Management of spent fuel and radioactive waste: EU legal framework

2010/0306(NLE) - 23/06/2011 - Text adopted by Parliament, 1st reading/single reading

The European Parliament adopted by 489 votes to 52, with 75 abstentions, a legislative resolution on the proposal for a Council directive on the management of spent fuel and radioactive waste.

The main amendments made to the proposal are as follows:

Objective: Parliament wants to specify that the Directive also relates to the **protection of the natural environment** and that it ensures the provision of necessary public information and participation in relation to spent fuel and radioactive waste management. The directive defines the **minimum standards** for the Member States, but they must be free to impose stricter standards in relation to the management of spent fuel and radioactive waste.

Scope: the directive applies to all stages of spent fuel management when the spent fuel results from the operation of civilian nuclear reactors or is managed within civilian activities on EU territory, **including the spent fuel originating from military defence programmes** if and when such spent fuel is permanently transferred to and managed in the context of exclusively civilian activities.

Disposal: this is defined as the emplacement of spent fuel or radioactive waste in a potentially definitive manner in an authorised facility with due regard for the **reversibility principle**.

Furthermore, spent fuel must be defined as waste, unless it is clear that it can be reprocessed in the near term without further impact on the environment.

General principles: the management of spent fuel and radioactive waste should remain, as a last resort, the responsibility of the Member States on whose territory they were produced. National policies on the management of spent fuel and radioactive waste should be implemented through a well-founded and documented stepwise decision-making process having regard to long-term safety. According to Members, national policies should be based on the following principles:

- the generation of radioactive waste is kept to the minimum practicable, respecting the ‘as low as reasonably achievable’ (ALARA) principle;
- spent fuel and radioactive waste are safely managed for as long as they are hazardous to people and the environment;
- exposure of workers, the public and the environment to spent fuel and radioactive waste is avoided;
- measures are taken to cover the future health and environmental risks for exposed workers and the general public;
- the costs of managing radioactive waste, including spent fuels, are borne by those who have generated such waste;
- the financial reserves which the originators of the waste have to provide so as to cover all the costs arising from the management of spent fuels und radioactive waste are administered in a State-controlled fund, in order to ensure that they are available for use in connection with permanent safe disposal;
- competent national bodies are involved in supervising the availability of adequate financial resources.

Spent fuel pools: since spent fuel pools involve major risks, especially when they are uncovered, all spent fuels shall therefore be moved out of pools and into dry storage as soon as possible. As part of that process, priority shall be given to the oldest of the spent fuel pools.

Establishment of regional disposal facilities: on a voluntary basis, Member States may decide to establish a joint or regional disposal facility in cooperation with other Member States or a third country in order to utilise the favourable geological or technical advantages of a particular site and to share the financial burden of the joint project.

Before launching such a project through an intergovernmental agreement, the Member States concerned shall ensure that the initiative fulfils a number of requirements including public acceptance and support in all the Member States concerned throughout all phases of the project development and the lifetime of the disposal.

Exportation: the text stipulates that in no circumstances may radioactive waste be exported to non-EU countries; shipment of spent fuel outside the EU should be allowed under the condition of its subsequent import back into the EU after recycling.

Seismic regions or coastal areas: all nuclear waste facilities in seismic regions or coastal areas at significant risk of rising sea levels or of tsunamis shall be prohibited

National framework for the management of used fuels and radioactive waste: this needs to include, among other things:

- a national programme, respecting subsidiarity, for implementation of the policy on spent fuel and radioactive waste management which ensures that all radioactive waste producers have access to safe disposal of radioactive waste under the same conditions;
- national requirements for the **health and safety, education and training of workers**;
- a system of licensing of spent fuel and radioactive waste management activities and facilities, including prohibition of the operation of a spent fuel or radioactive waste management facility without a licence, and ensuring that all radioactive waste, regardless of who produces it, is managed on a non-discriminatory basis;
- a system of appropriate institutional control, regulatory inspections, documentation and reporting, as well as the requisite training for the workers involved in the whole process, in order to secure and maintain their occupational safety and health;
- measures to guarantee **adequate financial resources** in the long term for activities and facilities relating to spent fuel and radioactive waste management;
- measures to ensure that the funding required for the management of spent fuel and radioactive waste and for emplacement is set by the competent regulatory authority on the basis of a transparent process which is regularly reviewed and in which all interested stakeholders are regularly consulted.

Safety evaluation: the competent regulatory authority shall have the powers and resources to regularly carry out nuclear safety assessments, investigations and controls, and where necessary to take enforcement action in facilities, even during the decommissioning process. The health and safety of workers, including any sub-contractors, as well as staff levels and training, shall form part of those assessments. The competent regulatory authority shall have the power to order that certain activities cease where the assessments have shown that they are not safe. Those and all other assessments by the competent regulatory authority shall be made public.

Safety case: Member States shall ensure that a safety case and a supporting safety assessment are prepared as part of the application for a licence to carry on a radioactive waste management activity or to operate a disposal facility located on EU territory. The safety case was originally the purpose of Article 8, the provisions of which are now dispersed in the relevant articles.

Licence-holders: licence-holders are required to inform cross-border regional and local authorities at the earliest possible date of their plans to establish a waste management facility, if the distance of such a facility from the national border is such that it is likely to have cross-border effects during the building or operation of the facility or after its abandonment, or in the event of an accident or incident related to the facility.

Marking and documentation: Member States shall ensure that licence holders mark containers and document the disposal of spent fuel and radioactive waste in a form not subject to weathering. The documentation shall comprise both the chemical, toxicological and radiological composition of the inventory and an indication whether it is solid, liquid or gaseous.

Recording and tracking, especially with regard to the health and safety of workers: Members want to oblige Member States to establish a recording and tracking system in the field of used fuels and radioactive waste. Information regarding workers who have been exposed in the course of their working life must be kept either by the licence-holder or by a state body, so as to enable work-related diseases to be followed up in the long term.

Sanctions:sanctions that are effective, dissuasive and proportionate in relation to the seriousness of the offence, are applicable in the event of infringement of the obligations arising from this Directive.

Expertise and qualifications: Members consider that particular attention needs to be paid to parties indirectly involved on-site and shall ensure that they are offered up-to-date appropriate education and training before the operations involving radioactive waste and spent fuel are carried out. Education and training for workers shall comply with internationally recognised standards, so as to strengthen overall responsibility for health and safety in the nuclear industry.

Financial resources: in Parliament's view, the proposal should guarantee that **sufficient financial resources are available** when needed to cover all necessary expenses related to decommissioning and the management of spent fuel and radioactive waste, thereby fully respecting the responsibility of radioactive waste producers according to the 'polluter-pays' principle and avoiding any recourse to State aid.

The amendments adopted by Members lay down **more restrictive obligations on Members States**, in accordance with their national procedures: i) an assessment of the costs related to the waste management; ii) reserves to be established to cover future decommissioning or waste management activities and the necessary assets to cover these reserves; iii) appropriate monitoring of the adequacy of the reserves and the management of the assets; iv) the costs of disposal shall be transparently set out and published by the Member States and reassessed each year; v) a national body capable of providing an expert judgment on the management of funds and decommissioning costs; vi) regular communications from Member States to the Commission.

Civil responsibility: Member States shall ensure that full third party liability in respect of any damage caused by accidents and long-term radioactive waste management, including damage to the terrestrial, water and marine environments, is borne by the **licence holders**.

Transparency: Member States shall ensure that all information on the management of spent fuel and radioactive waste which is necessary in order to preserve the health, safety and security of workers and the general public is available on a regular basis. This obligation includes ensuring that the competent

regulatory authority informs the public in the fields of its competence. Information shall be made available to the public in accordance with national legislation and international obligations, in particular the Aarhus Convention. Information directly relevant to the health and safety of workers and the public, in particular concerning radioactive and toxic emissions and exposure to such emissions, shall be made public, irrespective of the circumstances.

Public participation: Member States shall ensure that members of the public are given early opportunities to participate effectively in the preparation or review of national programmes for the management of spent fuel and radioactive waste needing to be drawn up pursuant to Article 13, and that members of the public have access to them once they have been drawn up. They shall place the programmes on a publicly available website.

Member States shall inform cross-border regional and local authorities of their national programmes at the earliest possible date, if the implementation thereof is likely to have cross-border effects.

Review: the Commission shall, no later than two years after peer reviews by Member States have taken place as provided for in the directive, submit a report to the European Parliament and the Council which focuses on a reassessment of the concept of the management of spent fuel and radioactive waste. The report shall, if necessary, be followed by a revision of this Directive.