



U.S. DEPARTMENT OF  
**ENERGY**

**Nuclear Energy**

# **OECD/NEA Workshop on Accident Tolerant Fuels, Workshop Expectations**

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**OECD/NEA Workshop on International Fuels  
Paris, France (December 10-12, 2012)**



# Workshop expectations

The topics of the workshop will include technical and safety issues of developing accident tolerant fuel

***The workshop IS about defining requirements for selection among various options during the feasibility phase of the development process***

- Identification of important attributes (properties, performance characteristics) for ATF
- Identification of operational and safety constraints for the new fuels
- Metrics to evaluate various candidate technologies
- Analyses/measurements required to quantify the metrics
- Exploring the possibility of an international forum to discuss and quantify the metrics and compare the assessment results

***The workshop IS NOT about identifying and proposing design solutions***

- NOT selecting or ranking candidate fuel/clad technologies (except as examples to guide the discussions)
- NOT selecting reactor technologies or designing new reactors (cover the spectrum of existing designs)



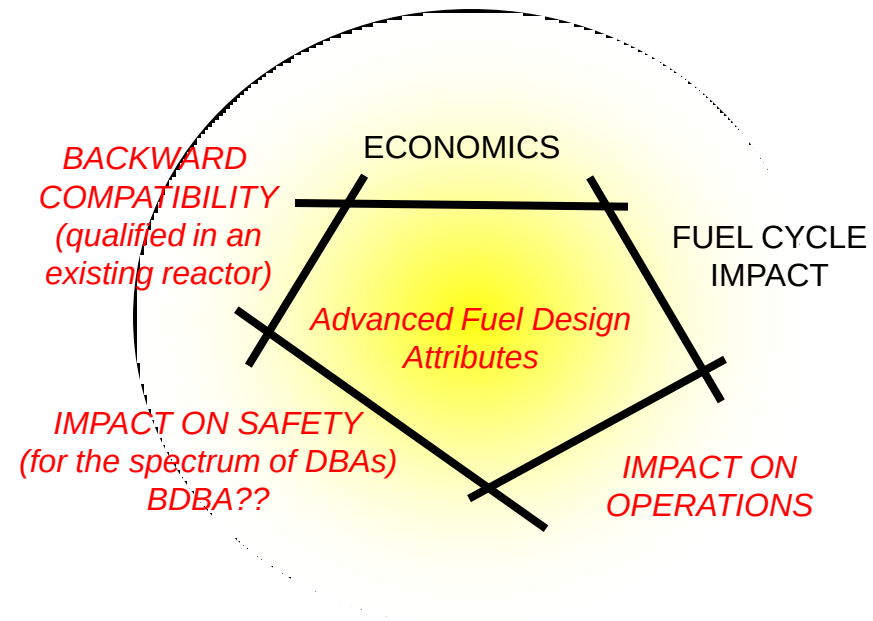
# Breakout Sessions – Expected Outcome

## Scientific and Engineering Issues

- Define critical attributes: properties, performance characteristics
- Map the merit of the attributes against potential operational or safety envelope benefits
- If possible, quantify the target value for the attribute/property
- Define required analyses (accident scenarios) to quantify the target value
- Potential assembly design changes within the design constraints

## Safety and Regulatory Issues

- Accident scenarios to be considered – safety envelope definition
- Operations envelope for initial conditions based on margins required during transients
- Defense-in-depth issues and the role of fuel design





***The discussions is the major focus of the workshop***

***Please keep the presentations within the allocated time***

***Technology presentations are limited to 20 min. (no exceptions)***

- Keep the presentation to 15 min ( 5 min questions and not comments)
- Provide and overview of the concept considered
- State concisely what attributes makes this technology accident tolerant and why (quantitatively if possible)
- State the pros and cons
- Summarize what is known and what is not known and path forward