



Advanced Reactors Licensing Readiness Activities

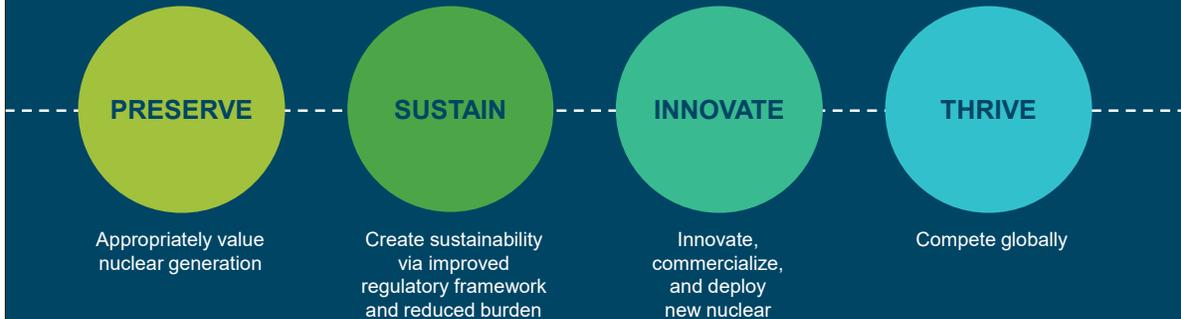
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NATIONAL NUCLEAR ENERGY STRATEGY

CREATE THE NUCLEAR IMPERATIVE



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Ensuring the Future of U.S. Nuclear Energy

*Creating a Streamlined and Predictable Licensing Pathway
to Deployment*



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- **A Modernized NRC licensing process that:**
 - Facilitates efficient and timely reviews (safety-focused and predictable);
 - Enables development, licensing and deployment of more innovative, cost-competitive and safer nuclear reactor technologies;
 - Identifies a variety of licensing pathways for design approvals and achieve project milestones; and
 - Results in a regulatory framework that recognize the enhanced safety and security of advanced reactor designs.

Creating a Streamlined and Predictable Licensing Pathway to Deployment



Reversing a Trend of Increasing Regulatory Costs and Unnecessarily Long Reviews

- NRC accepts level of detail commensurate with safety of design in licensing basis
 - Safety focused reviews (use available risk insights to inform reviews)
 - More disciplined and closely linked to “reasonable assurance” determination
 - More NRC management involvement in decisions
 - NEI White paper: An Evaluation of New Reactor Regulatory Reviews - *Do NRC reviews of new designs appropriately consider their enhanced safety and reduced risk?*

Aligning the regulatory framework for advanced reactors with their inherent enhanced safety and simplified design bases

- *Establish emergency planning regulations applicable to advanced reactors*
- *Establish security regulations applicable to advanced reactors*
- *Enable safety-focused licensing of advanced reactors through use of NEI guidance being developed from the Licensing Modernization Project white papers to be endorsed by NRC*

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Defining licensing options clearly, including options for staged application and approval

- Designers would benefit from a clearly defined, flexible, staged process for license application approval.
 - Provides a mechanism for licensing one portion of the design at a time
 - Reduces licensing risk incrementally and enables developers to win customer support
- Options exist today
 - Need to be further developed before they can be used with confidence that they are viable, and are unlikely to lead to significant disputes and costly delays

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Flexibility to make changes during construction is essential to deployment of new technologies and “first of a kind” designs

- Recent construction experiences demonstrate the need for greater flexibility
 - NEI White paper: “Assessment of Licensing Impacts on Construction – Experience with Making Changes During Construction under Part 52”
 - Reduce potential for delay if the license application were less detailed and more safety focused on performance outcomes
- Designation of Tier 1 information based on “First Principles”
- Eliminate Tier 2* and reduce the volume of information in licensing basis

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QUESTIONS?

