

# RECYCLING

## Spent Nuclear Fuel

Nuclear fuel is extremely energy dense, meaning a small amount of material can generate a lot of energy. The U.S. uses nuclear fuel once in a reactor before it's considered spent and labeled "waste." Yet, more than 90% of the energy potential remains in the fuel. Recycling could unlock the remaining energy potential and significantly reduce nuclear waste.

## Recycling Spent Nuclear Fuel in the U.S.

The United States does not currently recycle spent nuclear fuel, but several U.S. developers are designing advanced reactors that can run on spent nuclear fuel. These reactors optimize the use of uranium fuel and reduce the amount of nuclear waste. Implementing a recycling capability could significantly reduce both the volume and radiation hazard of spent nuclear fuel.

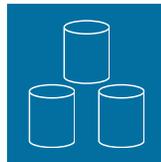
## Opportunities for Utah

Utah is exploring the entire nuclear ecosystem to identify energy and economic opportunities for the state—which includes recycling spent nuclear fuel. Recycling could create new jobs, foster economic growth and ensure Utah has a stable supply of energy for years to come. Here are several other key benefits we're considering:



## Energy Efficiency

Recycling allows us to access more energy from the fuel, conserving resources and reducing mining impacts.



## Valuable Materials

Spent nuclear fuel could be reprocessed to create fresh fuel for reactors.



## Waste Reduction

Recycling could reduce the volume of waste requiring disposal by as much as 75 percent.



## Environmental Benefits

Recycling reduces the presence of long-lived radioactive isotopes in nuclear waste, lessening isolation time.



## National Security

Recycling could help the nation reduce its reliance on foreign uranium imports.



## Medical Applications

Recycling helps recover critical isotopes for medical use.

