

We Don't Need New Nukes!

The nuclear industry wants us to believe that we **NEED** new nuclear power reactors – as a matter of fact, we need *thousands* of them¹...and that we taxpayers should help pay for them. Further, our region, the Southeast, has been singled out.



What the promoters fail to tell is the truth. We need NO new nuclear power reactors because:

- Contrary to industry projections, the United States today has more power than it needs. All our products and services could be delivered using half the energy, when more efficient hardware and practices available today are adopted.² (See reverse.)
 - *When we embrace energy efficiency we will reduce the amount of power we need. We would then run an economy TWICE the size on the power we have available today.*
- **Nuclear is the most expensive large-scale form of electric power invented.**³
 - *Wind power delivers two to three times more power per dollar invested.*⁴
- **Nuclear is not cost-effective for reduction of climate-changing emissions.**
 - *Energy efficiency combined with industrial co-generation⁵ can reduce climate-changing emissions faster, and seven times cheaper.*⁶
 - *Nuclear power itself is not carbon-free. Ongoing production of uranium fuel releases CO₂ comparable to burning natural gas to make the same power.*⁷
 - *In 2005 nuclear generated 19.9% of the nation's electricity.*

- **Nuclear reactors are effectively pre-deployed dirty bombs.**⁸
 - *Would anyone bomb a wind farm?*
 - *The Chernobyl catastrophe in 1986 dumped more radioactivity into our environment than all the nuclear weapons tests combined.*⁹
- **Every nuclear power reactor makes plutonium** – that is usable in nuclear bombs.¹⁰
 - *Photovoltaic (PV) solar panels produce electricity with no moving parts, no waste—and no security risk.*
 - *Electricity from solar panels is more reliable—and much safer, than nuclear.*
 - *Rooftops nationwide, when fitted with PV cells, will provide as much electricity as coal + gas + nuclear + hydro do today.*¹¹
- **Nuclear power = nuclear waste.** Deadly, plutonium-laced, highly radioactive, irradiated fuel left over from making electricity for one generation's use will be a burden and hazard for the next 12,000 human generations!¹²
 - *New plans for the mountain of existing radioactive waste target the South.*¹³
 - *Hydro, wind, and solar require no fuel, and make no waste. The only waste is when these renewable resources are not used!*
- **Nuclear is a bad investment risk** – historically projects ran behind schedule, over budget, and many were canceled before completion, resulting in massive loss of investment funds.¹⁴ Use of tax dollars will not change this—it merely transfers the burden more quickly to the public.
 - *Energy efficiency is making big profits and big news – major corporations have added billions to the “bottom line” simply by finding ways to save power (see reverse).*
 - *History is repeating in Europe and Asia: new reactor designs are just as expensive to build as they were two decades ago; costs are running about double nuclear industry goals.*¹⁵

We don't need new nuclear reactors— they cost too much, take too long to build, make terrible waste and threaten security. However, we do need swift action to adopt REAL solutions to climate change. The quickest, cheapest and most effective investment is in energy efficiency and energy conservation.

What is energy efficiency? Doing / making something, using less resources (of any kind), is called “efficiency.” In the case of electric energy efficiency, it means that the same product or service is delivered – using less electric power to do it.¹⁶

A simple (and vital) example is light bulbs. A traditional bulb that we grew up with comes in different wattages -- 60 watt or 75 watt, and we know how bright the light from each bulb will be.

Today a compact fluorescent light (CFL) delivers the same amount of light as an old 75 watt bulb – but only uses 25 watts of power! The CFL is more efficient than the old bulb – and does the same job. CFLs fit in the same fixtures as the old bulbs and are available at nearly every place you buy light bulbs, and also many local Green organizations.

Rocky Mountain Institute (www.rmi.org) estimates that if ALL the bulbs in the United States were replaced with CFLs, more than 20% of the total electric power nationwide would be saved. We could close the nation's 103 nuclear power reactors, because they make only 19.9% of the total U.S. electricity. Breakthroughs with even more efficient LED bulbs are on the way and even more exciting.

In addition to light bulbs, all type of electric appliances, motors, pumps, and even the power distribution system (“the grid”) itself could be upgraded to be more efficient. The savings in dollars, kilowatts, and CO2 can be significant. DuPont Chemical Corp. spent \$1 billion, and two years finding ways to save power in their enormous operations. They did -- \$3 billion worth! The net DuPont profit from investment in efficiency was \$2 billion. When power is not used, the generation potential is available for other purposes – or is not needed.

Energy efficiency is not a new thought...it is a new way of thinking.

What is energy conservation? When we choose to not use electric power (often by changing behavior)

we conserve energy. Conservation includes: Wearing a sweater and lowering the thermostat in Winter; turning down hot water heaters; turning off lights when we leave a room; not running water needlessly; buying foods grown locally. As our Vice President has famously stated, conservation is a *personal virtue*. We agree, and applaud those who practice it! Conservation is the cheapest way to cut CO2 emissions.

---August, 2006 Mary Olson, NIRS Southeast Office.

Note: all internet cites given as of 08/14/06.

¹ Deutsch, J. and E. Moniz, 2003, The Future of Nuclear Power, MIT, <http://web.mit.edu/nuclearpower/>

² Energy expert Amory Lovins stated in 1996 that the US could function on ¼ the energy used at that time, see <http://www.heinzawards.net/recipients.asp?action=detail&recipientID=31>.

³ Current rates for nuclear don't cover costs of replacement, weak regulation, waste, accidents, real security – costs born by taxpayers or victims.

⁴ Lovins, Amory. (2005, September). More profit with less carbon. *Scientific American*. (pp.74–84).

⁵ Cogeneration: industrial heat is used instead of vented. Heat may used to heat buildings or generate electric power.

⁶ See note 4.

⁷ van Leeuwen, Jan Willem Storm and Philip Smith, Nuclear Power: the Energy Balance, 2002, revised 2005 with updates at: <http://www.stormsmith.nl/>.

⁸ See: NIRS Reactor Watchdog Project, Security <http://www.nirs.org/reactorwatch/security/securityhome.htm> AND <http://www.greenpeace.org.uk/fridaythe13th/>

⁹ Fairly, Ian, & Sumner, David. (2006, April). The other report on Chernobyl. *TORCH Report*. Washington, DC: Nuclear Information and Resource Service.

<http://www.nirs.org/c20/torch.pdf>

¹⁰ Dr. Edwin Lyman – Public Health Consequences of Substituting Mixed-Oxide Fuel For Uranium Fuel in Light Water Reactors, 1999. <http://www.nci.org/k-m/moxsum.htm>.

¹¹ See www.millionsolarroofs.org for a start!

¹² 24,000 years = one half-life of plutonium-239, found in radioactive waste. 10–20 half-lives = undetectable.

¹³ Olson, Mary 2006. Chapter 5, Asheville: At the Nuclear Crossroads.

<http://www.nirs.org/radwaste/hlwtransport/ashevillemnuclearcrossroads280606.pdf>

¹⁴ Bradford, Peter and David Schissel, 2006. Why A Future for the Nuclear Power Industry is Risky.

<http://www.nirs.org/factsheets/whynewnukesariskyfacts.pdf>

¹⁵ Mariotte, Michael, 2006. Think Atomic Reactors Can Be Built Cheaply and On Time? Think Again.

<http://www.nirs.org/nukerelapse/neconomics/quickeconfact.pdf>

¹⁶ A National Efficiency Action Plan, 2006. US Environmental Protection Agency, posted at: http://www.epa.gov/cleanenergy/pdf/ActionPlanReport_PrePublication_073106.pdf