1 Uranium Fuel Pellet, without being reprocessed and recycled, has about as much energy available in today's light water reactor as...

Uranium-fueled electrical generating plants reduce consumption of limited fossil fuel reserves and help assure cleaner air. About 20% of electricity in the United States comes from uranium fuel. We depend on electricity to manufacture goods and provide services that assure safety, healthy living and conveniences in modern life.

Spent Nuclear Fuel
The simulated fuel pellet on this card is made to look like a uranium fuel pellet. Uranium fuel pellets in nuclear reactors undergo nuclear fission to provide heat (energy) that turns water to steam. Steam turbines power generators that produce electricity.

Fuel Rods
Uranium pellets are sealed in special metal tubes (fuel rods). These fuel rods are then bundled together into a fuel assembly. Over time the uranium pellets become less efficient for producing heat to generate electricity, so the entire spent fuel assembly is taken out of the reactor. When the spent fuel assembly is removed, it is very radioactive.

Spent Fuel Pools
Used fuel assemblies are stored in spent fuel pools or dry storage casks on site of nuclear power plants. The future goal is to develop a long term repository.

Shipping Casks
Spent nuclear fuel would be transported from reactor sites to the repository in specially designed and rigorously tested shipping casks. Durable containers (waste packages) would be kept in a monitored geologic repository.

Spent fuel from reactors is carefully confined for safety and security.