Round Table on Nuclear Provisions

on the initiative of the Belgian Minister for Climate and Energy

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Organized by the Belgian Federal Public Service Economy and ONDRAF/NIRAS

Summary report
based on the oral conclusions of the two rapporteurs

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Eight years after the entry into force of the Law on the provisions created for the decommissioning of nuclear power plants and the management of fuel irradiated in these plants (Law of 11 April 2003, as amended in 2007), the Belgian Minister for Climate and Energy wished to organize a round table on nuclear provisions aimed at examining the possibilities for improving this Law (see attached participant list), taking into account the experience gained and the assessments carried out, by ONDRAF/NIRAS among others within the scope of its "nuclear liabilities inventory" mission.

More specifically, the round table on nuclear provisions aimed at:

- analyzing various models — internal, external or hybrid — for managing the financial resources intended to cover the costs of the decommissioning of nuclear power plants and the management of fuel irradiated in these plants;
- examining the pillars supporting the coverage of nuclear costs: liability, financial security of financial resources, as well as control and transparency;
- formulating the main unresolved questions in order to enable decision-making with full knowledge of the facts.

The round table was not intended to examine the coverage of nuclear costs that are not directly linked with nuclear power plant operation and decommissioning.

The round table was framed around four main issues (see attached programme):

- presentation of the Belgian system, addressed from various angles;
- analysis of the above-mentioned pillars;
- comparative examination at OECD and European Commission level;
- presentation of four foreign systems, namely the systems in force in France, Spain, Germany and Finland.

The round table on nuclear provisions revealed no major divergences and led to the following areas of consensus.

1 The Law of 11 April 2003 can be improved

The Law of 11 April 2003 constituted a step forward in comparison with the regulations in place before it entered into force, but can be improved. Indeed, feedback on eight years of experience shows that the mechanisms it establishes to reach its objective — ensure that provisions are created to cover the costs of the decommissioning of nuclear power plants and the management of spent fuel — are not necessarily satisfactory since these provisions are not only supposed to *exist*, but should also be *adequate* and, above all, actually be *available* at the proper time.

Although the mechanisms put in place by the 2003 Law seem to ensure the existence of nuclear provisions satisfactorily,

- they not fully ensure the adequacy of these provisions;
- and barely concern their availability, which therefore needs to be improved.

Moreover, a law on nuclear provisions must not only cover the operating scenario planned for nuclear power plants, but also exceptional scenarios, such as the premature shutdown of these nuclear power plants. The Law of 11 April 2003:

- covers the planned operating scenario,
- but does not cover the scenarios of premature shutdown, which may occur for different kinds of reasons (technical, economic, political, legal,…).

The evolution of the general context of electronuclear production in Belgium also requires re-assessing the nuclear provision system. In particular, this evolution is characterized by:

- the liberalisation of the electricity market as of 1 January 2007,
- the new risk perception following the financial crisis,
- the resumption of the debate on nuclear power,
- the takeover of Electrabel by GDF Suez in 2003,
- the increase in transformations affecting the legal structure of companies (mergers and takeovers, disinvestment,…).

Finally, two agreements will have to be integrated in the legal and regulatory framework in order to avoid legal vacuums:

- the 1985 Agreement concluded between the Belgian State and the electricity producers on the creation by the latter of the necessary provisions for decommissioning nuclear power plants and managing the ensuing radioactive waste, which expires in 2015;

- the 2004 Agreement concluded by the Belgian State, Electrabel and Synatom specifying certain solvency requirements of Electrabel not covered by the 2003 Law, which, except renewal, expires in 2014.

2 A nuclear provision system must above all be coherent and comprehensive

Following the analysis of various nuclear provisioning systems applied abroad (France, Spain, Germany, Finland), it is not so much the internalized or externalized nature of the nuclear provision management model that is important to ensure their availability at the proper time, but rather *the whole coherence and the degree of completeness of the provisioning system within which this model operates*. In other words, a dogmatic approach is not appropriate in this field: there is no ideal system, but a variety of systems, each aiming at taking as much as possible the national particularities into account.

At the European level, the Commission is favourable to the application of the subsidiarity principle as far as nuclear provisioning is concerned, inasmuch as Member States comply with the Recommendation of 24 October 2006 on the management of these provisions (2006/851/Euratom). In its preamble (8), this recommendation considers that it is necessary to:

" - ensure that adequate financial resources for decommissioning and waste management activities,
- which are audited in Member States,
- are actually available for the purpose for which they have been established
- and are managed in a transparent way, thus avoiding obstacles to fair competition in the energy market."

3 The improvement of the Belgian system of nuclear provisioning must ensure the availability of adequate resources at the proper time

The improvement of the Belgian system of nuclear provisioning, which must ensure the *availability*, *in accordance with the planned timetable*, of the financial resources necessary to cover the costs of decommissioning nuclear power plants and managing spent fuel, rests on four key elements:

- liability of the actors,
- security of the financial resources,
- control of the system,
- transparency of the system.

3.1 Liability of the actors

The notion of liability of the actors is essential in the issue of nuclear provisioning. *Who is responsible for what and (till) when?* Only a system that clearly defines the respective liabilities and the contours of these liabilities is likely to *reduce the risk of financial charges being transferred to the State*, and thus to the community.

In the light of the other European models, the current system can be improved as for the definition and organization of the different types of liabilities attributed to the financially

responsible entity, on the one hand, and to the fund manager, on the other hand. In particular, the current system does not completely take into account the shareholding relations between the main actors. So,

- the fund manager, in charge of covering the costs of decommissioning and managing spent fuel is the Nuclear Provisions Company Synatom, a wholly-owned subsidiary of Electrabel;
- the entity responsible for transferring the financial resources necessary to cover the costs of decommissioning and managing spent fuel, referred to as financially responsible entity, is the nuclear operator Electrabel, a wholly-owned subsidiary of GDF Suez.

The liability issue regarding nuclear provisioning must also be addressed from various other angles, which are not taken into account in the 2003 Law:

- *Continuity of financial liability in case of loss of the status of nuclear operator* The system of nuclear provisioning must provide for the mechanism(s) necessary to ensure the nuclear operating company's financial obligations continue to be fulfilled if the company ceases to be nuclear operator. For instance, in the German system, there is only one financially responsible entity and its obligations are guaranteed by the possibility of moving up higher, if necessary, in the group structure. A similar system seems appropriate for Belgium.
- *Principle of territoriality* The nuclear provisioning system must take into account that the shareholding of the financially responsible entity may be foreign and, therefore, unlikely to be subpoenaed with a view to making it fulfil the financial obligations of its subsidiary if the latter were to become insolvent. A distinction may also be made between the European and non-European shareholders.
- *Temporal dimension* The nuclear provisioning system must provide for the organization of the liability continuity following a possible premature shutdown or extension of the operation of nuclear power plants, also for political reasons.
- *Separation of the provisions respectively intended for decommissioning, managing spent fuel and managing radioactive waste* The nuclear provisioning system must enforce separation between decommissioning provisions and provisions for managing spent fuel and provisions for managing radioactive waste. In fact, apart from being very different in nature, these activities — and the relating financial liabilities — differ in terms of temporal dimension: decommissioning is planned for the next 20 or 30 years, while the management of spent fuel and waste is considered over a period from 50 to 100 years.

3.2 Security of financial resources

The financial resources built up to cover the costs of decommissioning and managing spent fuel must be secured in a proper manner, so that they are available at the proper time. In this respect, the provisions of the 2003 Law can be strengthened and completed in varied ways:

- avoid entrusting a company that performs other activities in the nuclear sector with the management of provisions for decommissioning and managing spent fuel;

- subject the company responsible for managing provisions to clear internal governance rules;
- include the management of provisions in a legal framework clearly defining the economic parameters to be applied:
  - discount rates (protected from inflation) to be applied in the short and long term (see French model);
  - prudential rules: limits to the diversification of assets (dispersion ratio) (see French Law) and/or list of authorized investments (see Spanish model), avoid a policy of preferential loans for certain kinds of projects;
  - limitation of *risk to risk investment*: avoid increasing the risk by investing in other nuclear assets;
  - organization of the transition from an internalized provisioning system to an externalized system in accordance with various elements: the timescale, the strategic decisions to be made (regarding reprocessing policy for instance) and efficiency considerations;
- use recognized asset and liability management (ALM) tools in order to control as much as possible the range of risks by taking into account the temporal dimension (longer than the temporal dimension of most economic models) in the scenarios of provision valuation and the fact that the financial resources must be available to cover the costs at the proper time, in accordance with the dates planned in the scenarios;
- clearly allocate the assets to the obligations covered by the provisions (earmarking) to ensure that they can be traced and seized (as in France). Seizure is easier if the assets are rooted in Belgium;
- enforce a refunding guarantee if the provisions are lent to the operator of the nuclear power plants all the same (full security on back loan) (as in Finland);
- give the State a real status of preferred creditor.

3.3 Control of the system

The system of nuclear provisioning must be controlled in order to ensure that the cost of decommissioning nuclear power plants and managing spent fuel can be covered at the proper time. This control, provided for in the 2003 Law, should comply with various criteria, which are not (or not totally) covered by the existing provisions:

- be independent from the different stakeholders, including the State, and thus, in particular, be external to the controlled stakeholders (as in France and Spain);
- be efficient, which, in particular, implies for Belgium a better coordination between the Nuclear Provision Commission and the Belgian State, as holder of a Golden Share in Synatom, which grants it the right to oppose any decision of the Board of Directors of Synatom that goes against the energy policy of Belgium, or any decision likely to have a negative impact on the provisions;
- be performed by an entity or entities possessing a level of technical and/or financial expertise, equivalent to that of the parties controlled;
- be performed by an entity or entities possessing sufficient powers, including investigation powers.

3.4 Transparency of the system

The system of nuclear provisioning must be transparent. The transparency can be improved by different kinds of measures.

- The system of nuclear provisioning should be totally regulated by the legal and regulatory framework, so that all actors enjoy equal treatment, including at European level. The current Belgian system of nuclear provisioning is, however, also regulated by agreements, the use of which should therefore be abandoned.
- The implementation of the rules of good governance should be made public.
- Reporting on nuclear provisions should comprise two complementary aspects:
  - external reporting to experts on cost assessment and on the provisioning and ALM methods used (asset allocation, asset valuation,…);
  - public reporting, which is important not only to inform the public and civil society actors, but also to enhance the electricity producers' credibility.

4 A certain harmonization could be useful at European level

Although the European Commission is in favour of the principle of subsidiarity in the field of nuclear provisioning, harmonizing certain aspects of provisioning at European level could prove useful.

- The future European Directive on radioactive waste should require Member States to explicitly link their radioactive waste management programmes to the financing of the decommissioning of their nuclear power plants and the management of their spent fuel and waste.
- Electricity producers must be able to operate in a European market without distortion of competition. A European harmonization of discount rates, or even cost assessment methods, is advisable.
- Currently, the cross-border extension of liabilities in the field of nuclear provisioning are not regulated. It therefore appears recommended to lay down such rules at European level, as was the case in the field of nuclear civil liability, with the signing of the Paris Convention (1960) and the Additional Convention of Brussels (1963).

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Appendices:

- Programme
- List of participants
- Documents handed out:
  - Law of 11 April 2003 on the provisions built up for the decommissioning of nuclear power plants and the management of fuel irradiated in these plants (available in Dutch and French), *Moniteur belge* of 15.07.2003
  - European Commission, Commission Recommendation of 24 October 2006 on the management of financial resources for the decommissioning of nuclear installations, spent fuel and radioactive waste (2006/851/Euratom), No. L 330/31, 28.11.2006
  - European Commission, Communication from the Commission to the European Parliament and the Council, Second Report on the use of financial resources earmarked for the decommissioning of nuclear installations, spent fuel and radioactive waste, COM(2007) 794 final, 12.12.2007
  - Agreement of 3 May 2004 concluded between the Belgian State, Electrabel and Synatom (solvency requirements of Electrabel)
  - ONDRAF/NIRAS, Report on the provisions built up for decommissioning nuclear power plants and managing fuel irradiated in these plants - Summary, 28.03.2011 (also available in Dutch and French)
- PowerPoint presentations of the speakers, including conclusions.