

Recent Developments in Radioactive Waste Management in the Federal Republic of Germany-17450

Barbara Freund*

* Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (Barbara.Freund@bmub.bund.de)

ABSTRACT

In 2013 the Federal Parliament and the Federal Council passed the Act Concerning the Search and Selection of a Site for a Repository for Heat-Generating Radioactive Waste and the Amendment of Other Acts (Site Selection Act). It was a restart for the search for a repository for especially heat-generating waste in Germany.

As a first step in May 2014 the Commission "Storage of High-Level Radioactive Waste" started their work. Their aim was to debate and clarify the principle questions concerning the management of heat-generating radioactive waste. As well as to evaluate and determine the fundamentals for the Site Selection Process e.g. safety requirements, exclusion criteria, minimum requirements and consideration criteria for the site selection. They also evaluated the organizational and procedural arrangements in the scope of waste management. As a first act to implement the suggestions of this Commission the organizational structures in waste management were greatly altered. This reorganization not only had a significant influence on the waste management of high-active, but also on the management of low- and intermediate-active waste management in the Federal Republic of Germany.

In 2015 a second Commission started its work focusing on the funding of waste management in Germany. The results of this Commission were presented in April 2016. At the moment the suggestions of this Commission are being implemented, changing the financial responsibilities for waste management in the Federal Republic of Germany.

The presentation will focus on changes and the developments of radioactive waste management in Germany and talk about the ongoing process in implementing the suggestions of the two Commissions.

INTRODUCTION

In 2016 two Commissions handed in their recommendations regarding the management of radioactive waste. One of them focused on the site selection for a repository for especially heat-generating waste. The other focused on the funding of radioactive waste management.

The paper will highlight the developments and talk about the ongoing processes in implementing the suggestions of the two Commissions.

DESCRIPTION AND DISCUSSION

Organizational changes in radioactive waste management

The „Act for the Reordering of the Organizational Structure in the Area of Disposal“ [1] entered into force on 30th July 2016. It transposed a suggestion adopted by the Commission “Storage of High-Level Radioactive Waste” on 2nd March 2015.

The goal of this new act was to ensure a clear allocation of responsibilities and an efficient task completion.

A publicly-owned entity was founded. This *Bundesgesellschaft für Endlagerung mbH* (BGE) will serve as the implementer for all tasks in the area of disposal.

This means that there will be no more separation between the implementer and administrative supporter and therefore all tasks of implementation will rest with the BGE. In future all tasks concerning the planning, construction, operation and closure of a repository which were conducted in the past by the *Bundesamt für Strahlenschutz* (Federal Office for Radiation Protection, BfS) –acting as implementer- and the *Deutsche Gesellschaft zum Bau und Betrieb von Endlagern für Abfallstoffe mbH* (DBE) and the *Asse GmbH* – acting as administrative supporters – will be conducted by BGE. This also includes future tasks during the search for a site for a repository for especially heat-generating waste.

The *Bundesamt für kerntechnische Entsorgungssicherheit* (Federal Office for the Safety of Nuclear Waste Management, BfE) will act as regulator in the field of disposal. This means the BfE will act as licensing and supervisory authority in the field of disposal in the Federal Republic of Germany.

Draft act on the new organization of responsibilities in the management of nuclear waste

The phase-out of nuclear power in Germany was agreed in 2000/2001 in consensus between the Government and the energy utilities. Following the Fukushima accident in 2011, the nuclear phase-out was reaffirmed in a broad political and social consensus. Specific dates for shutting down Germany’s nuclear power plants were laid down in law. Eight plants were shut down in 2011, a further plant followed 2015. Germany will shut down all nuclear power plants until 2022.

In October 2015 an independent Commission – *Kommission zur Überprüfung des Kernenergieausstiegs* (KFK) – was set up by the German Government. Its mandate was to develop recommendations for action, such as ensuring the funding of the decommissioning of the reactors and the disposal of radioactive waste can be secured so that the utilities involved are financially able in the long term to fulfill their obligations in the nuclear area.

The KFK adopted its suggestions unanimously on 27th April 2016. Its recommendations were accepted across societal and party borders. The KFK advised a new allocation of the responsibilities in the field of radioactive waste management.

Presenting its recommendations, the Commission said, "The proposed combination of securing managing actions and financial obligations establishes the basis for a new disposal consensus. This consensus represents a gain of security for the companies and society. It represents an opportunity to end the dispute over the use of nuclear energy for good."

The Federal Government has assessed the recommendations of the KFK and passed a "draft act on the new organization of responsibilities in the management of nuclear waste". This act takes into account overall responsibility and reliability in energy politics.

It will ensure the financing of decommissioning, dismantling and radioactive waste management over a long period of time without putting the costs single-sidedly on the taxpayer and without endangering the economic situation of the utilities.

The utilities stay responsible for the execution and the financing of the decommissioning, dismantling and treatment and packaging of the radioactive waste. The execution and the financing of storage and disposal of the radioactive waste will rest with the state.

The money for storage and disposal will be transferred to a state-owned fund.

The utilities are obliged to pay an amount of 17,389 billion € into the fund. By paying a "risk premium" of 35.47 % to close the gap between provisions and costs, they can end their reserve liability. The total amount adds up to 23,556 billion €.

The money set aside for the decommissioning, dismantling and the treatment of radioactive waste will stay with the utilities as they will also stay responsible for these tasks. Therefore the act also imposes a follow-up liability on the utilities. Thus it is ensured that companies can be made liable for their subsidiaries regarding the decommissioning, dismantling and the treatment of radioactive waste.

The act also imposes an obligation on the utilities to dismantle their shut down power plants immediately, rather than delay decommissioning or make use of the safe enclosure option.

For the execution of the storage of radioactive waste a state-owned entity will be founded. It will operate the storage facilities for high-active waste from 1st January 2019 and the storage facilities for low- and medium-active waste (LAW/MAW) from 1st January 2020.

In the LAW/MAW storage facilities waste that already meets the requirements for disposal and other waste will be stored. The responsibility for the waste that already meets the requirements for disposal rests with the state while the other waste is still owned by the utilities.

The act [2] was passed by the *Bundestag* and the *Bundesrat*. It will enter into force after the European Commission has given a positive vote that the act is in line with European state aid rules.

Site Selection

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As a first step in May 2014 the Commission "Storage of High-Level Radioactive Waste" started their work. Their aim was to debate and clarify the principle questions concerning the management of heat-generating radioactive waste. As well as to evaluate and determine the fundamentals for the Site Selection Process e.g. safety requirements, exclusion criteria, minimum requirements and consideration criteria for the site selection.

This Commission published their report with recommendations in June 2016. The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety has reviewed the recommendations and transposed them into law. This draft act [3] has been passed by the Federal cabinet and is currently under discussion by the *Bundestag*.

CONCLUSIONS

Two Commissions concerning the Management of radioactive waste have concluded their work in 2016. Their suggestions led to major changes in the organizational structure and within the responsibilities in the field of radioactive waste management. While the German government is still assessing and transposing the recommendations, it shows that the changes will support ensuring a stable process from cradle to grave for radioactive waste in Germany by clearly allocating responsibilities and ensuring the financing of the whole process.

REFERENCES

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[2]www.bundesrat.de/SharedDocs/drucksachen/2016/0701-0800/768-16.pdf?__blob=publicationFile&v=1

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