

Re: NEF claims more nuclear power is not way forward

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- *From:* "daestrom" <daestrom@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Sat, 8 Sep 2007 17:54:06 -0400
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<dave.walters@xxxxxxxxxxx> wrote in message
<news:1189114615.270056.152310@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>

On Sep 6, 11:53 am, Rolf Martens <rolf.mart...@xxxxxxxxxx> wrote:

In article <46ddbe6a\$0\$17072\$4c368...@xxxxxxxxxxxxxxxx>, daestrom@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx says...

<snip>

>> Experience here in Sweden in 1970–1985, before the ban set in,
>> shows that a population section of 1 million people easily can
>> build 1 reactor of 1 GW in 15 years. That would be 300 such
>> in the USA in that time, for instance.

>But 300 in 15 years does not mean 1 reactor every 6 months. It does >take a
>lot longer time to build a 1000 MW nuc plant than it does to build a >1000
MW
>natural gas turbine plant. There's just no denying that.

>daestrom

Well, it should mean 1 every 6 months.

Now it also has been said that reactor building in the USA has been less effective than in Europe – one of a kind often has been built, instead of several of a standard model.

But anyway, a lot of such, technically, could be built in the USA too.

Rolf M.www.rolf-martens.com

Rolf is correct. Once infrastructure is in place: factories to build the components (there is only 1 in the US after all the others shutdown) are built, then the US should be building at least 2 a month

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on average.

Actually, there is only one steel mill in the *world* that can manufacture the large vessels used for LWR reactors and its in Japan. No US manufacturer can forge LWR reactor vessels.

Even with a 'crash' course in building nucs, *starting* 2 a month, the first unit won't be on-line for between 5 and 7 years.

The costs of financing a construction project that can take 5 years to complete is not trivial. The 'experts' believe they can do it, but a lot would depend on the financial markets. If we start seeing a return to double digit interest rates, the cost of starting a nuc may very well rise to the point of non-profitability.

Considering the risks involved, no business entity is going to risk starting construction on 24 nucs (2/month * 12 months) without even knowing if the first ones are going to be fully completed. You and Rolf may *want* to build a lot of nucs, but I don't think you have the money to do it on your own. And those that do have the money are a bit more cautious (that's one reason why *they* have the money).

Let's look at what is going on now. There are 33 "planned" with one or two (I forget which) that have filed C&O license. It takes 2 to 4 years to get approval. There are about 12 more with C&O L being submitted over the next 2 years. This is of course *nothing* to what we need but we can look at it's expansion. To wit: the 33 "planned" all get approved and break ground in 4 to 5 years. At that point, with the world infrastructure back up to snuff, we can plan 2 a month, 24 a year, 100 every 5 years for the next 30 years bringing us (in the US) up to the *originally planned* 600-800 GWs of power.

This is completely doable and ALL for under \$1 trillion US dollars, or about 3 years of the US defense budget.

Are you suggesting the government step in and start funding this? Boy, I can just imagine what all the other special interest groups have to say about that.

The US energy load is about 1,000 GW. 600-800 is what we could effectively use right now with current designs. Loading and 'peaker' nukes can be built and have been so it's not inconceivable that a 100% nuclear-to-load project is possible out toward 2040/2050. This would presume breeder and smaller HTR type plants in mix as well.

So you'll have replaced the large oil-based energy economy with one based on nuclear. I'd much rather see a diverse energy economy based on several technologies (nuclear included). It would be much more robust, able to sustain a number of 'hits' from a variety of unforeseen directions. Take a lesson from nature, life on the planet is very diverse and adaptable to changes in the environment. If mankind is going to continue to survive

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and flourish we must be similarly adaptable and diverse.

daestrom

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