

Re: Mook's quote about nuclear being a "low grade heat". Is it true?

Source: <http://sci.tech-archive.net/Archive/sci.energy/2004-07/0246.html>

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Date: 07/07/04

Date: Wed, 07 Jul 2004 01:37:10 GMT

"Scott A Crosby" <scrosby@cs.rice.edu> wrote in message
news:oydwu1hrfwy.fsf@bert.cs.rice.edu...

> On 4 Jul 2004 20:43:37 -0700, william.mook@mokindustries.com (william
mook) writes:

>

>> *I thought them reasonable given the political environment in which
>> they operate. Those references if examined closely can seen to be
>> biased. They discard those plants that in the view of the authors are
>> unreasonably delayed and turned off for insufficiently good reasons.
>> So, they are biased toward rather rosy and optimistic figures – not
>> real world figures with real people and real politicians around.*

>

> *[FYI, I've found this discussion very interesting, but I wish you
> didn't talk through each other as much as you are.]*

>

>

> *I think the problem here is that you are counting externalities as
> costs. If a plant has a social cost of \$2B, that being the amount of
> labor, material, etc needed to construct it, tear it down, and manage
> the waste, but NIMBYism inflates the expense of the plant to \$5B, the
> social cost of the plant remains \$2B, even though the owner has to pay
> the extra externality of \$3B to overcome NIMBY. That externality
> causes the expense of the plant to increase, not the social cost of
> the plant.*

Well, I would use a different term for these numbers. Let us call the \$2B to build a plant an actual 'physical construction cost', and the inflated expenses caused by NIMBYism or other politically motivated delays are the 'social construction cost'.

Yes, and as Mr Mook points out, the *actual* costs are the sum of the two. You must pay them both. To which I counter that the costs in the second category are not so easily predicted. One could spend just a few \$M on public education, and PR and probably change those second category costs dramatically. But one false step and instead of reducing them, you could

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treble them. Only a completely open and honest disclosure should be attempted there.

- >
- > *That externality exists as long as the social environment remains the*
- > *same. But I think you're wrong to charge that externality to nuclear*
- > *power as a technology, but to the social environment.*
- >
- > *The owner has to pay that expense---its a real expense---for as long*
- > *as the NIMBYism exists. But, change the social environment---say, a*
- > *realization that its either nuclear power or blackouts, and with luck*
- > *that expense will decline and the total cost of a nuclear plant will be*
- > *closer to the social cost of it.*
- >

Exactly.

<snip>

- > > *Yes, but I was which was the whole point. People who say – gee we*
- > > *won't have to worry about energy when oil runs out because we have*
- > > *nuclear power – are wrong. We do have to worry because the cost of*
- > > *energy the real costs we really pay, affect our standard of living in*
- > > *an industrial society. Nuclear as currently configured won't cut it –*
- > > *not at \$5 per watt, not at \$2 per watt. It won't cut it. Which is my*
- > > *point.*
- >
- > *Going by daestrom's numbers of \$.05/kW*h and this above, there's a*
- > *serious problem. \$3/gallon gasoline is going to be terribly bad for*
- > *our economy. Taxes might inflate the retail expense above that in some*
- > *parts of the world, in which case the government would siphoning value*
- > *off of cheap (costing) gasoline and putting it into other projects. If*
- > *the actual cost was \$3/gallon, there's be nothing for the government*
- > *to siphon off.*
- >
- > *We'd need energy at or under penny/kW*h to afford gasoline without*
- > *those dislocations. Could nuclear go that cheap?*
- >
- > *Daestrom, any suggestions?*
- >

As with many economic/social changes, I feel the key factor is time/rate of change. If the price of gasoline is allowed to rise slowly as supplies dwindle, the price escalation will make more and more alternatives economically viable. If the price rises slowly enough, many alternatives become viable *and* doable within the given time frame. Also new forms of conservation become economically viable that will help limit the impact of rising energy prices on overall economic growth.

But if the prices of fossil are held artificially low by government subsidy, or other means, then alternatives will *not* be economically viable for some

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time. Then if the price controls are removed and the price rapidly rises, there will be an economic incentive for alternatives, but not a long enough timeline to implement them. Chaos.

So I think the *best* thing to do is allow the scarcity of fossil to begin to raise prices slowly. Limit govt support/controls. But also limit the rate of increase in exploitation of known reserves (such as Alaska). Perhaps even continue to drive up scarcity if needed (albeit slowly) by stockpiling. This will provide more and more economic incentive for alternatives to be developed, while only moderately impacting the short term economy. The slower that fossil prices rise (within limits), the more time alternative infrastructures can grow to meet the inevitable demand. But the price should rise faster than general inflation (although, of course energy *is* a major input to that).

Just look at the oil prices over the past year. Yes, the significant increase has created some economic hardships. But the price seems to be stabilizing. And now, people are once again putting some focus on fuel economy and alternate transportation. And although the exact economic impact may be debatable, we're not experiencing 'bread line' depression as a result of the price increase. Perhaps if such price increases were to occur every two years, it would actually turn out to be a good thing in the long run.

daestrom