

### Revival of Pyroprocessing Technology for Nuclear Fuel in Bush Administration Energy Plan Poses Serious Proliferation Dangers

For Immediate Release, 17 May 2001

#### PRESS RELEASE

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## Process Could Lead to the Revival of Plutonium Breeder Reactors, Independent Institute Says

Washington, D.C.: The Bush administration has decided to investigate the use of a <u>plutonium</u> separation technology called pyroprocessing "in the context of developing advanced nuclear fuel cycles and next generation technologies for nuclear energy." Pyroprocessing, a term used to refer to electrolytic separation of the contents of spent nuclear power plant fuel, is the technology that was proposed to be used with the Advanced Liquid Metal Reactor, also called the Integral Fast Reactor (IFR), before it was cancelled in 1994. Research on pyroprocessing was continued as part of DOE's "waste management" program.

"Pyroprocessing is the tail that seems set to resurrect the IFR <u>breeder reactor</u> dog," said Dr. Arjun Makhijani, president of the Institute for Energy and Environmental Research (IEER), in Takoma Park, Maryland, which has published many studies on nuclear-related technologies. "Breeder reactors were consigned to oblivion in times past because of their potential for creating huge amounts of <u>plutonium</u>, the proliferation dangers that they posed, their high costs, and their safety vulnerabilities. They should not be revived."

Proponents of pyroprocessing, who seem to have convinced the White House energy panel, claim that it is "proliferation-resistant" because the impure plutonium that results will not be used to make nuclear weapons.

"It is true that countries that have nuclear weapons already would not use impure plutonium from pyroprocessing for building bombs," said Dr. Makhijani, "but those who lack the materials would not hesitate to use it. Non-nuclear states that may want nuclear weapons and terrorist groups would be the main customers for this impure plutonium, if this technology spreads."

Lack of nuclear materials that could be used to make even crude nuclear bombs is generally considered to be the main obstacle to nuclear proliferation. Pyroprocessing would lower the proliferation bar considerably, according to IEER. One of the drawbacks of pyroprocessing plants for proliferation derives is that they are far more compact than existing reprocessing plants, which are huge and discharge large amounts of liquid waste.

Pyroprocessing could greatly aggravate the problems of inspection of nuclear facilities and create disputes



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over the sharing of civilian nuclear technology. "Many countries will want this technology, if the United States promotes it as proliferation-resistant, and that could become a fertile source of international political disputes and inspection nightmares," said Dr. Makhijani.

"It's best to end development of pyroprocessing." Nuclear weapons states are obliged, under Article IV of the Nuclear Non-Proliferation Treaty to share civilian nuclear technologies, he further noted.