

# Re: NEF claims more nuclear power is not way forward

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*Source:* <http://sci.tech-archive.net/Archive/sci.energy/2007-09/msg00094.html>

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  - *Date:* Mon, 17 Sep 2007 19:47:36 -0400
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"T. Keating" <[tkusenet@xxxxxxxxxxxx](mailto:tkusenet@xxxxxxxxxxxx)> wrote in message  
[news:85use31bdn6gbn831u1tqd1sqhvmekbfls@xxxxxxxxxxxx](mailto:news:85use31bdn6gbn831u1tqd1sqhvmekbfls@xxxxxxxxxxxx)

On Tue, 28 Aug 2007 06:21:26 -0700, "EnergyForum.cc"  
<[fabian@xxxxxxxxxxxxxxxx](mailto:fabian@xxxxxxxxxxxxxxxx)> wrote:

Hello newsgroup members,

This might be of interest to someone:

An environmental think-tank in the UK, New Economics Foundation (NEF), has said that more nuclear power plants in the country is not the way forward for cutting carbon emissions from the power generation sector and reducing the consumption of imported fossil fuels because implementing a nuclear building programme will be slow, expensive and risky. Additionally, it will not have enough of an impact to prevent climate change nor guarantee energy supply security. According to NEF, the cost of building new nuclear reactors is actually triple what is being claimed by supporters of such plans.

Source: Energy Business Review

There is a significant chance that our current nuclear reactor designs will enter into a class-9 meltdown phase after being subjected to a EMP attack. (google CRAC-2, "Calculation of Reactor Accident Consequences" ) .

I.E. Simultaneous failure of all power, measurement, electronic control, and cooling systems.

If this EMP pulse occurs in near space (altitude 200+ miles, just off the US east coast), we could have dozens of reactors entering into a simultaneous meltdown phase. Thus sealing the US's fate as a massively contaminated radioactive wasteland.

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<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0933/sec3/020r1.html>

Unfortunately.. this study was prepared(1982) before many electronic control, and monitoring system additions where made to many of these plants.

Unfortunately for your theory, the digital controls and other protective equipment at nuclear plants are used to keep the control rods 'out'. A failure of nuclear instrumentation systems, whether from EMP or dropped screw-driver in the works, results in the reactor scrambling and stopping the fission process. Digital control of the main turbine-generator is a non-issue as well. The small number of instruments actually needed to maintain a reactor in a safe shutdown condition is very small. And these instruments are environmentally qualified to a very rugged level, including sustaining several hundred RADS of ionizing radiation. An EMP wouldn't damage them.

The emergency cooling systems do not use digital controls to operate. Large electrical motors, motor operated valves and tanks of water are not significantly affected by EMP. As the 82 study points out, the most that would happen is a momentary loss as some switchgear breakers trip and re-close.

As much as you'd like to think that an EMP would devastate the US with nuclear power plant meltdown, the emergency shutdown and cooling systems of these plants are \*not\* that vulnerable. That's what the NRC said in '82 and its still true today. In fact, there are no plants that I'm aware of that have upgraded to digital equipment in any category I equipment, they still use simple, rugged controls designed from the 1960's.

daestrom

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