

**INTERNATIONAL LONG-TERM INTERIM STORAGE FOR SPENT FUEL;  
AN INDEPENDENT STORAGE SERVICE INVESTOR MODEL**

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Private investors in the USA successfully demonstrate how the unclear situation of the Jucca Mountain repository project can be used to make profit by offering interim storage services for spent fuel to the American utilities.

Thinking more globally the obvious world-wide demands for **large storage capacities** for spent fuel within the next decades and the newly arising demands for **long-term** interim storage of spent fuel urges to respond by international interim storage facilities of high capacity [1].

To find investors acting as independent operators of such international interim storage facility needs mainly a storage technology which enables safe storage at low costs for periods exceeding hundred years.

Low cost storage can be achieved only by arranging the interim storage facility underground in a suitable host rock formation and by selecting the geographical area of such an interim storage facility by an international competition under those countries, who are willing to offer their land.

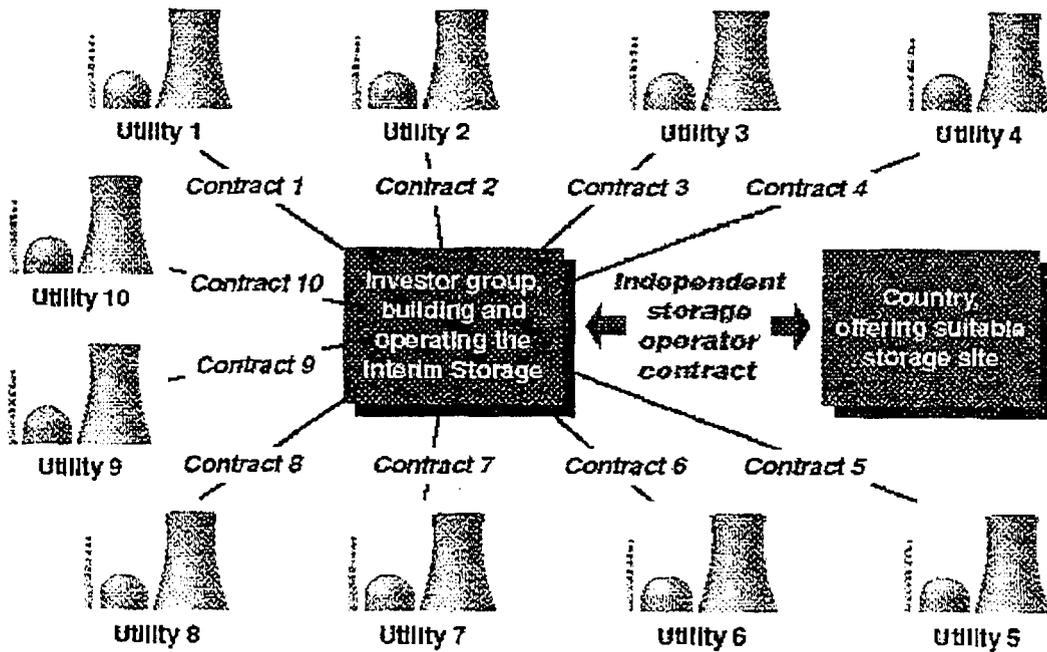
However, competition is not the only consideration. Any country which makes an interim storage site available internationally must impute the operation of the facility to the international supervisory body, must establish that the selected site will be accepted by the local population and that the financial means made available for the development of the site will benefit local industry and the population. Not last this state must underwrite the necessary guarantees for contracts made between the power plant operation and the storage operating enterprise.

The investor and operator of an international interim storage facility selected and realised by a competition on the free market procedure as well as the country where the storage is built, are both bound by two different kinds of contracts. The main contract is between the offering storage country/region and the independent operator (Fig. 1) and is embedded by:

- The atomic law of their country, including the Non-Proliferation Act;
- The IAEA Joint Convention on Safety of Spent Fuel Management (including Earliest Public Acceptance concept);
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes.

The independent operator has in addition a series of contracts with various utilities, which are interested to have their spent fuel stored for a longer period.

The independent storage investor model was calculated on a conceptual design of such an underground storage facility. Economic calculations demonstrate that an upper limit of storage costs is \$ 44/kg U [2]. It is expected to reduce this figure significantly by the competition of low level industrial wages in, say, east European countries.



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FIG. 1. Model for independent interim storage facility

## REFERENCES

- [1] LEISTER, P., "New Storage Concept", Proc. of IAEA Workshop "Commissioning of Dry Spent Fuel Storage Technologies", 07-10 October, 1997, Prague.
- [2] LEISTER, P., "International Long-term Underground Interim Storage For Spent Fuel; An Answer to Various Demands", Proc. of Annual Meeting on Nuclear Technology, 26-28 May 1998, Munich.