

| April 13-15, 2021

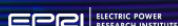
AGENDA

The purpose of this stakeholder meeting is to:

- Receive industry feedback on the technical work in the DOE-NE Advanced Reactor Safeguards Program.
- Inform program R&D related to material control & accountability, and physical protection for advanced reactors.

Tuesday, April 13, 2021

Time (EST)	ARS Security Session	Presenter
11:00 am	Welcome / Workshop Overview / Virtual Meeting Logistics	Lori Braase, GAIN Everett Redmond, NEI Andrew Sowder, EPRI
11:20 am	DOE NE Remarks	Alice Caponiti, DOE-NE Alison Hahn, DOE-NE
11:30 am	ARS Program Overview	Ben Cipiti, SNL
12:00 pm	SMR Security by Design and Analysis	Alan Evans, SNL
12:20 pm	Fused Radar and Video Analytics	JR Russell, SNL
12:40 pm	Treatment of Uncertainty in a Risk Informed Licensing Approach	Curtis Smith, INL
1:00 pm	Unique Sabotage Targets for Advanced Reactors	Vince Mousseau, SNL
1:20 pm	Break	
1:30 pm	Security by Design Discussion	
2:10 pm	Safeguards & Security for HALEU	Maia Gemmill, BNL
2:30 pm	HALEU Discussion	
3:00 pm	Optional Security and HALEU Roundtable Discussion	
4:00 pm	Adjourn	



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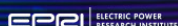
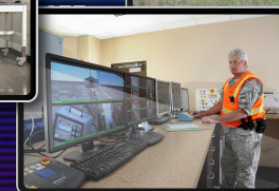
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Wednesday, April 14, 2021

Time (EST)	ARS HALEU, PBR, and Microreactors Session	Presenter
11:00 am	Welcome / Virtual Meeting Logistics	Ben Cipiti, SNL
11:10 am	Pebble Bed Reactors (PBR) Material Control and Accountability	Philip Gibbs, ORNL
11:30 am	Material Control Technique Validation for PBRs	Claudio Gariazzo, ANL
11:50 am	Machine Learning for Video Surveillance for PBRs	Yonggang Cui, BNL
12:10 pm	PBR Discussion Industry Needs Presentation – Margaret Ellenson, Kairos Industry Needs Presentation – Sonat Sen, X-Energy	
1:00 pm	Break	
1:10 pm	Framework for Microreactor Safeguards and Security	Andrew Breshears, ANL
1:30 pm	Technical and Regulatory Considerations for Microreactor NDA Measurements	Robert Weinmann-Smith, LANL
1:50 pm	MC&A for Different Reactor Designs Industry Needs Presentation - Westinghouse	
2:30 pm	NRC Remarks	Jim Rubenstone
3:00 pm	Optional Roundtable Discussion on PBR and Microreactors	
4:00 pm	Adjourn	



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Thursday, April 15, 2021

Time (EST)	ARS MSR, Int'l Considerations (SBD Approach)	Presenter
11:00 am	Welcome / Virtual Meeting Logistics	Ben Cipiti, SNL
11:05 am	MC&A Approach for Molten Salt Reactors (MSRs)	Mike Dion, ORNL
11:25 am	MSR Safeguards Modeling	Nathan Shoman, SNL
11:45 am	On-line Monitoring for MSR MC&A	Amanda Lines, PNNL
12:05 pm	Flow Enhanced Electrochemical Sensors for MSRs	Nathaniel Hoyt, ANL
12:25 pm	Experimental Validation of NDA Capabilities for MSRs	Mark Croce, LANL
12:45 pm	MSR Discussion	
1:10 pm	Break	
1:20 pm	Leveraging IAEA Safeguards Experience for U.S. Advanced Reactors	Ty Otto, PNNL
1:40 pm	Proliferation Resistance and Physical Protection of GEN-IV Systems	Lap Cheng, BNL
2:00 pm	International Considerations Discussion NNSA's Support to U.S. Adv Reactor Industry – International Safeguards and Security – Anagha Iyengar, NNSA	
2:30 pm	Wrap-up Discussion, Industry Feedback, and Program Gaps	
3:00 pm	Optional Roundtable Discussion	
4:00 pm	Adjourn	



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ACRONYMS

ANL	Argonne National Laboratory
ARISE	Advanced Reactor International Safeguards Engagement
ARS	Advanced Reactor Safeguards
BNL	Brookhaven National Laboratory
DOE-NE	Department of Energy – Office of Nuclear Energy
EPRI	Electric Power Research Institute
GAIN	Gateway for Accelerated Innovation in Nuclear
HALEU	High-Assay Low-Enriched Uranium
IAEA	International Atomic Energy Agency
INL	Idaho National Laboratory
LANL	Los Alamos National Laboratory
MC&A	Material Control and Accountability
MSR	Molten Salt Reactor
NDA	Non-Destructive Assay
NEI	Nuclear Energy Institute
NNSA	National Nuclear Security Administration
ORNL	Oak Ridge National Laboratory
PBR	Pebble Bed Reactor
PNNL	Pacific Northwest National Laboratory
PRA	Probability Risk Assessment
R&D	Research and Development
SMR	Small Modular Reactor
SNL	Sandia National Laboratory