

Decommissioning and Waste Management Funds

"Imagine a market where you give one operator access to a 63 billion EURO fund; could you expect any fair competition on this market? This is exactly what EU Commission accepts when building the EU internal electricity market", Claude Turmes rapporteur for the European Parliament on the directive on Electricity liberalisation.

Over the past decades nuclear operators are supposed to have set aside funds to pay for future waste management and decommissioning activities. However, there are significant differences in the operation and accessibility of these funds, in particular: -

- Segregation of collected funds or provisions for use for activities other than decommissioning.
- The amount of yearly funds required, depending significantly on the discount rate used.
- How and when decommissioning is to be undertaken.

The economic distortions linked to the existing differences in the national regulations are enormous, and they have a double impact on the internal electricity market.

1) Impact on the electricity market as a whole

In order to insure a level playing field for all the economic actors in the EU energy market, a harmonised approach has to be found for access or non-access to the decommissioning funds. Whereas EDF, British Energy, E.ON and RWE are using these funds to buy up competitors and/or to enlarge their market shares through electricity sales below the production costs, most of their competitors do not have access to such funds. This is clearly a problem of the internal market and has to be ruled by the present directive.

2) Impact on the price of nuclear produced electricity

The amount of the yearly funds required and the obligations on when decommissioning has to be undertaken is a important part of the costs for producing electricity from nuclear power. In order to attempt to reduce market distortions linked to the different technical obligations of the decommissioning and the waste management, the EU Commission should propose in 2002 a specific directive on this issue.

The decommissioning and waste management funds is not a new issue, but the opening of the market across the EU means that it is one which must be addressed quickly, as the European Commission notes in a document reviewing this issue, *"this situation [lack of uniformity of decommissioning policies] could lead to distortion and discrimination between now competing nuclear electricity producers from different Member States. Decommissioning costs are clearly seen as part of the electricity production costs. They may not be cross-subsidised from the transmission activity nor be directly subsidised via state aid."*¹

¹ Nuclear Safety and the Environment, Decommissioning of nuclear installations in the European Union. Supporting document for the preparation of an EC Communication on the subject of decommissioning nuclear installations in the EU, EUR 18860 1998, page 30

The extent of the variation and market distortion can be seen by comparing the policies and activities of different EU countries, which are shown in the final table. The value of these funds is huge at around €80-190 billion. The main companies involved in the operation of nuclear power plants in Europe and the size of the national funds are listed below. What can clearly be seen is that EdF are the only sole nuclear operator in a country and have access to the largest funds in the EU decommissioning funds.

Country	Expected Size of Fund (Billion Euro)	Companies
Belgium	17.5-22.5	Electrobel, EdF, SPE
Finland	1.6	IVO; TVO
France	63	EdF
Germany	25-30	EnBW, EON, DB, RWE, HEW
Netherlands	1.2	EPZ; NVGKN
Spain	9.66	HI, Nuclenor, CSE, UE, Fecsa, Enseds, Hidruna, Segre, Uefsa, ID, Iberdrola, Iberduero, Hifrensa, EIA
Sweden	4.8	Sydkraft; FKA; OKG; Vattenfall
UK	58	British Energy; BNFL

However, in addition to the size of the funds there are some key differences between Member States, which can be noted:

- 1) The accessibility of funds for decommissioning and waste management is a key factor in both the attractiveness of a utility to outside investors and the opportunity of a nuclear utility to expand. Across the EU this varies significantly: -
 - Some utilities retain the funds and only pay when waste is delivered, e.g. France, Germany and the UK. Therefore funds set-aside for waste or decommissioning are at the disposal of the utility.
 - Some utilities have separate funds, but can still access them for acquisitions, e.g. Finland.
 - In other instances, a Waste Management Organisation holds the funds with payment on sale of electricity. In these cases - Netherlands, Sweden and Spain - access by the utility to the funds appears to be limited or non-existent.

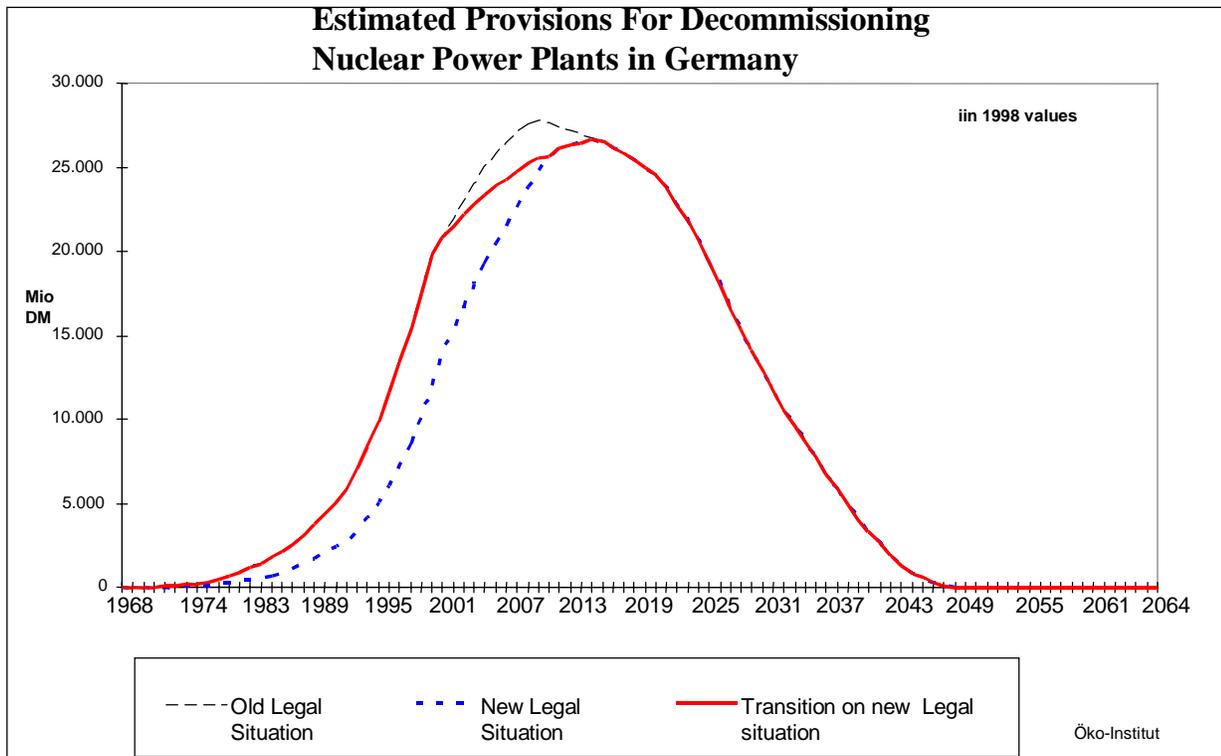
- 2) Some countries do not pay tax on their waste management/decommissioning funds, e.g. in Germany and Spain. This produces a significant market distortion.

- 3) In addition to differences in the financial arrangements for decommissioning funds, variations also occur in the timing and technical standards required. In particular, the timing of decommissioning significantly affects the cost: leaving final stage decommissioning for 70 years or more will reduce the level of funding that must be put aside during operation.

With over 30% of the EU’s electricity coming from nuclear power distortions within this sector can have significant impacts on the wider electricity industry. It is therefore essential that uniformity for waste management and decommissioning funds is established as quickly as possible. Consequently, in the Amendments prepared by the Parliamentary rapporteur a proposal is being put forward for a common approach which would require the establishment of an independent waste management

agency. It is important that the EU act on this issue as soon as possible as a number of Member States are currently reviewing or preparing new legislation for the management of their radioactive wastes.

In addition to the size of the decommissioning and waste management these funds are important as they are available for long periods of time. The funds are accumulated during the 30-40 year operational life of the power stations but may be only used decades after the stations closure. The graph below demonstrates this for the German nuclear power stations, where the funds will not peak until around 2015 and not be exhausted until 2064



The rapporteur of Parliament proposes a two-step approach: -

- As the access to the decommissioning funds creates a distortion for the market has clearly to be dealt within the proposed directive on liberalisation of the electricity market. In order to establish a level playing field the access to the funds should be prohibited and placed under the control of a national independent waste management agency.
- The more technical aspects on final stage of decommissioning, the discount rates applied and minimal technical and environmental levels for decommissioning and waste disposal should be dealt with in a separate directive which is expected to be presented by Commission later in 2002.

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Table Showing Differences of European Decommissioning Strategies²

Country	Nature of Waste Management Organisation	Remit of Waste Management organisation	Expected Cost of Waste Management (€on 1997 exchange rates)	Timing of Payment	Management of Advanced Payment
Belgium	State Owned Agency (ONDRAF/NIRAS)	Management and disposal of wastes	Waste management - €17.5-22.5 billion	Fee on delivery of waste	Interest-baring fund, managed by ONDRAF using external money managers
Finland	Private Limited liability company (POSIVA)	Management and disposal of HLW	Waste and Decommissioning -€1.6 billion	Advanced Payment	State-managed fund, investable at best “zero-risk” rate, but 75% may be borrowed by producers against provision of securities
France	State-owned company (ANDRA)	Management and disposal of all Wastes	Waste management and Decommissioning - €3 billion	Advanced Payment for research and construction, fee on delivery for disposal	None. Waste producers built up provisions
Germany	State Office (BfS) (operator, DBE)	Management and disposal of all Wastes	Unclear, so far utilities have gathered €25-30 billion	Advanced payment for research and construction. Mechanisms for Konrad and Gorleben not decided. Fee on delivery to Morsleben	Reserves built up by Waste producers
Netherlands	Private Limited liability company (COVRA)	Management and disposal of all Wastes	€1.2 billion	Fee on delivery of LILW to COVRA, advanced payment for HLW construction	Capital growth fund managed by COVRA
Spain	State-Owned Limited Liability Company	Management and disposal of all Wastes and decommissioning	Waste management and decommissioning - €9.66 billion	Advanced payment	Interest-bearing fund managed by ENRESA
Sweden	Private Limited liability company (SKB)	Management and disposal of all Wastes	€4.8 billion	Advanced payment for most, fee on delivery of operational LILW	Fund managed by SKI and invested with the Swedish National Debt Office.
UK	Private Limited liability company (NIREX)	Management and disposal of ILW and some LLW	€58 billion	Fee on delivery for most LLW, mechanism for HLW not decided	Waste Producers build up provisions

² Nuclear Safety and the Environment, Schemes for Financing Radioactive Waste Storage and Disposal, UK Nirex et al. Final Report, EUR 18185 1999