



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 8.9.2008  
COM(2008)542 final

**REPORT FROM THE COMMISSION  
TO THE EUROPEAN PARLIAMENT AND THE COUNCIL**

**SIXTH SITUATION REPORT ON RADIOACTIVE WASTE AND SPENT FUEL  
MANAGEMENT IN THE EUROPEAN UNION**

**SEC(2008)2416**

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**1. INTRODUCTION**

The Commission stressed in its Communication on "An Energy Policy for Europe"<sup>1</sup> of 10 January 2007 that nuclear power raises important issues regarding waste and they should be included in the future Community work. As set out in the new Nuclear Illustrative Programme<sup>2</sup>, an integral part of the package submitted with the Communication, "waste is fundamentally an environmental and health issue; as such, management and disposal of radioactive waste have to be subject to the same scrutiny applied to all projects which have an impact on humans and their environment", and the discussion should notably focus on "ensuring that Member States put in place national plans for management of radioactive waste".

In its conclusions of 8 May 2007 on nuclear safety and safe management of spent nuclear fuel and radioactive waste, the Council sets out that each EU Member State should be urged "to establish and keep updated a national programme for the safe management of radioactive waste and spent fuel that includes all radioactive waste under its jurisdiction and covers all stages of management".

Following 30 years of research, it is sufficiently demonstrated that geological disposal now represents the safest and most sustainable option for the long term management of high level waste and spent fuel subject to direct disposal, even though implementation-oriented research and development needs to continue in those subject areas identified by the principal research stakeholder organisations and coordinated through the 7th Euratom Framework Programme.

This Report gives an overview of the current status of the management of radioactive waste and spent fuel in the EU, on the basis of the Sixth Situation Report "Radioactive Waste and Spent Fuel Management in the European Union"<sup>3</sup>. It also proposes actions at the Community and national levels with the purpose of ensuring progress towards implementation of radioactive waste and spent fuel disposal facilities.

**2. RADIOACTIVE WASTE AND SPENT FUEL MANAGEMENT**

**2.1. Policies and practices**

The policies and practices of Member States on radioactive waste and spent fuel management reflect their historical, scientific and technological development. Currently five states use the reprocessing option and two states are actively pursuing spent fuel direct disposal option. In

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<sup>1</sup> COM(2007) 1 final  
<sup>2</sup> COM(2006) 844 final  
<sup>3</sup> COM ([...]), [...] final

the majority of states a definitive spent fuel policy does not exist, other than arrangements to ensure a safe extended period of storage (50-100 years).

For the most dangerous waste category, high level waste and spent fuel subject to direct disposal, progress on disposal projects is noted only in a few Member States, namely Finland, Sweden and France. It is likely by 2025 these countries will have operational disposal facilities. Germany and Belgium will possibly follow by 2040. The remaining countries are less advanced. Many of them have not made such progress because of the political sensitivity of the issue, insufficient scientific, technical and financial resources and/or due to other historical and societal reasons.

Finland demonstrates that even small nuclear programs can afford their own national repository. In this case, the cooperation with the Swedish nuclear program has helped to reduce costs. In order to optimise the cost side, there are increasing multi-national initiatives in support of national solutions through joint work, programs and knowledge transfer, as well as reflections on regional solutions both on international and EU levels. The research and demonstration under the European Framework Programmes have contributed to advance in this field. A similar situation exists for long lived low and intermediate level waste, since also for this type of waste the preferred solution is deep geological disposal, either using the same repository as for high level waste / spent fuel or disposed separately. For this waste category, Germany might have a deep geological repository operational before 2014.

In the case of the least hazardous waste categories, short lived low and intermediate level waste and very low level waste, 7 of 16 Member States with nuclear power plants currently operate disposal facilities to deal with these categories of waste. However by 2020, if current plans are followed up, all states, with the exception of the Netherlands, could have operational disposal facilities for these types of waste.

## **2.2. Public acceptance**

The last Eurobarometer<sup>4</sup> on radioactive waste has revealed that 93% of the EU citizens want the implementation of solutions now for the long term management of highly radioactive waste but only 43% believe that deep underground disposal represents the most appropriate solution. This survey, as well as the last Eurobarometer<sup>5</sup> on nuclear safety has shown that the unresolved question of radioactive waste is one of the European citizens' fears linked to nuclear energy.

The implementation of geological disposal requires long-term political commitment, modern governance concepts, building on a step-by-step approach and early involvement of national and local stakeholders to ensure sound consultations and acceptance. Such modern governance concepts have successfully laid the foundation of the Finish and Swedish approaches.

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<sup>4</sup> Special Eurobarometer 297 (2008)

<sup>5</sup> Special Eurobarometer 271 (2007)

### 3. CONCLUSIONS

It is the Commission's view that many scientific and technical areas important to geological disposal have reached maturity level, and moving towards implementation should be encouraged and facilitated.

Postponements of the definitive solution decision taking, referred to as "wait-and-see" policy, are not acceptable because of the potential consequences of radioactive waste and spent fuel management on health and safety, as well as of the European citizens' opinion. All initiatives leading to encouraging and facilitating progress towards identification and operation of safe waste repositories are highly welcome.

The Commission believes that regional and international cooperation could accelerate decision-making on definitive disposal solutions. However, while regional solutions are appealing in terms of economy of scale, giving the potential for considerable savings in terms of both cost and resources, it is clear that a country must be willing to host such a regional centre which requires political and social acceptance.

It is also the Commission's view that proposals from non-EU states for disposal of radioactive waste and spent fuel should not be encouraged for technical, economical and also safety and security reasons. This is in particular true when the potential receiving state has not put in place the same technical, political and societal requirements and conditions as given at EU level.

The management of radioactive waste and spent fuel is a part of sustained development of the national nuclear programs, including planning, construction and decommissioning of nuclear facilities. In the context of the future use of nuclear power, the policy on waste management is a subject of major importance.

The recently established European High Level Group on Nuclear Safety and Waste Management<sup>6</sup> constituted among others a Working Group on Waste Management, mandated to work on behalf of the HLG in order to improve the management of spent fuel, radioactive waste and decommissioning in the European citizens' interest.

The Sixth Situation Report "Radioactive Waste and Spent Fuel Management in the European Union" forms a factual basis for the Working Group to develop a common understanding and, if appropriate, suggest a common approach in the field of the safety of spent fuel and radioactive waste management.

This report should facilitate a restart of the discussion in the Council and in the European Parliament on an European Union legislation.

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<sup>6</sup> Commission Decision of 17 July 2007 (2007/530/Euratom), Official Journal L 195/44