

RESEARCH REACTOR DECOMMISSIONING

- **~ 800 constructed worldwide to date**
- **~ 50% shut down**
 - Due to design life, strategic, economic or regulatory considerations
 - Various stages of decommissioning
- **~ 50% Operational.**
 - 27% of these are over 40 years old

DECOMMISSIONING?

- **Staged process** through which a nuclear facility, which has ceased normal operations, is taken out of service, including **full or partial dismantling** of buildings and contents’.
- It may include other operations such as the **decontamination** of buildings which are not to be dismantled and the remedial treatment or **restoration** of the land under and around the facility.
- **Progressively removing the hazard** the facility poses giving due regard to **security, safety and protecting the environment**.

DECOMMISSIONING?

- **Reduce regulatory control**
- **Case by case basis**
 - **May be appropriate to delay decommissioning to take benefit from developing technologies and radioactive decay**
- **As soon as reasonable practicable taking into account all relevant factors as provided for in the relevant operator's decommissioning Strategy and the Decommissioning Plan**

DECOMMISSIONING PLAN

STRATEGIC ISSUES

- Waste Management
- Environmental impact
- Public safety
- Worker safety
- Site security
- Site stewardship
- Funding
- Cost effectiveness
- Skills/knowledge base
- Best practice
- Research/technology
- Stakeholders

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FUNDING

- **Cost Estimates**
 - Benchmarking
 - Databases
 - Sharing experience
- **Source**
 - Owner/operator
 - Government
- **Provision**
 - Segregated
 - Fund
 - Account

WASTE

- **Classification**
 - High, Intermediate, Low/Very Low
- **Minimisation**
 - Delay/decay
- **Storage**
 - Local/national
- **Clearance levels**
 - Removal from regulatory control

STAKEHOLDER DIALOGUE

- **Facilitates ‘Stepwise’ decision making process:**
 - **Meaningful involvement in planning process**
 - **Public reassurance**
 - **Higher levels of:**
 - **openness**
 - **transparency**
 - **reversibility**
- **Influences strategy**
- **Opposite to ‘Decide, Announce and Defend’**

STAKEHOLDERS

- **Comprehensive and diverse range required**
- **Operators and license holders**
- **Government Organisations:**
 - **Government Departments, Regulators and Environment Agencies**
 - **Regional and Local Government**
- **Non-Government organisations:**
 - **Trades Unions and Professional Bodies**
 - **General Public and Focus Groups**
 - **Anti-Nuclear Groups**

Example

- **UK BNFL Magnox Decommissioning Dialogue**
- **Independently facilitated by the UK Environment Council**
 - **Registered charity**
- **Regular meetings**
 - **Main Group, Coordination Group, Working Groups**
 - **Strategic Action Planning Group**
 - **Ground rules**
 - **Records**
 - **Expert advice**
- **Dialogue funded by BNFL**
 - **Travel and subsistence**
 - **Payments for NGO focus group attendance**
 - **Attendance time**
 - **Report writing**

Summary

- **Early and agreed strategy required covering all aspects of decommissioning, including funding, waste management and stakeholder dialogue.**
- **Whilst waste management is probably the most technically difficult issue, everything depends on adequate funding.**
- **Stakeholder dialogue becoming increasingly more important**
- **A Comprehensive Decommissioning Plan is required that encompasses the agreed strategy**
- ***Failing to plan = planning to fail!***