



ADVANCED REACTOR SAFEGUARDS

# Enhanced Delay Technologies



PRESENTED BY  
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*Sandia National Laboratories is a multimission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525*



# Overview

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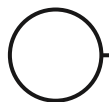
- Enhanced Delay Technologies is a new project starting in FY24
  - Project consists of vendor engagement with Kairos Power to better understand the access delay needs of advanced reactors and to develop general guidance on current and emerging access delay technologies for use across industry
  - Focus on identifying ways to reduce the overall cost of the physical security system without degrading overall system effectiveness
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# Project Execution

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- Engage with a vendor partner to better understand the challenges and needs
- Work with vendor partner to identify access delay technologies and provide subject matter input on how these technologies could be integrated into ARs to meet the security needs
- Identify information and technologies that would be beneficial to the wider AR community and provide guidance documentation on access delay technologies and how to integrate them into ARs using security by design principles



# Industry Impact

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- Physical security systems are a significant cost for nuclear reactors
  - Security by design principles can help to reduce the cost and increase overall physical protection system performance
  - Early engagement with vendors and regulators will aid in understanding the security needs of advanced reactors
  - Providing guidance will aid advanced reactor vendors in identifying and implementing access delay technologies to meet the security needs of new reactor designs
- Lessons learned from this initial engagement may identify opportunities for future R&D efforts on delay technologies, provide valuable feedback for a wide range of stakeholders in the AR community, and could help inform decisions around regulations moving forward

