

Session 3 Spent fuel management for smaller programmes and newcomer states

More than 60 'newcomer' countries have indicated that they are interested in developing nuclear power in their countries. While information about reactor systems and fuel supplies is readily available from vendors it has proved to be more difficult for newcomers to obtain reliable information about the back-end of the fuel cycle. The IAEA has assisted by giving advice to newcomers but its guidance tends to be at too high a level for many countries.

It has to be made clear to 'newcomers' that, as basic conditions, they need to have safe and secure facilities, security of front-end services, security of back-end services and access to geological disposal.

The options that they have for spent fuel management are:

national storage and disposal,

reprocessing abroad, recycling and disposal nationally,

reprocessing, recycling and waste disposal abroad,

national storage, disposal in shared repositories,

fuel leasing,

retention of spent fuel as a valuable commodity.

The choice between these is not easy and some are not available or feasible for smaller countries.

It is clear that multilateral solutions for storage, reprocessing and disposal in which there were sharing mechanisms between countries would greatly help newcomer countries, especially smaller newcomer countries. However, while these are being actively discussed (some under the auspices of the IAEA), none has yet materialized.

'Off the shelf' solutions are not likely to be realistic in this context. It would be difficult for the vendor to provide a guarantee that all back-end aspects would be provided, e.g., spent fuel reprocessing, storage and disposal.

A problem for many countries is the size of the nuclear units on offer; they are too big (greater than 1000MW) for the needs of smaller countries.