

## Recovery and Utilization of Plutonium until 2010

### 【Recovery】

- (1) Aggregate amount of plutonium to be recovered under existing agreements with overseas reprocessing facilities is estimated at approximately 30 tons.
- (2) Domestically, upon the start of full-scale operation at the Rokkasho Reprocessing Plant, a little less than 5 tons of plutonium will be recovered annually.

### 【Utilization】

- (3) After Monju resumes operation, some hundreds of kilograms of plutonium will be needed annually for research and development purposes.
- (4) According to plans by the utility companies, use of MOX fuel will be gradually increased up to 16-18 LWRs by 2010. In that use of MOX fuel, according to plans already specified, approximately 0.3-0.4 tons of plutonium are expected to be used annually at each unit.
- (5) Approximately 1.1 tons of plutonium per year are expected to be used at the full-MOX-core Ooma nuclear power station.
- (6) Plutonium recovered at overseas reprocessing facilities will be used initially, and plutonium recovered at the domestic facility will be used later in line with the expansion of MOX utilization.

(Source) Report of Second Subcommittee

## World Energy-Resource Reserves

	Oil	Natural Gas	Coal	Uranium	
Proved Minable Reserves (R) <sup>(Note 2)</sup>	1,052.9 billion barrels worldwide as of end-1998	146.39 trillion m <sup>3</sup> worldwide as of end-1998	984.2 billion tons worldwide as of end-1996	4,363,000 tons worldwide as of January 1997	
Distribution by Area	North America	8.1 %	5.7 %	26.0 %	17.4 %
	Central and South America	8.5	4.2	2.3	6.2
	Western Europe	2.0	3.6	7.5	3.0
	Middle East	64.0	33.8	0.1	0.0
	Asia Pacific	4.1	7.0	29.7	25.1
	Africa	7.2	7.0	6.2	17.4
	Former Soviet Union and Eastern Europe	6.1	38.7	28.3	31.0
Annual Production (P)	73.105 million b/d in 1998	2.2718 trillion m <sup>3</sup> in 1998	4.65 billion tons in 1995	36,000 tons in 1996	
Minable Years (R/P)	41.0 years worldwide as of 1998	63.4 years worldwide as of 1998	212 years worldwide as of 1996	72 years worldwide as of 1996 <sup>(Note 1)</sup>	
Sources	Statistics from BP Amoco statistical review (1999)		Congress of World Energy in 1998 (held every three years)	OECD/NEA, IAEA (1997)	

(Note 1) Because there is currently sufficient uranium on hand (inventory), annual production and annual consumption are not in balance. Minable years are therefore calculated by dividing proved minable reserves by annual consumption (61,000 tons).

(Source) Comprehensive Energy Statistics for 1999 [Agency of Natural Resources and Energy]

(Note 2) Proved Minable Reserves: Amount of the resource expected to be minable under current technological and economic conditions.