



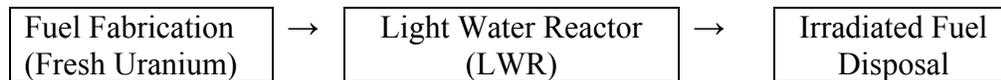
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Joan Claybrook, President

Nuclear Power Fuel Cycles and GNEP

The U.S. Department of Energy is proposing to embark on a massive program, called the Global Nuclear Energy Partnership (GNEP), for managing the world's irradiated fuel created by nuclear power plants. Under this program, the U.S. would reprocess its irradiated fuel (as well as fuel from other countries) and use the plutonium in mixed oxide (or MOX) fuel in fast neutron reactors. Reprocessing, however, will not solve our country's nuclear waste problem.

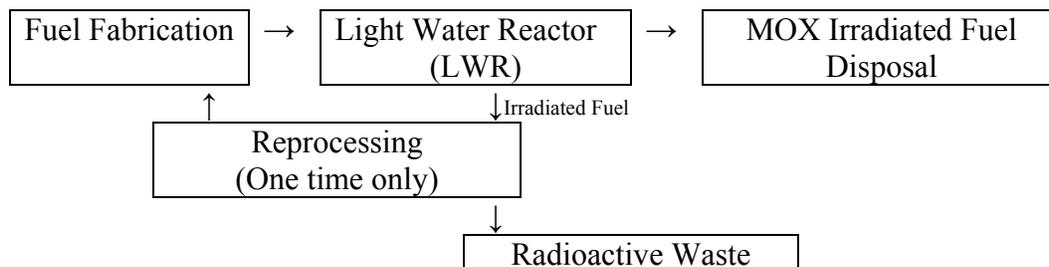
What the U.S. Currently Plans:

In the 1970s, India tested a nuclear bomb using plutonium that it separated using reprocessing technologies given to it by the United States. As a result, the United States decided to stop reprocessing domestically in order to show other countries by example that reprocessing is not necessary. The effort worked; the only new country to start reprocessing since then is Japan, which is about to test a \$20 billion reprocessing plant, and many of the countries that did reprocess have stopped.



What France Does:

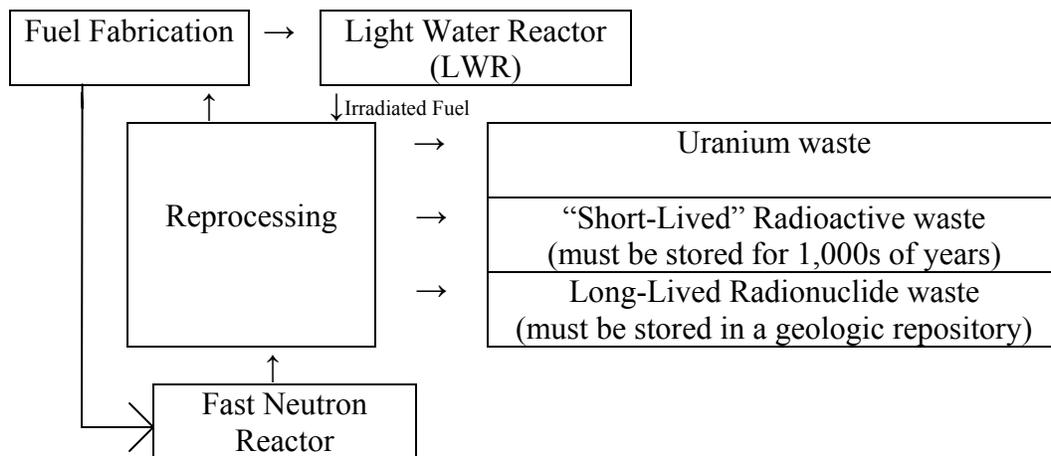
France and other countries (India, Russia, and soon Japan) that are currently reprocessing end up with irradiated MOX fuel, which is hotter than regular irradiated fuel, making it too difficult and expensive to reprocess again. So, these countries are looking for their own waste dump for permanently storing the MOX irradiation fuel, and finding the same public opposition to the proposed sites. Globally, there is about 250 metric tons of separated plutonium from commercial reprocessing that have not been used in MOX fuel – equivalent to 30,000 nuclear bombs.



What DOE Is Proposing Under GNEP:

The necessary technologies for the GNEP program—including reprocessing, fast reactors, and plutonium fuel—are still in the early stages of research. DOE has stated that it does not want to use the old reprocessing technology (called PUREX) that results in separated plutonium. But the two reprocessing technologies (UREX+ and pyroprocessing) that DOE is currently researching are not “proliferation-resistant.” The resulting plutonium mixes from these technologies are not sufficient to prevent theft. Moreover, both technologies can easily be undone to obtain pure plutonium using the old, 1940s technology (PUREX). Countries, including the US, have been trying to develop fast reactors for 50 years and the results have all been technical and economic failures.

Reprocessing will not eliminate the need for a geologic repository, and will actually increase the number of waste streams to be managed.



The Department of Energy’s (DOE’s) budget request for \$250 million for its reprocessing research and development program, called the Advanced Fuel Cycle Initiative, is not merely a “little R&D program.” It is the first step in this huge program that will cost more than \$100 billion, according to a 1996 estimate by the National Academy of Sciences. GNEP is also a massive change in U.S. policy on commercial irradiated fuel management. Despite the fact that the technologies are not even close to ready for even a demonstration project, DOE is trying to build constituencies for the program by siting a demonstration reprocessing facility and by signing contracts with industry. DOE has also announced an advance notice that it intends to prepare an Environmental Impact Statement on the facility; yet, DOE has not done a Programmatic Environmental Impact Statement evaluating the entire GNEP program.

Congress should cut the \$250 million requested by DOE for reprocessing.