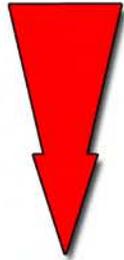
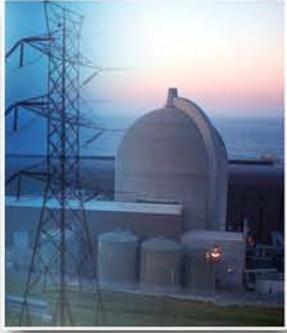


# Spent Nuclear Fuel Management Options

**Commercial Reactor**



**Spent Nuclear Fuel**

## Once-Through Cycle

Uranium, 100% transuranics, and fission products



Spent nuclear fuel

**Geologic Disposal Equivalent of 1 Yucca Mountain**

## Limited Recycle

Transuranics (neptunium, americium, and curium) and fission products



Spent nuclear fuel and waste forms

**Geologic Disposal Equivalent of 0.9 Yucca Mountain**

PUREX Separations

Plutonium/Uranium Mixed Oxide Fuel (MOX)



Commercial Reactor

Spent MOX

Uranium (future fuel or low-level waste)

## Full Recycle

Transuranics (0.1% from process losses) and fission products



Waste forms

**Geologic Disposal Equivalent of 0.01 Yucca Mountain**

Advanced Separations (UREX<sup>+</sup>)

Advanced Fuels



Commercial Reactor

Spent Fuel

Advanced Spent Fuel Treatment (Pyroprocessing)

Recycled Transuranic Fuels



Advanced Reactor

Uranium (future fuel or low-level waste)