Initial Estimation of Backend Costs for Advanced Reactors and Small Modular Reactors

Register for the event

Background

(Image credit: Pixabay)

The NEA is organising a workshop on initial estimation of back-end costs for small modular reactors (SMRs) and Generation IV technologies.

This topic has gained significant attention within both the Committee for Decommissioning and Legacy Management (CDLM) and Radioactive Waste Management Committee (RWMC), reflecting a growing interest from NEA Member Countries.

The CDLM Expert Group on Costing for Decommissioning of Nuclear Installations and Legacy Management (EGCDL) is responsible for the organisation of the event.

The workshop will bring together experts from:

- nuclear decommissioning;
- back-end and waste management;
- regulatory affairs;
- facility operations; and,
- vendor companies and private industry.

The workshop will be the **first-ever collaborative space** where experts can tackle the unique challenges of **back-end cost estimation** for next-generation nuclear technologies, exploring how novel fuels, designs and waste streams reshape our traditional approaches, with the aim to inform future ideas for work across industry and for diverse stakeholders.

It will aim to develop preliminary guidelines that compile current best practices. These guidelines will help key stakeholders understand critical

decommissioning and waste management considerations from the design phase onwards.

Download the agenda
261.19 KB

Objectives

1. **Pioneering discussion forum:**

- Create the first-ever collaborative space where experts can tackle the unique challenges of decommissioning cost estimation for next-generation nuclear technologies, exploring how novel fuels, designs and waste streams reshape our traditional approaches, with the aim to inform future ideas for work across industry and for diverse stakeholders.

2. **Cross-industry strategic dialogue:**

- Facilitate dynamic conversations among stakeholders that go beyond technical aspects to address critical regulatory requirements and financial assurance mechanisms—questions that will determine the economic viability of these technologies.

3. **Decoding SMR/GEN IV complexity:**

- Unpack the distinctive features of small modular reactors and Generation IV designs to reveal how these innovations fundamentally alter backend management strategies, identifying crucial questions that must be answered to develop reliable cost estimation methods.

4. **Learning from history to shape the future:**

- Critically examine lessons from traditional nuclear decommissioning projects to prevent repeating costly mistakes and create more efficient pathways for emerging technologies.

5. **Bridging divides among stakeholders:**

- Foster earlier and more meaningful collaboration between technology vendors and the decommissioning community, ensuring end-of-life considerations influence designs from the earliest development stages.

6. **Navigating the regulatory landscape:**

- Illuminate how existing regulatory frameworks should inform early SMR/Gen IV development decisions, with special focus on streamlining licensing processes, decommissioning planning, and establishing appropriate financial guarantees.

Practical information

Workshop format

This will be a three-day workshop. The workshop will have presentations from relevant experts in the fields of SMR technologies, decommissioning and waste management activities, cost estimation methodologies, financial assurances and guarantees and dedicated panel sessions along with a breakout session where all the participants will work on understanding, brainstorming, and providing solutions for key issues.

Topics to be addressed by the workshop programme

- Topic 1: Current Status of SMR/Gen IV Technologies and Impact on Backend Management
- Topic 2: Waste and Backend Management for SMR/Gen IV Technologies
- Topic 3: Decommissioning Strategies for SMR/Gen IV Technologies
- Topic 4: Cost Estimation Methodologies
- Topic 5: Regulatory Challenges and Financial Assurances

Programme Committee

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Additional information

The workshop is a public event open to all. Please feel free to contact the NEA Secretariat for further information and any queries.

When?

18 - 20 November 2025

NEA Headquarters, Boulogne-Billancourt, Paris

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Tags

Advanced reactors Back-end CDLM Decommissioning Decommissioning and legacy management EGCDL Expert feedback …

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EGCDL Workshop Concept Paper
93.3 KB

Authorisation form
177.17 KB