

Public Outreach Meeting on TVA's Construction Permit Application for the Clinch River Nuclear Site

U.S. Nuclear Regulatory Commission

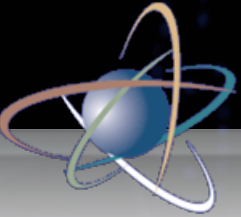
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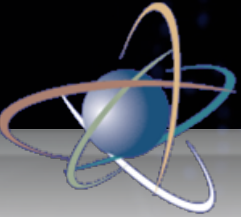
May 6, 2025

Purposes of this Meeting



- Explain the NRC and its regulatory role and mission
- Explain how we review safety and environmental topics for a construction permit
- List your opportunities to give input and participate in the permitting process
- Answer your questions
- Share NRC contact information with you

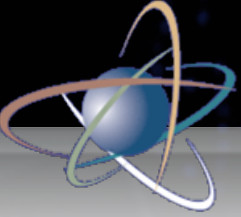
NRC Mission Statement



The NRC protects public health and safety and advances the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment.

www.nrc.gov/about-nrc.html

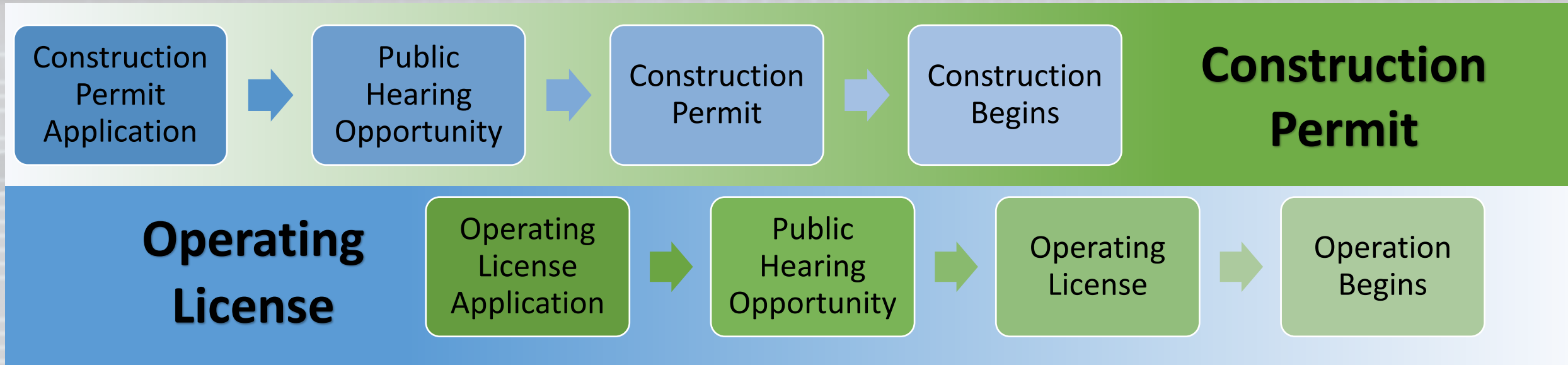
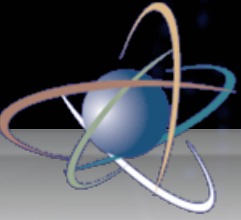
Code of Federal Regulations

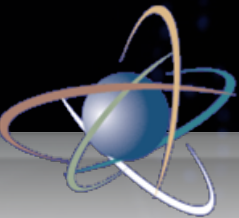


- NRC's regulations (or rules) are contained in Title 10 of the *Code of Federal Regulations*, Parts 1 through 199
- Regulations govern:
 - Transporting and storing nuclear materials
 - Civilian use of radioactive materials, such as for nuclear power plants, research and test reactors, uranium recovery facilities, fuel cycle facilities, waste repositories, and for medical, industrial, and academic purposes



10 CFR Part 50: Two-Step Licensing Process





Principal Legislation & Regulations Driving Timely Decisions and Outcomes

Environmental Review

Environmental Impact Statement

- National Environmental Policy Act (1969)
- Impacts **ON** the environment **FROM** licensed activities
- 10 CFR Part 51
- Impact level
- Disclosure document

Safety Review

Safety Evaluation

- Atomic Energy Act (1954)
- Energy Reorganization Act (1974)
- Impacts **ON** the facility **FROM** the environment
- 10 CFR Parts 20, 40, 50, 52, 70
- Risk informed
- Reasonable assurance of adequate protection

Safety Review – Fundamental Functions

Reactivity and power control

Fuel

Reactivity control systems



Radionuclide retention

Containing radioactive material within the facility

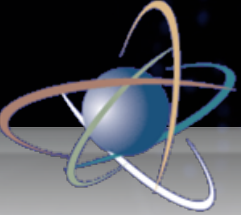
Heat removal

Reactor coolant system

Backup cooling systems

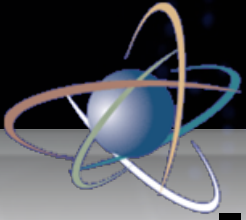


Safety Review – Key Topics



- External hazards (nearby facilities, hydrology, seismology, etc.) Effects **FROM** the environment (extreme weather, quakes, nearby facilities) **ON** the plant
- Reactor fuel
- Controlling and safely halting the core's chain reaction
- Safely cooling the core during operation and during shut down periods
- Instrumentation and control
- Radiation protection for both workers and the public
- Accident analyses
- Operational programs (emergency plan, security, operator training, etc.)

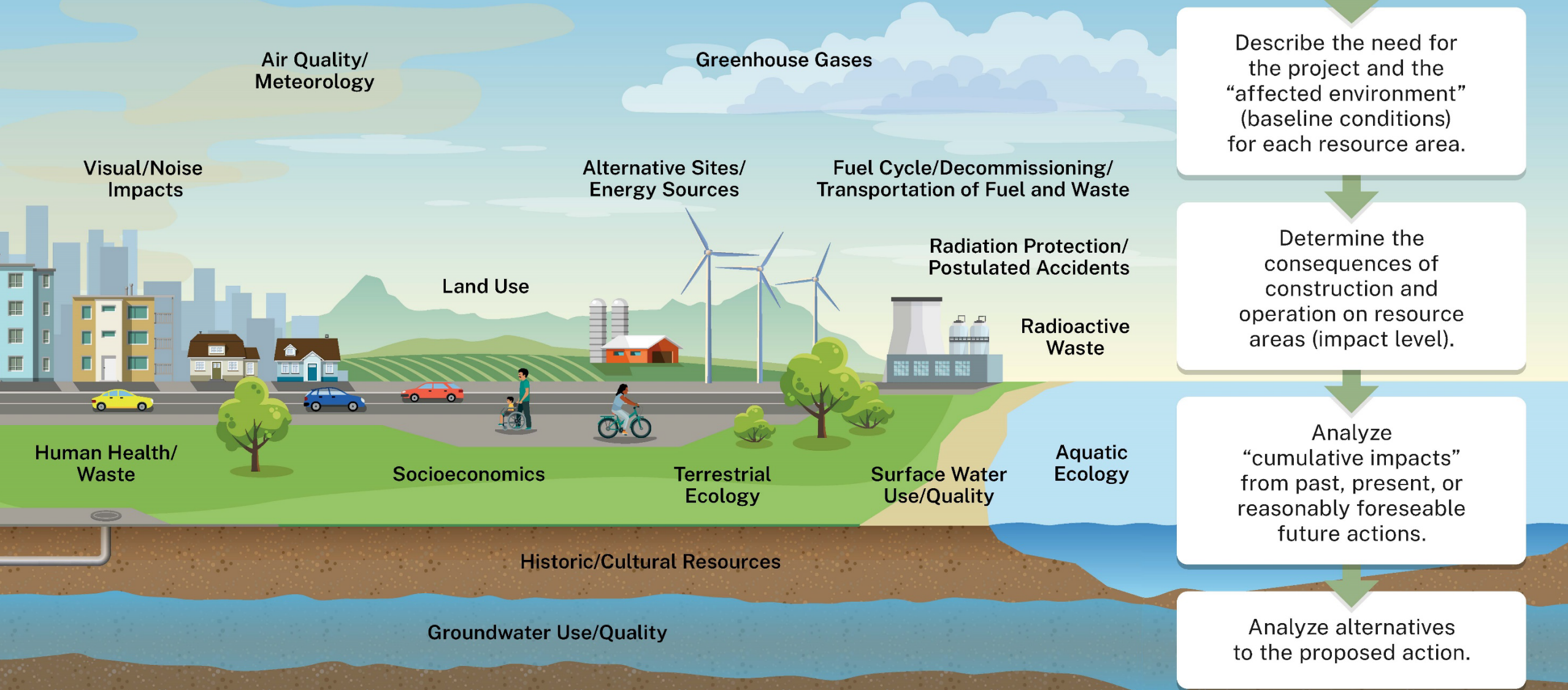
Environmental Review – Regulations



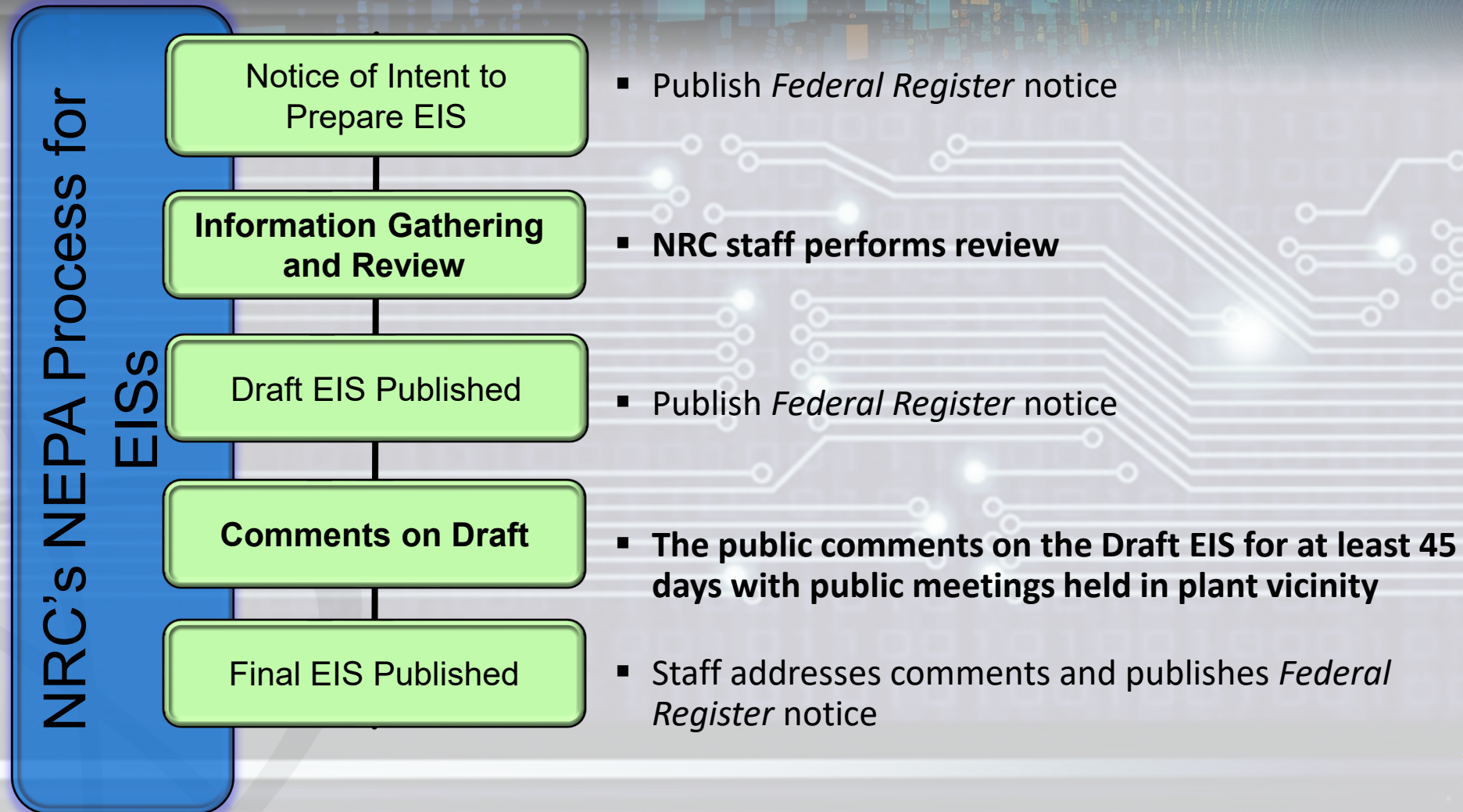
- National Environmental Policy Act (NEPA)(1969)
 - The range of actions covered by NEPA is broad and includes making decisions on permit applications
 - 10 CFR Part 51 – NRC environmental protection regulations for domestic licensing and related regulatory functions
 - The NRC NEPA document addresses impacts **on** the environment **from** the facility and informs the NRC licensing decision
- National Historic Preservation Act (NHPA), Endangered Species Act (ESA), others
- For a power reactor an Environmental Impact Statement (EIS) is required – *Federal Register* Notice

Typical Resource Areas Analyzed in NRC NEPA Reviews

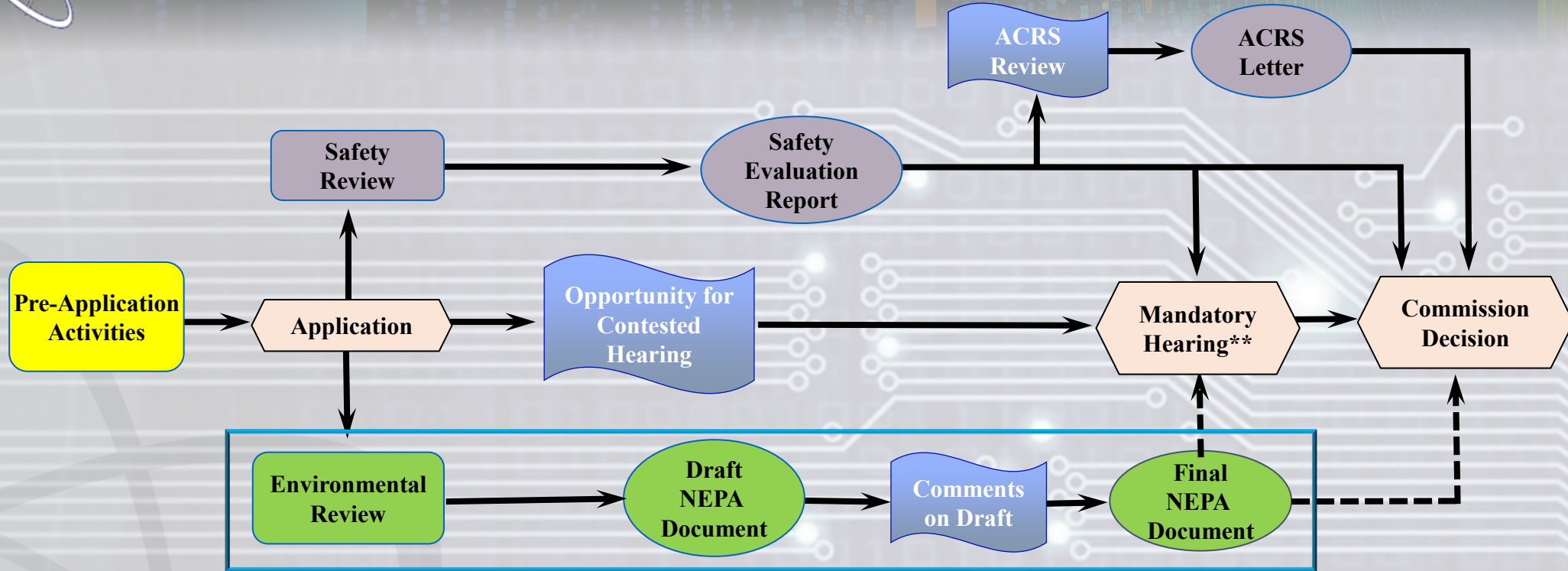
NRC NEPA REVIEW PROCESS



Environmental Review Process



Licensing is a Multi-Step Process, with Opportunities for Public Engagement



Consultations

Public
Participation

ACRS: Advisory Committee on Reactor Safeguards

NEPA: National Environmental Policy Act

*Required for early site permits, construction permits, or combined licenses

NRC Public Participation and Interaction

Public Meetings

- Open
- Closed



General Inquiries

- Phone
- Mail
- Email
- In-person



Information Meetings

- Scoping
- Preliminary
- Counterpart
- Information Exchanges



Education and Business Outreach

- Minorities Groups
- Small Businesses
- Vendors and Contracts
- Recruitment



Media Outreach

- Press Conferences
- Press Releases
- Editorial Boards
- Interviews



Public Comments

- Regulations.gov
- Verbally (at Public Meetings)
- Mail
- Email
- Fax



Resident Inspectors in the Community



10 CFR 2.206 Petition

- Electronic or Hard Copy



Website

- www.nrc.gov



Adjudicatory Hearings



Advisory Committee Meetings



Public Document Room

- Phone
- Email
- In-person



Conferences

- International
- Trade
- Industry



Emergency Preparedness

- Federal
- State
- Local



Social Media

- Blog
- Twitter
- YouTube
- Flickr
- Facebook



Visitors to the Agency



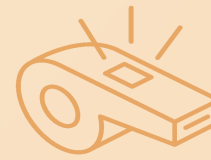
Open Houses



Congressional Hearings



Allegations



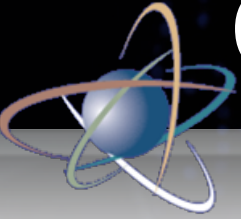
Petitions for Rulemaking



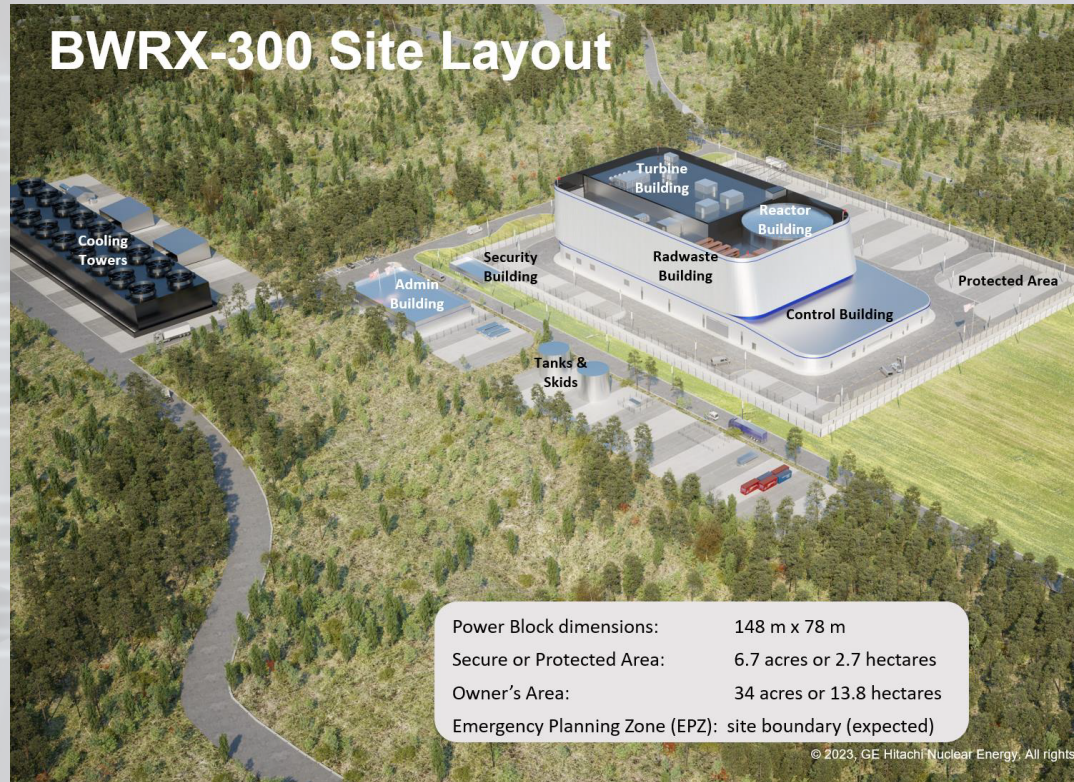
Federal Register Notices



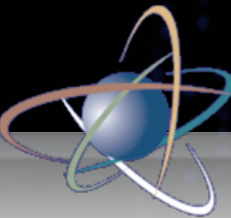
Clinch River CP Proposed Technology: GEH BWRX-300 Reactor



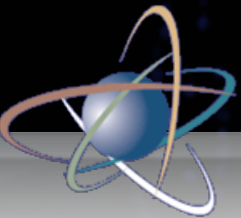
BWRX-300 Site Layout



- GEH BWRX-300 is considered a small modular boiling water reactor (BWR)
- The design would generate about 300 megawatts of electricity
- TVA's construction permit application is based on the GEH BWRX-300 design



Thank You
Questions?



Contact Information

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