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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