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# Comparison among different decommissioning funds methodologies for nuclear installations

**Final Report**

## Executive Summary

on behalf of the European Commission  
Directorate-General Energy and Transport, H2

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### **Editor:**

Wuppertal Institut für Klima, Umwelt, Energie GmbH  
im Wissenschaftszentrum Nordrhein-Westfalen

## Project partners

### Wuppertal Institute for Climate, Environment and Energy, Germany

Wolfgang Irrek (Co-ordinator), Lars Kirchner, Frederic Rudolph, Lutz Jarczyński

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North Rhine-Westphalia  
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and Technology



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### Ellipson AG, Switzerland

Kaspar Müller

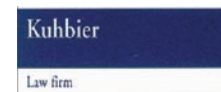
ELLIPSON

### Antony Patrick Froggatt, UK

Private Consultant

### Kuhbier Law Firms, Belgium

Dörte Fouquet



### Ameur Sciences et Techniques, France

Abdelkader B. Ameur



### Mycle Schneider Consulting, France

Mycle Schneider, partly assisted by David Jacobs

### Public Services International Research Unit, University of Greenwich, UK

Stephen Thomas



### VTT Technical Research Centre of Finland

Seppo Vuori



## Subcontractors

### Aplinkos Apsaugos Politikos Centras (AAPC), Lithuania

Daiva Semenienė



### Energia 2000, et al.

Jozef Krizan, Maria Mistrikova, Luba Kupke-Siposova

Občianske združenie  
**Energia 2000**  
and partner organisations

### Ian Smith, UK and Romania

Private Consultant

### MTA KFKI Atomic Energy Research Institute (AEKI), Hungary

Péter Zagyvai, Tamás Pázmándi



### Öko-Institut e.V., Germany

Veit Bürger, with contributions from Aaron Best



## Executive Summary

The European Commission estimates that approximately one third of the 145 power reactors currently operating in the European Union will need to be shut down by 2025. This will result in the need to dismantle, decontaminate and demolish these nuclear facilities as well as to undertake processing, conditioning and disposal of nuclear waste and spent fuel ('decommissioning'). It is of paramount importance that the **funding of these decommissioning activities will be adequate and available when needed** in order to avoid negatively affecting the **safety** of EU citizens. Nuclear operators are expected to accumulate all the necessary funds during the operating life of facilities.

Member States oversee different regimes for estimating, collecting and managing decommissioning costs and there are significant differences in the operation, governance, investment and accessibility of the existing funds across the EU.

This report has undertaken an assessment of the different regimes and noted the following:

- The Polluter pays principle for decommissioning is widely accepted and needs to be the fundamental basis of the granting an operating **license**, as occurs in Finland and Sweden.
- The discussions on decommissioning funds have focused on nuclear power plants. Decommissioning of **other facilities** must not be overlooked, in particular for high cost facilities, such as reprocessing plants or facilities having experienced incidents or accidents.
- Costs estimates are subject to high degree of **risks and uncertainties**; expected costs have risen significantly in a number of countries while many estimates still contain a considerable range of possible costs.
- Differences in reported cost estimates occur due to varying **discounting** mechanisms and the timing of dismantling.
- Not all Member States require that funds be **managed** externally and segregated from the operator.
- A number of Member States seem to be **moving towards the increased restriction of funds**. This development might be further accelerated by pressure from the financial markets (analysts and auditors)
- In most countries there are only limited rights for the public to **access information** on decommissioning costs and funds.
- Many operating companies and governments are **satisfied with the current situation** and have **concerns towards an EU harmonization process** of nuclear decommissioning financing.

A comprehensive assessment of the **financial consequences and risks** of the decommissioning funds from governance, accounting, valuation and investment perspectives has been undertaken in the course of this study.

From a **governance perspective**, the higher the **potential conflict of interests** within a particular decommissioning methodology, the greater the need for additional **checks and balances**. Externally managed funds have a lower risk of conflicts of interest. Given the many conflicts of interests embedded in decommissioning and the importance of the health and safety aspect over a long time horizon, a framework for best practice of decommissioning financing should be introduced, which goes beyond mere legal requirements. Therefore decommissioning financing projects should focus on the **independence** of the involved parties, avoid situations where the operator has power of authority to dispose of the decommissioning funds and aim at reducing any possible situation where financial funds obtained by the operator can be used for different purposes.

Using the **accounting perspective** leads to the conclusion that the **International Financial Reporting Standards (IFRSs<sup>®</sup>)** should be applied together with clarifications (EU interpretations and guidance) to improve reliability and comparability. Applying the “current budget” methodology doesn’t meet the qualitative characteristics of modern accounting and is a possible source of failure in decommissioning financing.

The **valuation perspective** is particularly important to investors. A reliable valuation has to allow a comprehensive risk assessment. To enable this to happen **transparency** is paramount.

The incentive to finance part of future decommissioning costs through a high **investment performance** is evident. However, high performance investments can conflict with the **prudence principle**, which plays an important role in the field of financial asset management. It is therefore recommended that **guidelines** are established. The long time scales potentially allow more allocating to shares (with a higher expected return) than shorter term portfolios, a process known as **asset and liability management**. However, this approach requires the establishment of a **guarantee scheme**.

The **legal aspects** of the report suggest that the legislative proposals and recommendations on the European level on the structure and availability of decommissioning funds in the respective Member States should not be solely based on the EURATOM Treaty but have to be based on the **Treaty of the European Communities**, especially Article 95 together with Article 175 on environmental grounds.

Based on the findings of the report a number of **recommendations** are made on how to ensure that adequate funds are available when necessary. These recommendations are made to **Member States** and to actions that could be undertaken now on the **European** level. Furthermore, the report makes suggestions on how **further harmonization** could be achieved on the EU level if necessary. Along with these recommendations are suggestions for **information sharing and reporting** that should be undertaken across the EU to increase **transparency**.