

Nuclear Science Committee (NSC) Workshop

“Enhancing Experimental Support for Deployment of New Fuels and Materials”

8-10 January 2018

OECD Conference Center, room CC15

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Goal and Motivation

Our goal is to attempt to reduce the time required to deploy innovative fuel concepts in commercial nuclear reactors

- Downward trend in resources and experimental infrastructure
- Need for a concerted effort to harmonize approaches used in the areas of experimental validation, qualification and experimental programmes, to optimise resources and deployment times
- A combined effort signals a readiness for investment
- Need for a shared systematic approach to validation providing an ‘international confidence’
- Need to reinforce a scientific community around relevant infrastructures

The workshop hopes to strengthen connections and promote communication between TSOs/regulators, licensees, experimental facilities, and ensure best practices in experimental support are followed when deploying innovative fuel

NEA NSC Role

NEA is in a good position to reduce barriers associated with deploying novel concepts, by coupling the advances in science, in order to **improve fuel/materials testing**.

Some scientific issues to be addressed:

- Design of ‘smart’ experiments
- Advanced methods for interpretation and extrapolation of experimental measurements
- Advanced instrumentation
- Coupling of state-of-the-art modelling and simulation with experimental capabilities

Workshop Agenda

Session 1. **Industry experience and perspectives** in developing new material and fuel.

Session 2. **TSO perspectives and requirements** for acceptance of innovative fuel and materials.

Session 3. **Advances in nuclear science:** promising fuel technologies; modelling and validation methods; and associated experimental challenges.

Session 4. **Experimental infrastructure:** perspectives in advanced instrumentation and experimental techniques to support innovative fuel development.

Session 5. Summary and conclusions: agree on **implementation plan** to enhance experiments for validation/ qualification.

Questions?



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