EU Spent Fuel and Radioactive Waste Management: An Overview

Gerassimos THOMAS
Deputy Director General, DG ENER, European Commission

ENSREG 2017 Conference
Nuclear Safety in Europe
Recommendation on financial resources for back-end

Nuclear Safety Dir.

Rad-Waste Directive

Amended Basic Safety Standards

Amended Nuclear Safety Directive

PINC

Rad-Waste Report

Energy Union

Integrated, Interconnected, Resilient and Secure
Energy
Avg age 31 y

+50 shutdown by 2025

Reactors
- 129 operating
- 90 shut-down

EU Nuclear Energy Landscape
1st Commission Report on Radioactive Waste

✓ Provides an **inventory** of radioactive waste and spent fuel present in the Community’s territory, including future prospects

✓ Provides a **comprehensive overview** to the Council, European Parliament and EU citizens on implementation of the Directive

✓ **Directive 2011/70/Euratom**
Structure

National Policy
- Legislative
- Regulatory
- Organisational

National Framework
- Safety
- Licensing / control
- Financing
- Public dialogue

National Program
A generally good level of compliance

- Legal arrangements ensuring safety
- Competent regulatory authorities
- Clear allocation of responsibilities
- Education and Skills

- *Self-assessment and peer reviews*
- *Transparency*
Inventory

- Estimated total inventory of radioactive waste on the EU territory **3 313 000 m³**
- Spent fuel stored in the EU **54 000 tHM**
Disposal

- Disposal of very low level waste and low level waste remains a challenge in several MS

- Decisions on disposal of intermediate level waste, high level waste and spent fuel are often put on the long term.

- Half of MS consider shared disposal solutions without specific proposals
Monitoring

- **Monitor progress**

  Only one third of Member States have defined clear and detailed milestones and time frames

- **Key performance indicators**

  Most Member States have not clearly defined key performance indicators
Financing costs

EUR 400 bn

EUR billion

European Commission
Going Forward

✓ **Studies and evaluations**

✓ **Workshop 6-8 November**
  - Lessons learned from the directives implementation
  - Shared solutions for spent fuel disposal

✓ **Feedback to Member States**
  - on national programmes for waste management
  - International peer reviews

✓ **Periodical reporting (3 years)**
Thank you!

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