



NRC/FERC/NERC Interactions, Current Fleet of Operating Reactors, License Renewal, Decommissioning, New Reactors

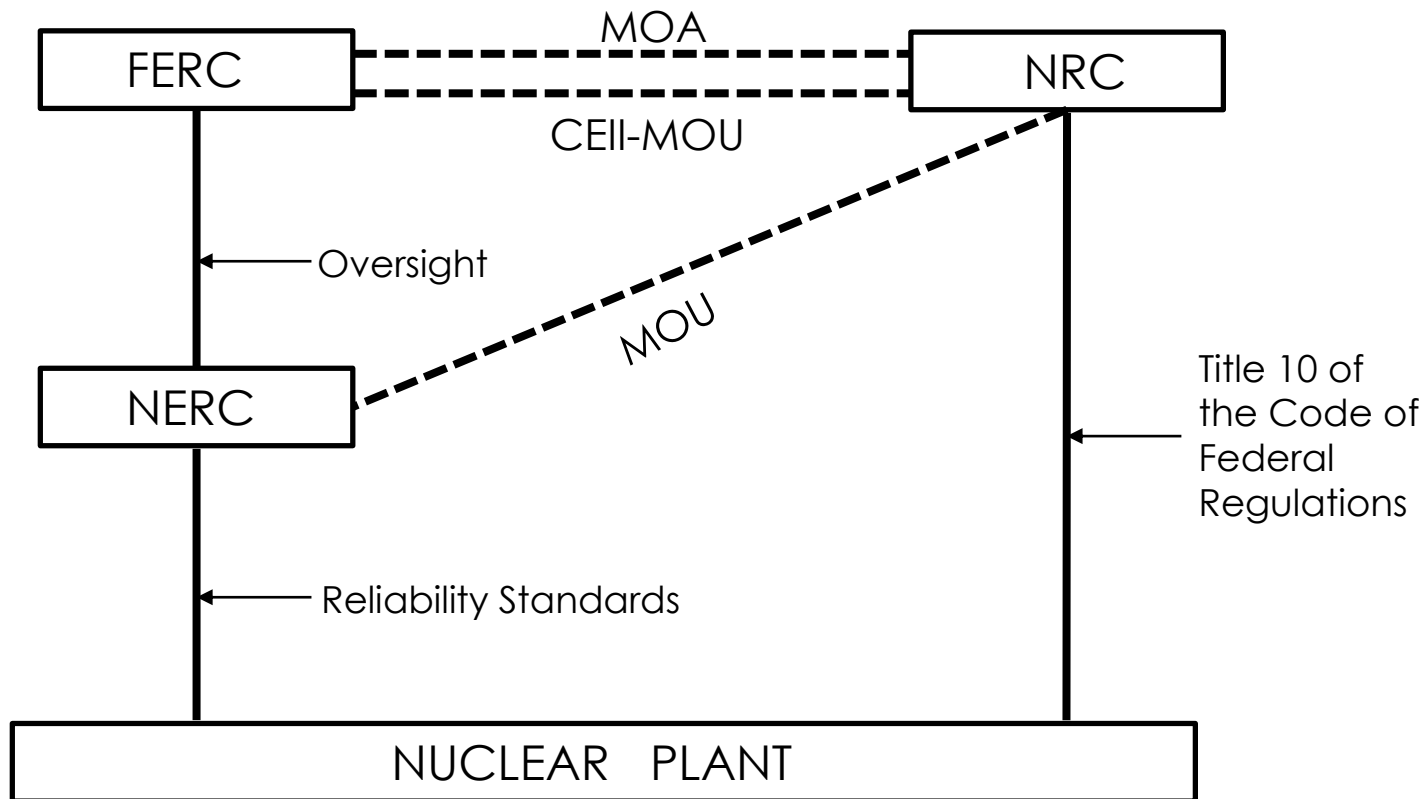
NRC/FERC Joint Commission Meeting
September 25, 2019



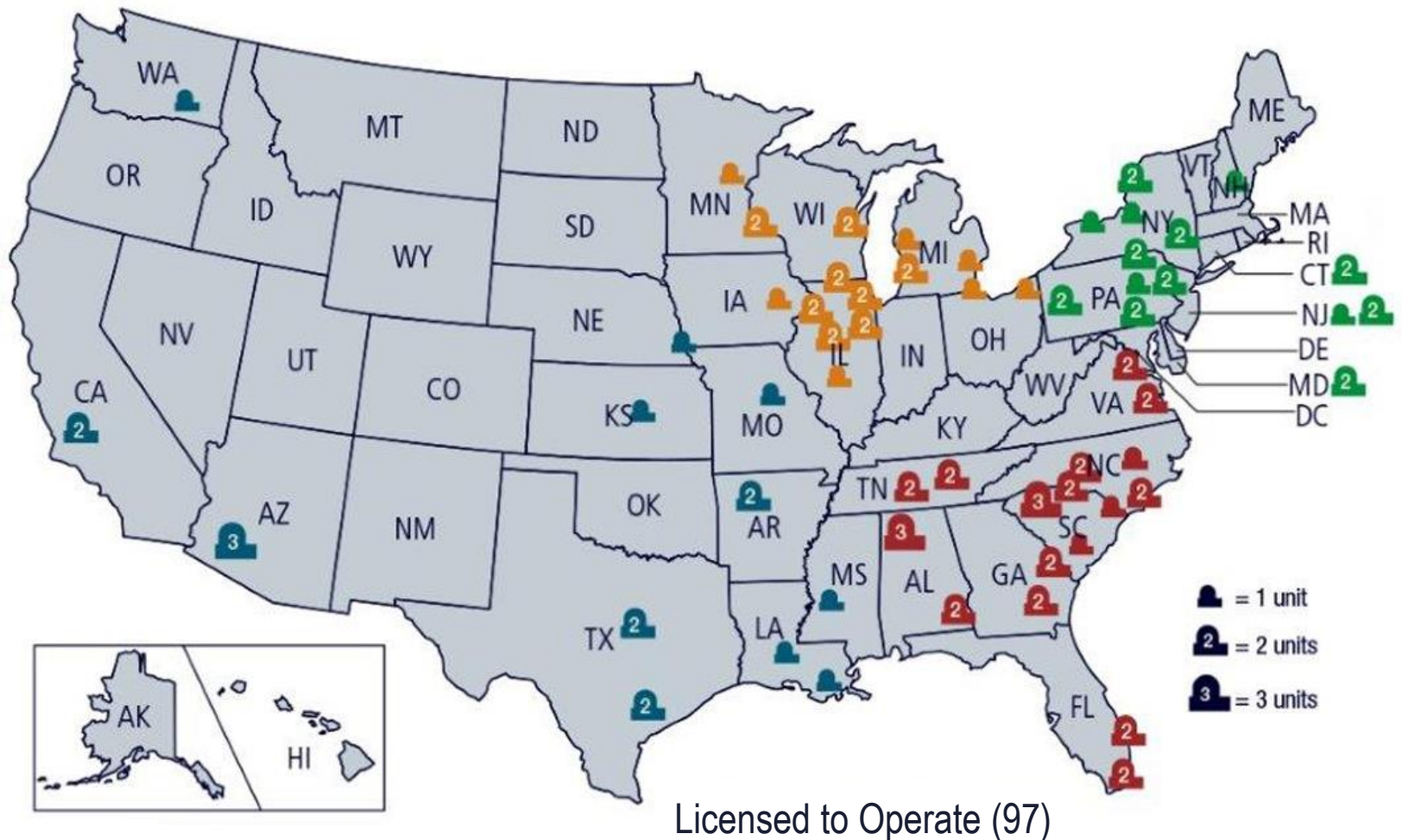
Agenda

- Eric Benner, Acting Deputy Director for Reactor Safety Programs, NRR
- Meena Khanna, Acting Deputy Director, Division of Materials and License Renewal, NRR
- Anna Bradford, Deputy Director, Division of Licensing, Siting and Environmental Analysis, NRO

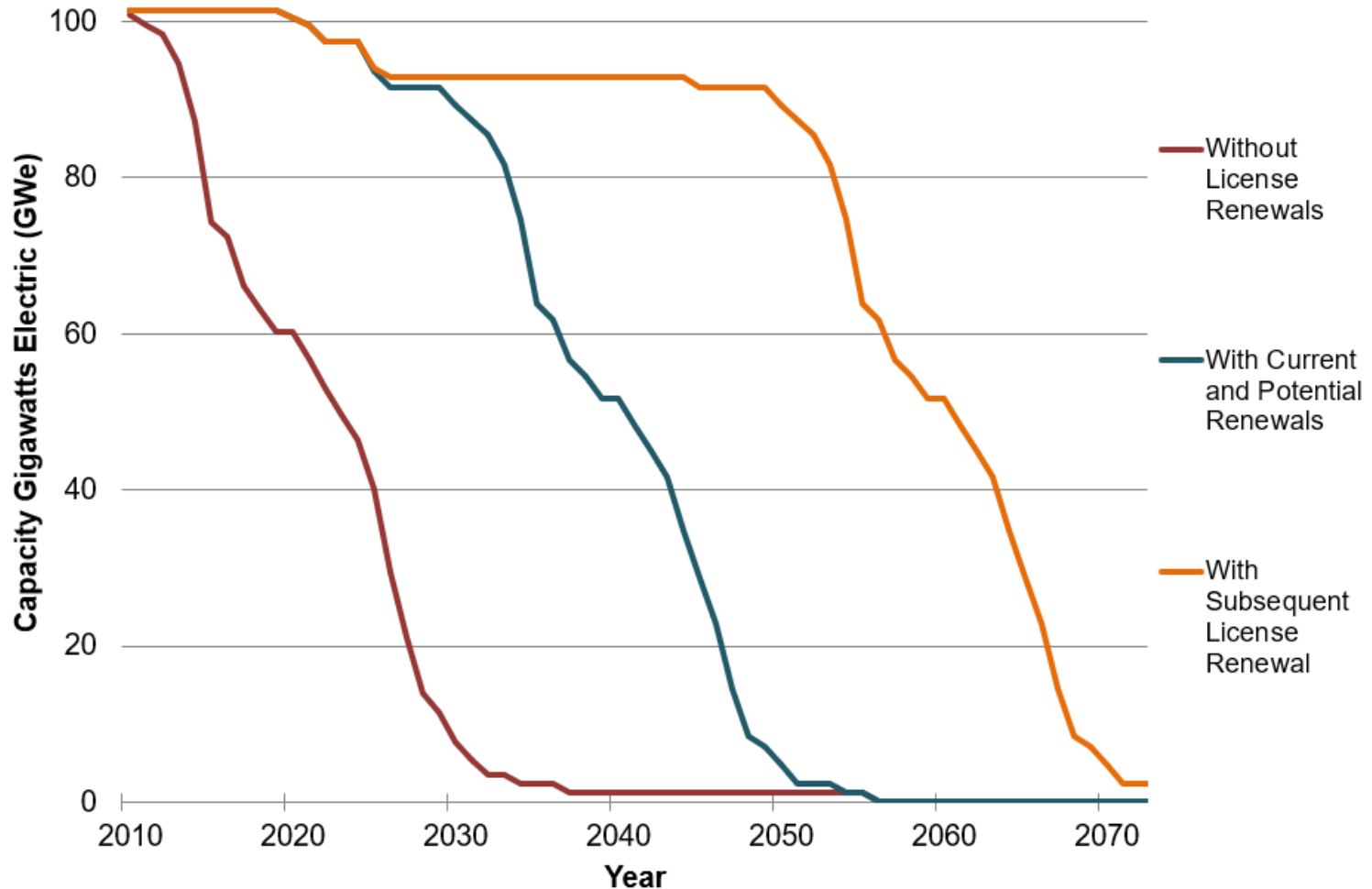
Nuclear Safety & Security Enhanced by Interagency Agreements and Interactions



Nuclear Power is a Significant Portion of the U.S. Electric Generation



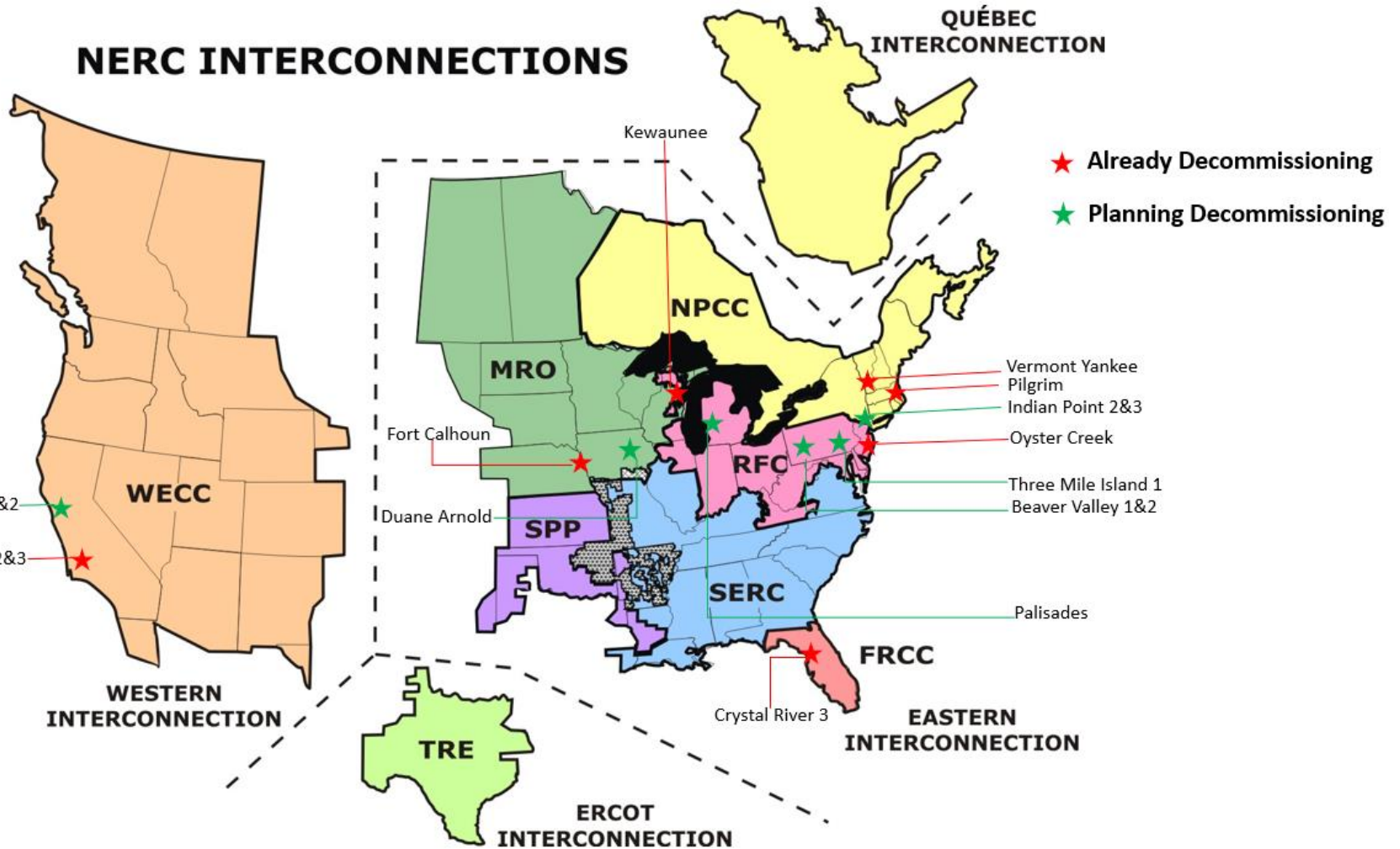
Projected Electric Capacity Dependent on License Renewals



Subsequent License Renewal (SLR) Moving Forward

- Issued SLR guidance in July 2017 in anticipation of applications
- Reviewing 3 applications
- Anticipating 1 application in 2020

Electric Capacity Decreased by Decommissioning Power Reactors



“NERC Interconnections.” NERC. Web. 22 May 2018. <<https://www.nerc.com>>.

Safety Ensured Prior to and During Decommissioning Activities

- NRC continues to ensure safety during the entire decommissioning process
 - Timely reviews
 - Draft proposed rule
- Lessons learned are being applied to current reviews and incorporated into the decommissioning rulemaking.

New Reactor Licensing in the U.S.

- NuScale Phases 2 and 3 milestone completed in July 2019
- TVA Early Site Permit application Commission hearing completed
- UAMPS Combined License Application plans to reference the NuScale design

New Reactor Licensing in the U.S., cont'd

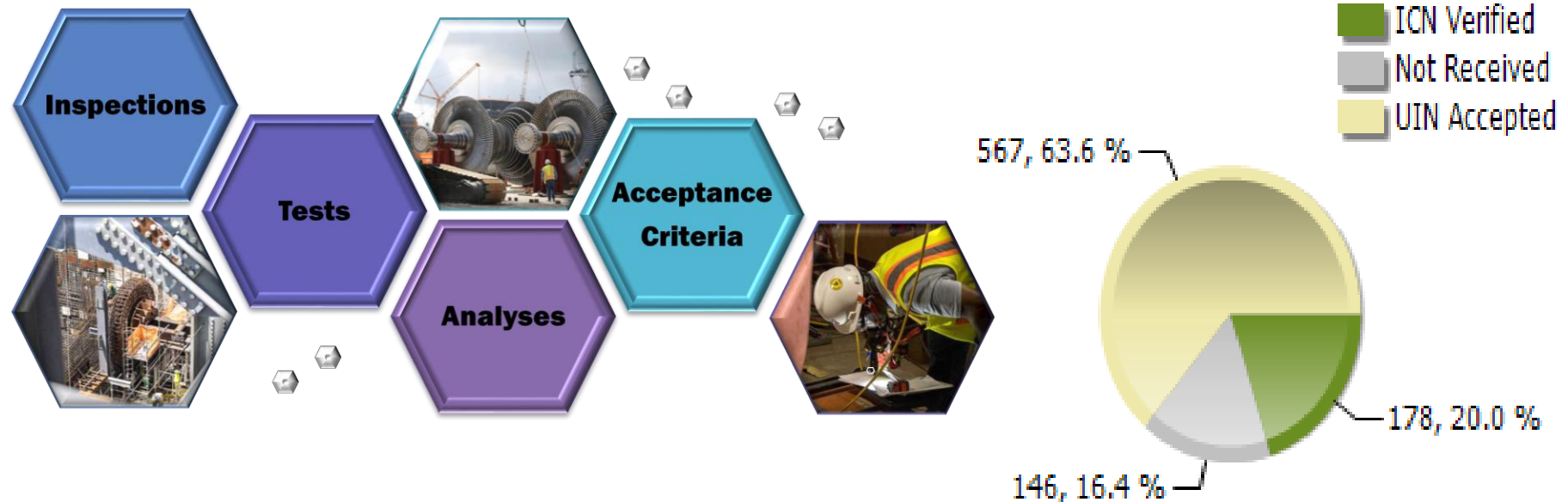
- GE-Hitachi pre-application interactions anticipated for its BWRX-300 design
- Bellefonte construction permit license transfer request

Preparing for Vogtle 3 & 4 Operation

- Scheduled Fuel Load Dates
 - Unit 3: November 2020
 - Unit 4: November 2021
- Commercial operation anticipated 6 months after fuel load dates
- NRC prepared to support timely licensing and oversight activities

NRC's Oversight of Vogtle Construction

- Verified about 20% of all ITAAC for both units (ITAAC Closure Notifications: ICNs)
- Accepted “plans” for remaining 64% (Uncompleted ITAAC Notifications: UINs)

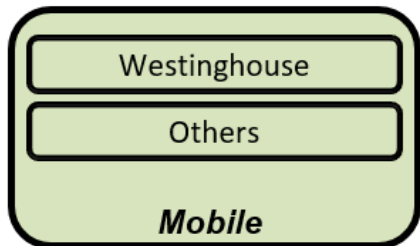
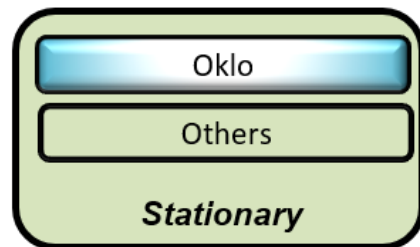


Assuring Readiness for Advanced Reactors

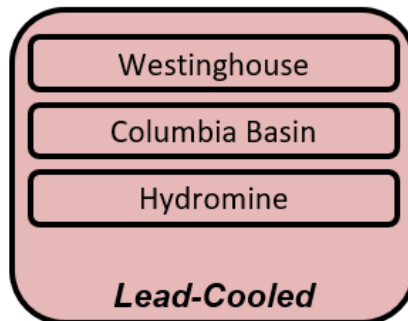
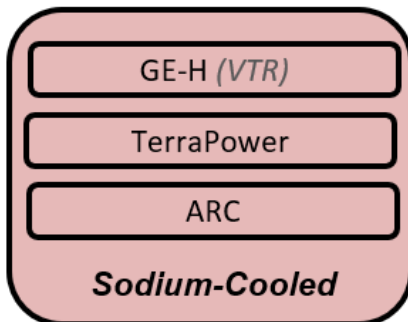
- Risk-Informed Performance-Based Licensing Approaches
 - Draft Regulatory Guide (DG) 1353
- Technology Inclusive Policy Issues
 - Functional Containment
 - Security
 - Emergency Preparedness
- Nuclear Energy Innovation and Modernization Act (NEIMA)

Advanced Reactor Landscape

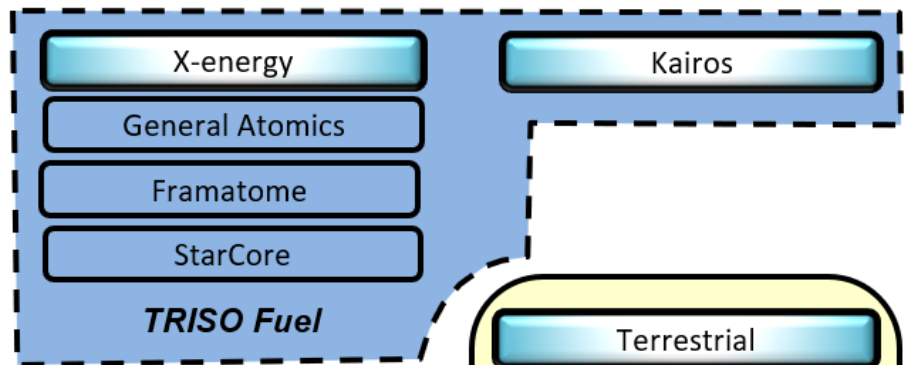
Micro Reactors



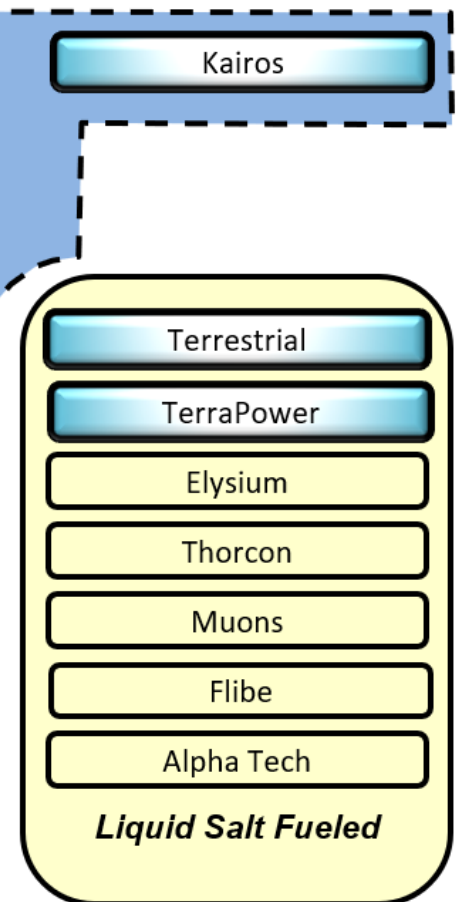
Liquid Metal Cooled Fast Reactors (LMFR)



High-Temperature Gas-Cooled Reactors (HTGR)



Molten Salt Reactors (MSR)



Acronyms

- CEII – Critical Energy/Electric Infrastructure Information
- ESP – Early Site Permit
- FERC – Federal Energy Regulatory Commission
- IAP – Implementation Action Plans
- ITAAC – Inspections, Tests, Analyses, and Acceptance Criteria
- MOA – Memorandum of Agreement
- MOU – Memorandum of Understanding
- MWe – Megawatt electric

Acronyms

- NERC – North American Electric Reliability Corporation
- NRR – Office of Nuclear Reactor Regulation
- NRO – Office of New Reactors
- NPP – Nuclear Power Plant
- SLR – Subsequent License Renewal
- SMR – Small Modular Reactor
- TVA – Tennessee Valley Authority
- UAMPS – Utah Associated Municipal Power Systems