Nuclear Fuel Cycle Characteristics

What is the nuclear fuel cycle?

The nuclear fuel cycle refers to the entire process from when the fuel for nuclear power generation is fabricated up to when the fuel is recycled as fuel once again. This cycle consists of the nuclear power reactor facility, the reprocessing faculty, and the fuel fabrication facility.

Providing energy in a stable manner for a long period of time

By implementing the recycling process, we are able to reduce the demand for uranium resources. By putting fast breeding reactors to practical use, we will be able to expand the number of years that existing uranium is available, which is currently about 80 years, to a duration of several dozen times longer.

Reducing nuclear waste

By reprocessing the spent fuel repository as waste, the amount of high-level nuclear waste will be reduced to 30–40%, and the area required for the waste repository will be reduced to one-half to one-third.