



**Bruce P. Hallbert, Ph.D.**

Director,

Light Water Reactor Sustainability  
Program Technical Integration Office

# Technical Integration Office Summary

## 2024 LWRS Program Spring Review 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.
- **Sustainability** – the ability to maintain safe and economic operation of the existing fleet of nuclear plants for as long as possible and practical.
- **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 Program Organization

The LWRS Program Organization includes Federal staff from DOE-NE, and from National Laboratories

- Idaho National Laboratory
- Oak Ridge National Laboratory
- Sandia National Laboratory

## Federal Program Management



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## Technical Integration Office



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## Research and Development Pathway Leads



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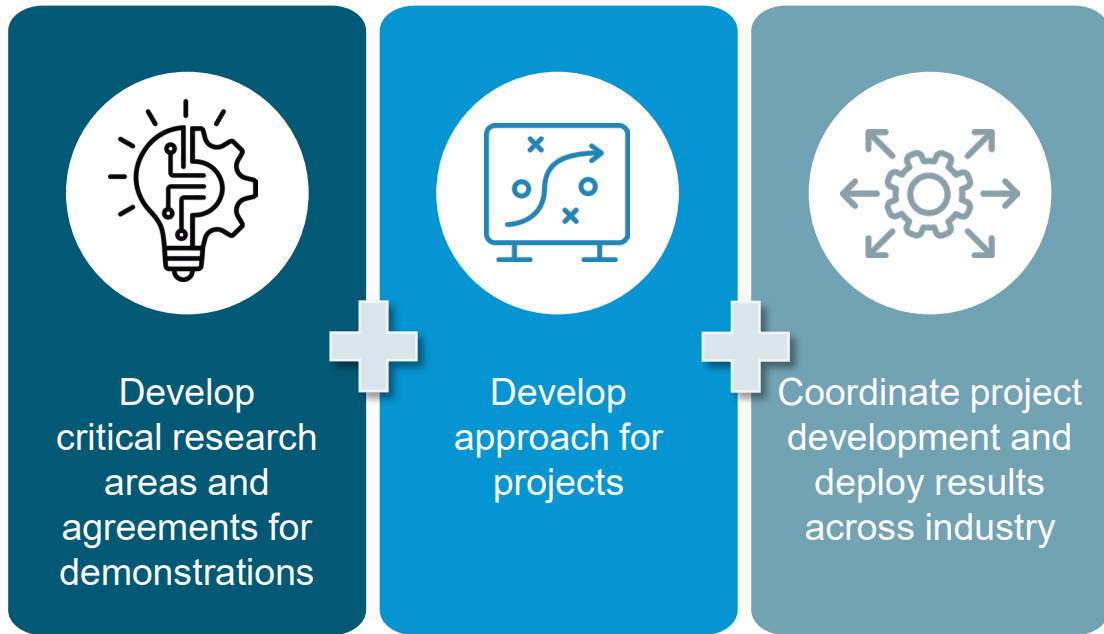


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# Stakeholder Engagement



MOUs with NRC and EPRI



The screenshot shows the LWRS Program Webpage with the following content:

- Navigation:** HOME, ABOUT, RESEARCH AREAS, REPORTS, NEWSLETTERS, VIDEOS, CONTACT US, PRESS, COLLABORATION, EDIT LINKS. A search bar is located in the top right.
- Mission Statement:** "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."
- Recent Newsletter Articles:**
  - Extending reactor life
  - Security Measures for NPPs and Security Officers
  - Affordable Nuclear-Powered Hydrogen Production Within
  - "Future proofing" the Fleet
  - Learning to Spot Trouble Before It Starts
  - Better Together: EMBALD-HUNTER
- Recent Technical Reports:**
  - Light Water Reactor Sustainability Program
  - Safety Analysis of Chromium-Coated Accident-Tolerant Fuels with Increased Enrichment and Extended Burnup for PWRs
  - March 2024
  - U.S. Nuclear Energy Research Initiative
- Footer:** Logos for INEL, Oak Ridge, Argonne, Pacific Northwest, Los Alamos, Sandia National Laboratories, and U.S. Department of Energy.

[LWRS Program Webpage Link](#)

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Revision 0

## Light Water Reactor Sustainability Program

# Overview and Accomplishments Report – 2023

April 2024

U.S. Department of Energy  
Office of Nuclear Energy

[Overview and Accomplishments Report - 2023 Link](#)

# Summary

**Collaborations and technical exchange with stakeholders facilitate progress in areas of vital common interest**

- Materials, Modernization, Risk-Informed Research, Diversification of Products, Physical Security

**Need for clean and reliable energy from nuclear power underscore the need to address existential challenges facing the existing fleet**

- LWRS research addresses highest priority issues for long term operation and growth of nuclear energy

**Projects follow timelines to impact economic competitiveness and long-term operation**

- **Address** critical needs in aging and obsolescence
- **Enable** diversification of revenue and products beyond electricity
- **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

*[lwrs.inl.gov](http://lwrs.inl.gov)*