



## Agenda

# NEAMS Annual Review Light Water Reactors

May 7, 2025

11:00 AM- 5:00 PM (Eastern Time)

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|-------|--|---|
| 11:00 | <b>Opening remarks and meeting objectives</b>                              | David Henderson, DOE/David Andersson, LANL  |
| 11:05 | <b>NEAMS overview and Light Water Reactors research plan</b>               | David Andersson, LANL                       |
| 11:15 | <b>Technical Area introductions: overview, highlights, and strategy</b>    |   |
|       | Multiphysics Applications<br>(5 min)                                       | Emily Shemon, ANL & Cody Permann, INL       |
|       | Thermal Fluids<br>(5 min)  | Elia Merzari, INL                           |
|       | Fuel Performance<br>(5 min)  | Steve Novascone, INL                        |
|       | Reactors Physics<br>(20 min)   | Matthew Jessee, ORNL                        |
|       | Structural Materials and Chemistry<br>(20 min)                             | Ben Spencer, INL                            |
| 12:15 | <b>NEAMS industry impact &amp; contribution to experimental testing</b>    | Nathan Capps, ORNL                          |
| 12:40 | <b>Break</b>   |   |
|       | <b>Burnup extension and fuel fragmentation, relocation, and dispersal</b>  |   |
| 13:00 | <b>Analysis of burst susceptible during LBLOCA in high-burnup BWR core</b> | Ian Greenquist ORNL/<br>Aaron Wysocki, ORNL |

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13:25 ***UO<sub>2</sub> pellet model developments: Doped UO<sub>2</sub>, high burnup UO<sub>2</sub>, pellet-clad bonding model, analysis of Halden data***

*Pierre-Clement Simon, INL/  
Conor Galvin, LANL*

14:30 ***Clad ballooning and mechanistic model development***

*Laurent Capolungo, LANL*

14:50 ***Questions and feedback from stakeholders***

15:10 ***Break***

***Power uprates: Time at temperature***

15:30 ***Simulation of the Peach bottom turbine trip benchmark case***

*Nick Herring, ORNL*

15:55 ***Validation and sensitivity analysis of thermal hydraulic capabilities for modeling of transient dry out and re-wet***

*Vineet Kumar, ORNL*

16:20 ***Cladding model development for time at temperature***

*Laurent Capolungo, LANL*

16:45 ***Questions and feedback from stakeholders***

17:00 ***Adjourn***