



Significant Events Report for the International Nuclear Regulators Association

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Topics to be discussed

- Advanced Non-Light Water Reactors
- Life Extension
- Decommissioning
- Cybersecurity

Advanced Non-light Water Reactors

- Significant US interest in advanced non-light water reactors
- Government and industry activities ongoing and increasing
- Many new vendors with a wide range of reactor designs and varying degrees of design development

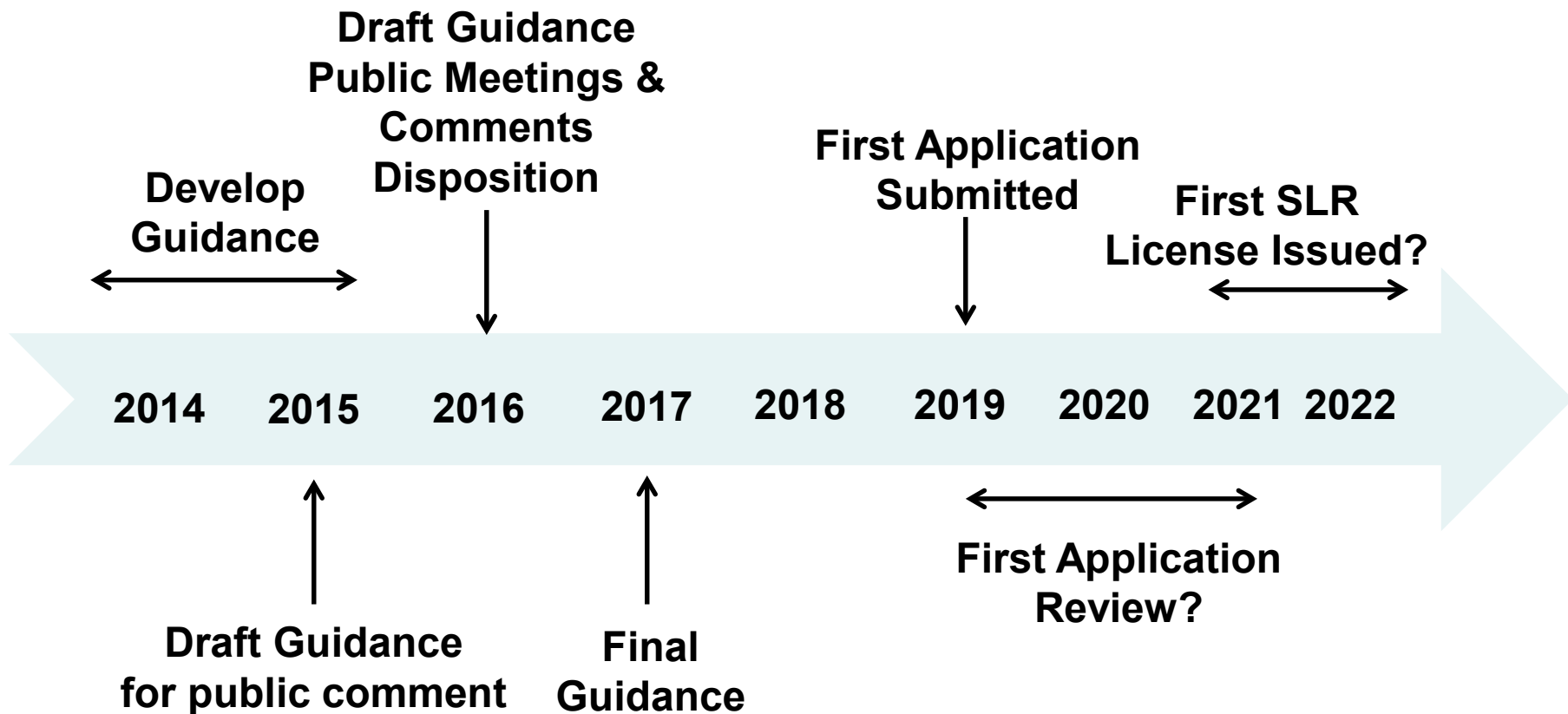
Advanced Non-light Water Reactors

- NRC – ensures safety through licensing and regulatory oversight
- Department of Energy – promotes nuclear energy and development of new reactor designs
- International efforts

Life Extension

- **Status of license renewal activities:**
 - 83 units have renewed licenses
 - 12 units currently under review
 - 5 upcoming units between 2017 and 2022
- **Age of current plants:**
 - By the end of 2016, 45 units will have more than 40 years of operation
 - The oldest operating plants will reach the end of 60 years in 2029

Subsequent License Renewal



Recent and Planned Plant Shutdowns

- Five recent shutdowns
- Three future planned shutdowns
 - Potential exists for additional shutdowns
- Factors affecting licensees' decisions:
 - Long-term availability of less expensive power
 - Increasing plant modification, maintenance, and repair costs
- Requests for license amendments and regulatory exemptions

Power Reactor Decommissioning Rulemaking

- Improve efficiency of decommissioning transition process
- Support the principles of good regulation including openness, clarity, and reliability
- Advance Notice of Proposed Rulemaking published November 19, 2015
- Regulatory basis under development

NRC Cyber Security History

- **2002-2003**; NRC included the first cyber requirements in Physical Security and Design Basis Threat Orders
- **2005**; NRC supported industry voluntary cyber program (NEI 04-04)
- **2009**; 10 CFR 73.54, Cyber Security Rule
- **2012**; Implementation/Oversight of Interim Cyber Security measures
- **2015** Endorsed NEI 13-10, Rev. 4, Cyber Security Control Assessments
 - Graded Consequence Based Approach

Cyber Security Roadmap

- SECY 12-088, Cyber Security Roadmap Paper, June 25, 2012
- Outlines the approach for evaluating the need for cyber security requirements at four additional categories of the NRC licensees and facilities:
 - Power Reactors
 - Fuel cycle facilities
 - Non-power reactors
 - Independent Spent Fuel Storage Installations
 - Byproduct materials licensees
- Our approach to evaluating the cyber threat and implementing requirements provides protection and flexibility to respond to evolving threats