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Light Water Reactor Sustainability Program
Technical Integration Office

Technical Integration Office Summary

LWRS Spring Meeting



The Technical Integration Office

- The LWRS Program is the primary programmatic activity that addresses the DOE-NE's priority to extend the life of the nation's existing fleet of nuclear power reactors.
- Research activities focus on expanding the role of nuclear energy to ensure a reliable and abundant source of electricity and energy to power national industry and enhance efficiency.
- Technical Integration Office (TIO) manages the LWRS Program and serves as the primary interface with industry, Laboratories, universities, regulatory organizations, and other stakeholders to achieve DOE's goals and objectives for this program.
- Accomplishments are programmatic, organizational, and facilitate the mission of the program and DOE with respect to the goals of the LWRS Program.



LWRS.INL.GOV



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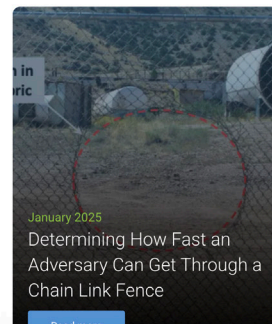
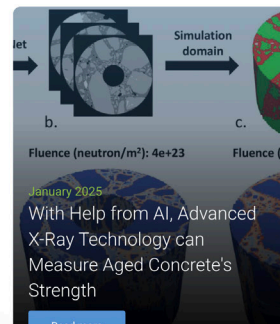
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Light Water Reactor Sustainability

Sustaining National Nuclear Assets

The mission of the Light Water Reactor Sustainability Program is to develop the scientific basis, and science-based methodologies and tools, for the safe economical long-term operation of the nation's high-performing fleet of commercial nuclear energy facilities.

Newsletter Articles



Stakeholder Engagement

Develop critical research areas and agreements for demonstrations

+


Develop approach for projects

+

Coordinate project development and deploy results across industry

MOUs with NRC and EPRI





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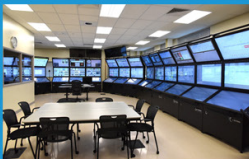
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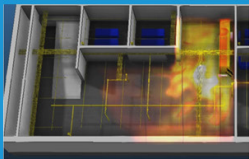
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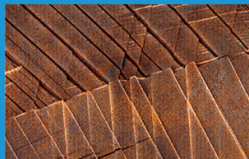
Plant Modernization




Flexible Plant Operations & Generation




Risk-Informed Systems Analysis




Materials Research



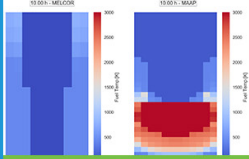
Physical Security




Technical Integration Office



Safety-Related Pilot Upgrade



Reactor Safety Technologies



System Analysis and Emerging Issues



LWR Nuclear Fuels

INL

OAK RIDGE


Argonne

Pacific Northwest

Los Alamos


Sandia National Laboratories

U.S. DEPARTMENT OF ENERGY



Overview and Accomplishments – 2023

Light Water Reactor Sustainability Program



U.S. DEPARTMENT OF ENERGY

https://lwrs.inl.gov/content/uploads/11/2024/10/LWRS_Program_Overview_Accomplishments_2023.pdf

Summary

- Collaborations with industry facilitate progress and exchange in areas of vital common interest
 - Materials, Modernization, Risk-Informed Research, Diversification of Products, Physical Security
- Need for reliable and abundant energy from nuclear power underscore the need to expand and enhance efficiency of operating fleet
 - LWRS research addresses highest priority issues to achieve near-term outcomes
- Projects follow timelines to impact economic competitiveness and long-term operation
 - Develop the means to expand capacity and support buildout of nuclear energy using experience and infrastructure of the existing fleet.
 - Address critical needs in aging and obsolescence
 - Demonstrate the means to substantially reduce the costs of ownership
 - Lead transformation from a labor-centric to technology-centric business model



Sustaining National Nuclear Assets

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