

# MOVING AT THE PACE OF CHANGE

## ACHIEVING REGULATORY READINESS AS A MODERN, RISK-INFORMED REGULATOR

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# | NRC AT A GLANCE



The NRC licenses and regulates civilian use of radioactive materials to:

- Protect public health and safety
- Promote common defense and security
- Protect the environment

- 5-member Commission
- Headquarters (MD)
- 4 regional offices (PA, GA, IL, TX)
- Resident inspector offices
- Technical training center (TN)
- FY22 budget request
  - \$887.7 M including 2,879 FTE





## ► Nuclear Reactors in the USA

- 93 commercial nuclear power plants, which generate about 20% of our nation's electrical use
- Average age is ~ 38 years old
- Oldest operating plant
  - Nine Mile Point unit 1, NY (1969)
- Newest operating plant
  - Watts Bar unit 2, TN (2016)
- Two AP1000 under construction at Vogtle 3 & 4, GA
- 31 research and test reactors

**The NRC's goal is  
to be a modern,  
risk-informed  
regulator**

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The NRC is strategically transforming and modernizing to prepare for safe deployment of

# ADVANCED REACTORS

Stakeholder  
Engagement



Transforming  
Our Workforce



Strategic  
Policymaking



Modernizing  
Our Tools



Supporting  
Innovation

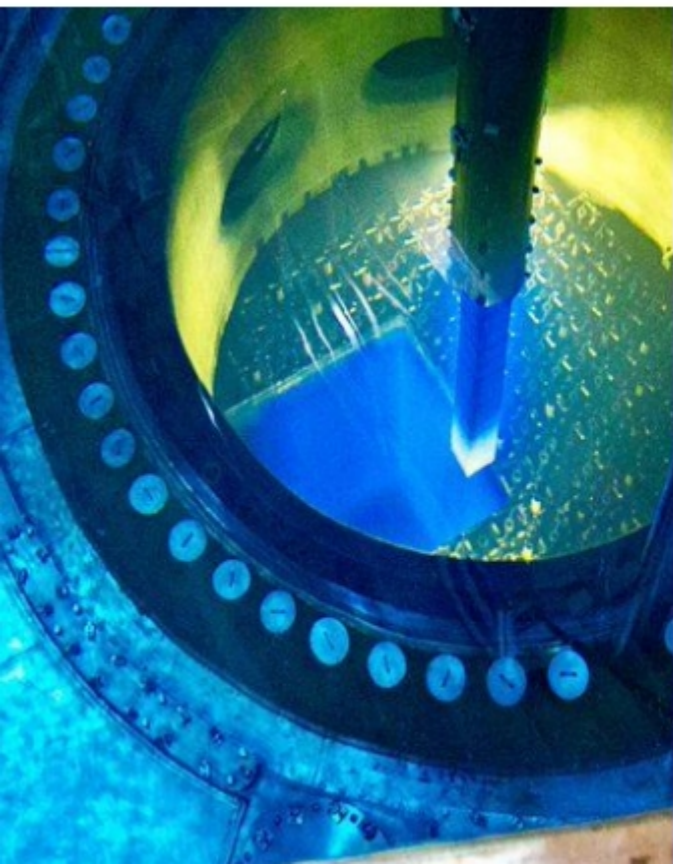


Flexible  
Review Strategies

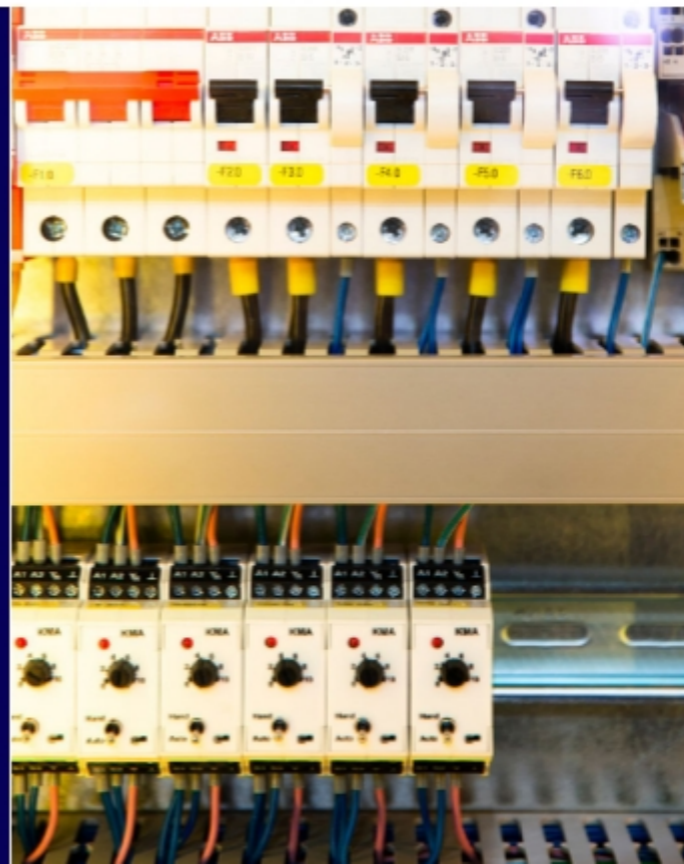




# MODERNIZING OUR REGULATORY INFRASTRUCTURE TO BETTER ENABLE NEW TECHNOLOGIES



ACCIDENT  
TOLERANT FUELS



DIGITAL  
INSTRUMENTATION  
AND CONTROLS

# Data Science and Artificial Intelligence

The nuclear industry is investigating and using artificial intelligence applications

The NRC recognizes a need to use data analytics and artificial intelligence for regulatory decisionmaking

The NRC must be prepared to understand and evaluate these technologies

**DATA SCIENCE AND ARTIFICIAL INTELLIGENCE  
REGULATORY APPLICATIONS WORKSHOPS**

Virtual - Microsoft Teams Meeting

Website: <https://www.nrc.gov/public-involve/conferences.html>

NRCAIWorkshop@nrc.gov



<https://www.nrc.gov/public-involve/conference-symposia/data-science-ai-reg-workshops.html>

# Developing Our 21st Century Workforce

In executing our mission, our people remain our most important asset



**Culture  
Initiatives**



**Diversity and  
Inclusion**



**Professional  
Development**



**Knowledge  
Management**

# Strengthening Readiness through Research

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Reference Plant Models  
Code Development  
Technical Basis for  
Consensus Standards

# Collaborating Internationally to Enhance Licensing the Reactors of the Future

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US - Canada MOC  
IAEA - SMR Regulators Forum  
NEA - Working Group on the  
Safety of Advanced Reactors



## ► Closing Remarks

- Continued safety and security in the nuclear industry is paramount
- Embrace new and innovative ways to better meet our mission
- Strong partnerships with domestic and international counterparts