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Subject: : Conservation

Topic: : Do you support or oppose nuclear power generation?

Re: Do you support or oppose nuclear power generation?

Author: : pcray1231

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URL:

While there are problems, its the cleanest large source of energy we have.

Wind and solar are great to supplement the grid, but can never be large enough scale to take a significant bite out of coal. Geothermal is great too, but can be large scale for electricity in only a few areas. For houses (heating and cooling), it can be done pretty much everywhere, and the long-term economics are beneficial, so it should be pursued aggressively.

The only way to take a bite out of coal's influence on the large-scale electricity generation is nuclear. Its practically carbon free, if you believe in global warming (not trying to start debate). Even if you don't, it has no problems with acid rain, or mine acid, a huge factor for fishermen like us. Its inherently cheaper too. Though the cost of getting through the red tape and building a plant today make it so its not, even with those shortcomings its still competitive economically.

Regarding waste, we keep our old plants around, which make waste on an enormous scale compared to what modern plants would make if we built them. Yet we don't build them, why? Environmental concerns? It doesn't make sense. We also do not reprocess our waste, and the rest of the free world does. The vast majority of the waste we have around could be used as more fuel, and the stuff that comes out afterwards is much less radioactive (less dangerous and a half life on the order of 2-3 hundred years, as opposed to millions), elimintating or at least vastly reducing our storage problems. It seems counterintuitive, but a breeder reactor (which we don't use do to Jimmy Carter and proliferation concerns) actually winds up with more fuel than it started with. Consider, our aircraft carriers can stay at sea, under full power, for 50 years on a few pounds of fuel.

As far as safety. There are lots of safety problems. A properly running nuclear plant actually puts out less radioactivity than a properly running coal plant. Yes, there's been accidents. Chernobyl is most notable, but if you go through the list of design flaws and blatant disregard for safety, it truly baffles the mind that it could ever happen. TMI was big too, but the safety measures worked, and nothing all that bad actually happened. Accidents will occur, but modern reactors, which we could build today are immune to the "big one." And even with our poor reactors running, compare nuclear's safety record with that of coal, and its not even close. Now add all the deaths and injuries in mining accidents and its even more lopsided. Now consider the health effects of acid rain, AMD, siltation, etc, and its a no brainer.

The last part is hydrogen, probably the eventual winner to power our transportation. Right now, hydrogen can be made from oil, which has obvious limitations if we were to fuel our cars with it, we'd need a lot more oil per mile than gasoline needs. Or it can be made from water, by putting electricity through it to separate oxygen and hydrogen, and saving the hydrogen. The problem is, if it was 100% efficient (and it isn't), you'd get the same energy back as you put in via electricity. Essentially you'd be shifting the power from oil to coal, and I'm not

sure that's an upgrade, certainly not with regard to emissions, carbon dioxide, and smog. Nuclear solves this. Because uranium is essentially free and endless, the cost of nuclear power is in building the plant and cutting red tape. It doesn't take any more money to run a plant at 100% capacity than it does at 30%. So at 4 a.m. when the demand on the grid is low, nuclear energy can be making hydrogen from water on a huge scale, and cars can be powered with no emissions at any point in the cycle.