



The Global Nuclear Energy Partnership (GNEP)

GNEP Element: Minimize Nuclear Waste

GNEP will increase the efficiency in the management of used nuclear fuel, also known as spent fuel, and defer the need for additional geologic nuclear waste repositories until the next century.

Ensures America only needs one repository in this century

Under all strategies and scenarios for the future of nuclear power, the United States

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Aerial view of Yucca Mountain, Nevada, (www.ocrwm.doe.gov/lymp)

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will need a permanent geologic repository to deal with radioactive wastes resulting from the operation of nuclear power plants.

How recycling and spent fuel management would work

Under GNEP, commercial used fuel would be recycled so that *transuranic elements* would be consumed, not disposed of as waste. (See *Advanced Burner Reactors*.) Residual waste fission products would be reconfigured for disposal at a single geologic repository.

GNEP would provide three improvements to spent fuel disposal at a repository: (a) significantly reduce the volume of waste; (b) enhance thermal management by reducing waste form heat load; and (c) reduce the amount of long-lived radionuclides requiring disposal.

With recycling and used fuel management, the planned geologic repository site at Yucca Mountain, Nevada, has the technical capability to accommodate all the used U.S. commercial nuclear fuel that has been or will be generated by U.S. nuclear power plants over their lifetimes.

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