these systems that you'd buy a*
- > > *house right by a nuclear plant? Maybe you are comfortable with all of*
- > > *these things. But the vast majority of people would quite rightly be*
- > > *more skeptical about the safety of these types of things.*
- >
- > *I would buy a house next to a plant. But that's an idiotic standard.*

If you say so. I suppose that people around chernobyl thought it was pretty "idiotic" to worry about the risks as well. Ditto for Hanford, Rocky flats and many other areas that have been demonstrably contaminated by the nuclear industry.

- > *Would you be a prison guard?*

It depends upon how many megawatts you plan to generate on a regular basis from the prisoners :)

Anyway, it's interesting that both you and Longmuir seem to think that working in a nuclear plant is about as safe as being a prison guard.

That isn't exactly a vote of confidence. Hopefully you're not just reading from the same talking points. The point was just to get you to "put your money where your mouth is" so to speak with nuclear power, but

it seems that both of you seem to want to sidestep that discussion in favor of pointing out that <gasp> there are other dangerous occupations in the world. Never mind the fact that enforcing the law might be a little more essential than generating power with nuclear fission. But I'm pretty sure that when prison safety protocols break down it usually doesn't result in everyone within several hundred miles dying or contracting fatal illnesses.

> *No? I wouldn't either. Well then I  
> guess no one should be and we shouldn't have prisons.*

Gee, you seem to have knocked down a conclusion that nobody but you proposed. I didn't say that we shouldn't have nuclear power plants just because it was a dangerous profession. I just wanted super-optimistic nuclear boosters to take off their rose colored glasses for one second. If you want to argue that a nuclear power plant is a necessary evil, on par with a prison then it sounds like you recognize that there are some pretty significant dangers. If we compare these types of dangers to ones presented by wind, solar, otec, geothermal, etc then it looks like nuclear may be at a fairly significant disadvantage respectively.

> *(no prison  
> guards = no prisons).*

You mean we can't let the inmates run the prison?

> *New technologies like "fusion"? There is no "fusion" technology to be  
> implemented. It is a pipe dream. If the scientists working on it say  
> it's decades away at best, then it can't be implemented. It may never  
> be. So relying on it to solve the "energy problem" and "waste  
> problem" is idiotic.*

Relying upon it might be too strong a word. In all likelihood, some form of fusion generation will eventually be available. It will still probably have many of the same problems nuclear power generation has today, though perhaps on a somewhat diminished scale. I wouldn't reject fusion out of hand as a research program. But I wouldn't pick either it or fission as the most attractive power source available at present.

>  
> *Besides if fusion were here it would generate wastes. Then people  
> like you would carp about how it isn't perfect so we shouldn't use it.*

Yes and we would be quite right to carp about the types of waste that it does produce. I guess people like you would try to keep ignoring the problem until the inevitable catastrophes produced by such negligence made it impossible to ignore.

>  
> *Opposition to nuclear is letting the perfect be the enemy of the very  
> good. Nuclear produces some waste and that just won't do!!*

If you say so.

> *Given the*  
> *state of the world it's complete insanity.*

Yeah, some nuclear schemes are a bit nutso, but really, you shouldn't be so hard on yourself :). Nuclear might at least serve in a nice backup capacity.

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Quibbler (quibbler247atyahoo.com)  
"It is fashionable to wax apocalyptic about the threat to humanity posed by the AIDS virus, 'mad cow' disease, and many others, but I think a case can be made that faith is one of the world's great evils, comparable to the smallpox virus but harder to eradicate." -- Richard Dawkins