

# The Plutonium-Use Plan for Research and Development in the Japan Atomic Energy Agency for Japanese Fiscal Year 2006

original: January 6, 2006  
revised: September 29, 2006

Independent Administrative Institution Japan Atomic Energy Agency

Holder	Amount of spent fuel to be reprocessed in JFY2006 <sup>*1</sup> Weight of spent fuel (tU)	Amount of Pu in possession <sup>*2</sup>		Purpose of Use <sup>*5</sup>		
		Amount of Pu held at the end of JFY2005 <sup>*4</sup> (tPuf) <sup>*3</sup>	Amount of Pu to be recovered in JFY2006 (tPuf) <sup>*3</sup>	Research and development of fast breeder reactor, etc.		
				Place of use	Amount of Pu to be used (Rough estimate for annual use) <sup>*6</sup> (tPuf/year)	Time to start use and prospects for the period required to consume
JAEA	20	3.6 (0.6) <sup>*4</sup>	0.1	Experimental Fast Reactor "JOYO"	0.1	JFY2006 forward approximately 8 years <sup>*7</sup>
				Prototype Fast Breeder Reactor "MONJU"	0.5	JFY2008 forward approximately 6 years <sup>*8</sup>
Total	20	3.7			0.6	

\*1: "Amount of spent fuel to be reprocessed" is based on an operation plan of the Tokai Reprocessing Plant. The amount of 20 tU in JFY2006 includes 6 tU already reprocessed from April to August 2006.

\*2: "Amount of Pu in possession" includes plutonium which is recovered in the Tokai Reprocessing Plant based on the reprocessing service contract with Electric Power Companies (EPC), but not yet transferred from EPC to the JAEA. The reason is that the JAEA plans to use the plutonium for "JOYO" and "MONJU" after transfer from EPC. The JAEA plans to use a part of plutonium to be recovered at the Japan Nuclear Fuel Ltd. (JNFL) Rokkasho Reprocessing Plant after transfer from EPC. A fixed amount of the plutonium will be announced in this plutonium-use plan after a decision is available in the future.

\*3: "tPuf" represents a metric ton of fissile plutonium (Puf) contained in plutonium.

\*4: "3.6 tPuf" excludes about 0.4 ton fissile plutonium, which is dedicated to experimental purposes as fuels for a criticality test assembly FCA in the Tokai site and DCA in the Oarai site from 4.0 tPuf of the "Separated Pu" held by JAEA at the end of FY2005. The number in parenthesis (0.6) tPuf shows amount of the "separated Pu" already fabricated into fuel assemblies for "JOYO" and "MONJU" and stored at the fuel fabrication facility and those reactors.

\*5: In addition to plutonium use for "JOYO" and "MONJU", a small amount of plutonium will be used in the JAEA's research and development facilities under a limited-quantity license for specific research and development purposes.

\*6: "Rough estimate for annual use" represents an annual average amount of plutonium contained in MOX fuel to be loaded into "JOYO" and "MONJU" during standard reactor operations.

\*7: "JOYO" is in operation for irradiation tests and is expected to continue to use about 0.1 ton fissile plutonium every year. The annual use amount and expected period to consume plutonium will depend on progress of research and development and will be subject to change.

\*8: At "MONJU," JAEA is carrying out renovation work and is expected to use about 0.5 ton fissile plutonium every year after FY 2008. As with "JOYO", the annual amount and the expected period to consume the plutonium will depend on the progress of research and development, and therefore, will be subject to change.