

FACT SHEET

Risky Appropriations: Gambling US Energy Policy on the Global Nuclear Energy Partnership

The Global Nuclear Partnership (GNEP) is a major element of the Bush Administration's energy policy. Its principal goal is to expand the world-wide growth of nuclear energy as a means of reducing greenhouse gas emissions and fostering economic development. Under the President's plan, the United States and its nuclear partners would sell power reactors to developing nations who agree not to pursue technologies that would aid nuclear weapons production, notably reprocessing and uranium enrichment.

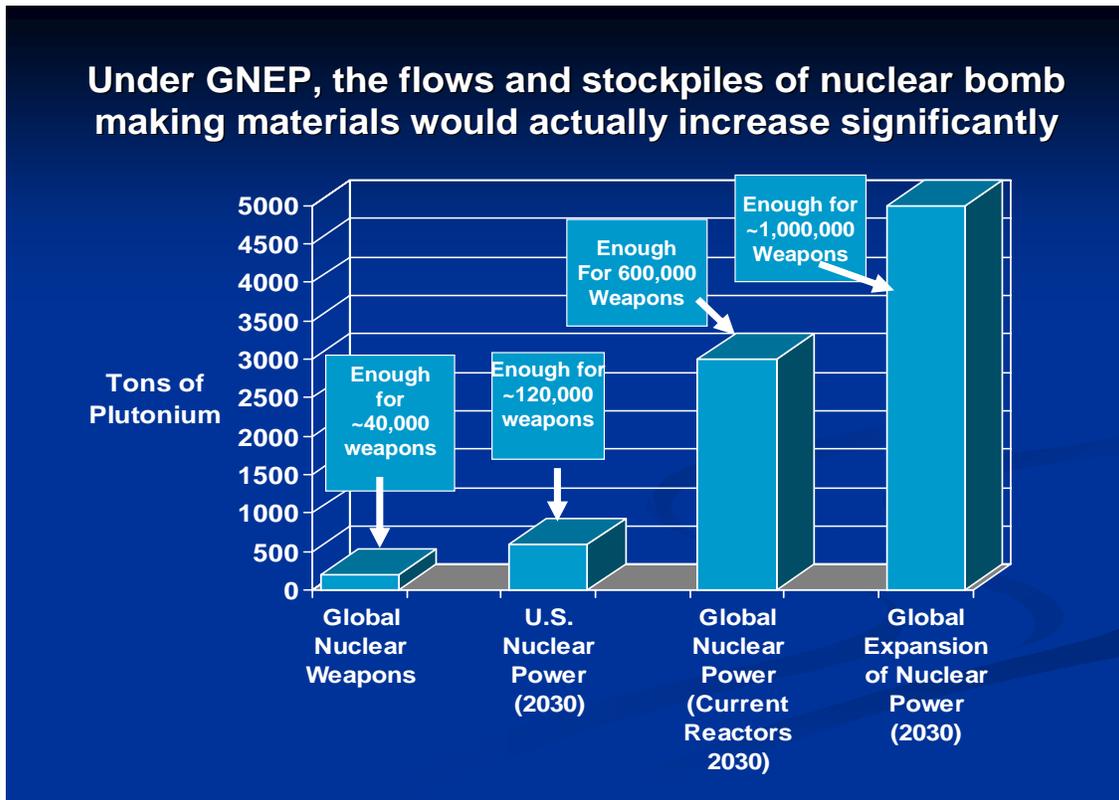
To sweeten the deal, the United States would take back highly radioactive spent fuel rods from foreign reactors for recycling in this country. These foreign reactor wastes, along with spent fuel from the U.S. reactor fleet, would be reprocessed to reduce the amount that would be placed in permanent storage deep underground. Nuclear explosive materials, such as plutonium, would also be separated and converted to less troublesome isotopes in a new fleet of advanced burner reactors that would be built at sites throughout the U.S..

However, an investigation by Synapse Energy Economics has found that:

- **GNEP is a rushed, ill-conceived, poorly supported and technically and economically risky expansion and redirection of the nuclear industry. Several Congressional Committees and Subcommittees have decried the absence of detailed technical and cost information in support of the program. None of the technologies and processes proposed for GNEP current exist in commercially viable applications and only a few have been demonstrated in large, engineering scale projects.** The National Academy of Sciences reported in 1996 that the technological elements of a GNEP-like program would cost as much as \$700 billion and take 150 years to convert nuclear explosive materials. In August 2007, the Academy once again raised critical concerns and recommended curtailment of DOE's aggressive efforts to deploy unproven technologies. DOE has yet to provide any details regarding long-term costs and definitive timelines. GNEP's reliance on reprocessing spent nuclear fuel represents a major break with longstanding U.S. policy, which for the past few decades has supported a once-through nuclear fuel cycle.
- **Even if its unproven technologies are shown to be viable, GNEP also has the potential to inhibit the adoption of more reasonable solutions to global climate change by diverting resources into an unproven and, most likely, a prohibitively expensive nuclear option.** An expansion of nuclear power to effectively mitigate greenhouse gas emissions would be prohibitively expensive and risky, requiring at least 1,000 reactors over the next 45 years. It also would be an extremely slow process, taking decades to achieve any reductions in world CO₂ emissions, if, indeed, it ever does. Such a massive expansion of nuclear power also would divert capital resources from investments in other faster and more easily deployed alternatives for reducing world CO₂ emissions.
- **GNEP also would increase the danger of nuclear proliferation and the potential for weapons grade materials falling into the hands of hostile or**

unstable nations and terrorist groups. There is no evidence that GNEP actually would reduce the threat of proliferation of nuclear weapons and nuclear materials to other nations and terrorists. GNEP's reversal of the U.S. practice of not reprocessing wastes poses a proliferation threat. Indeed, the flows and stockpiles of potential nuclear bomb making materials would actually increase significantly under GNEP. Not only will more radioactive materials that are less "self-protecting" be produced under GNEP, but their wide deployment over myriad transport routes will create additional access points at which these materials could be intercepted and diverted. (see Figure 1)

Figure 1



- GNEP will likely worsen the radioactive waste disposal problem and would also make the United States the dumping ground for nuclear wastes from the other participating nations.** If nuclear power growth is tripled to mitigate global warming, the "take back" policy of GNEP would mean that the U.S. could import enough reactor spent fuel to fill more than a dozen Yucca Mountain, Nevada repositories. Under the administration's plan, highly radioactive strontium-90 and cesium-137 would be separated for near surface disposal after 300 years – resulting in the largest source of high-heat radioactivity in the United States and possibly the world. DOE would be going against the past 50 years of recommendations by the National Academy of Sciences that these very wastes be disposed in a deep geological repository.

Thus far, over the past six years, the Energy department has spent approximately \$756 million for GNEP technologies. In FY 2009, DOE is requesting \$300 million more. However, GNEP still lacks important details about technical viability, proliferation risks, waste streams and ultimate life-cycle costs. By contrast, other, more effective programs have been cut or eliminated, like the DOE's weatherization program that effectively reduced energy demand and greenhouse gas emissions but has been cut in FY 2009 by 300 million and eliminated.