SAFETY AND EFFICIENCY OF FUTURE SYSTEMS

European Commission, DG Energy and Transport, Brussels
presented by L. Rossi

OBJECTIVE OF FP5

- Investigate and evaluate new or revisited concepts for nuclear energy that offer potential longer term benefits in terms of cost, safety, waste management, use of fissile material, less risk of diversion and sustainability

WORKPROGRAMME

- Innovative or revisited reactor concepts and other applications
- Innovative fuels and fuel cycles

EURATOM

XA0055621

TOPICS COVERED BY THE MARCH 1999 CALL

- Innovative or revisited reactor concepts:

  4 projects on HTR development grouped in a cluster

  - HTR-F (fuel technology)
  - HTR-N (reactor physics and fuel cycle studies)
  - HTR-M (materials)
  - HTR-C (co-ordination and synthesis)

  - HPLWR (high performance light water reactor)
  - GCFR (gas-cooled fast neutron reactor)

PARTITIONING AND TRANSMUTATION

Work programme

STRATEGY STUDIES

CHEMICAL SEPARATION (PARTITIONING)

TRANSMUTATION:

- Preliminary engineering design of an ADS
- Technological support (including fuels and targets)
- Basic studies (including nuclear data)

NUCLEAR ENERGY PROGRAMME (1998-2002)

Partitioning and Transmutation

Research Topic	*No. of proposals received*	*No. of proposals selected*	*Proposed budget (MEURO)*
Strategy studies	1	0	-
Partitioning (chemical separation)	5	3	5.0
Transmutation:			
- Technology	4	3	5.8
- Preliminary engineering design of an ADS	3	0	-
- Basic studies	6	3	6.5
Total	19	9	17.3

EURATOM

TOPICS COVERED BY THE MARCH 1999 CALL

- Partitioning of long-lived radionuclides from high level waste:
  - PYROREP (pyrochemical processes)
  - PARTNEW (aqueous processes, BTP, dithiophosphinic acid)
  - CALIXPART (aqueous processes, macrocycles)

- 243 -

- Transmutation - preliminary engineering design of an ADS:
  - Projects are expected for the October 2000 call

TOPICS COVERED BY THE MARCH 1999 CALL

◆Transmutation - technological support:

- SPIRE (neutron/proton irradiation damage)
- TECLA (lead corrosion issues)
- CONFIRM (Pu nitride fuel fabrication and irradiation)

◆Transmutation - basic studies:

- MUSE (experimental sub-critical neutronic studies)
- HINDAS (nuclear data for ADS engineering design)
- N_TOF-ADS (nuclear data for transmutation)