

UPDATES

# Congress Passes ADVANCE Act to Facilitate U.S. Development of Advanced Nuclear Reactors

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June 26, 2024

## Summary

On June 18, 2024, the U.S. Senate passed the [Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy \(ADVANCE\) Act](#) to accelerate the deployment of nuclear energy capacity, including by accelerating the licensing and creating new incentives for advanced nuclear reactor technologies, among them small modular reactors. The Senate introduced the ADVANCE Act in March 2023, and the House of Representatives passed the Fire Grants and Safety Act, which contains the ADVANCE Act, on May 8, 2024. Now that both houses have passed the Act, it will go to President Joe Biden for signature. Full text of the ADVANCE Act as passed by the Senate can be found [here](#) on page 4.

The ADVANCE Act enjoys broad bipartisan support, having passed the House of Representatives by a vote of 393–13 and the Senate by a vote of 88–2. If the ADVANCE Act is signed into law, it will accelerate U.S. efforts to license and operate advanced reactors.

## Provisions in the ADVANCE Act

The ADVANCE Act is divided into six titles as summarized below:

- **Title I – American Nuclear Leadership**

1. Empowers the Nuclear Regulatory Commission (NRC) to expand efforts to collaborate with international stakeholders on advanced nuclear reactor regulation, development, and export activities while requiring NRC to notify Congress if it issues an export license for special nuclear material or any associated reactors or components to certain countries.
2. Directs the Department of Energy (DOE) to improve its process for approving the export of American nuclear technologies to international markets while maintaining safeguards against nuclear proliferation under 10 C.F.R. Part 810.

- **Title II – Developing and Deploying New Nuclear Technologies**

1. Reduces regulatory costs for companies seeking to license advanced nuclear reactor

technologies by removing expenses from the NRC fee base for advanced nuclear reactor applications.

2. Creates a prize to incentivize the successful deployment of next-generation reactor technologies, available for the first advanced reactor in any of five categories to be licensed by the NRC.
3. Requires the NRC to develop a pathway to enable the timely licensing of microreactors and nuclear facilities at brownfield and retired fossil-fuel energy generation sites.
4. Directs the NRC to establish an accelerated licensing review process to site and construct reactors at existing nuclear sites.
5. Differentiates fission and fusion regulations, updating the definition of “fusion machine” to note that it creates byproduct material and therefore distinguishing fusion machines from advanced nuclear reactors for licensing purposes.

- **Title III – Preserving Existing Nuclear Energy Generation**

1. Modernizes rules to reduce restrictions on international investment and issuing reactor licenses to certain foreign corporations and entities.

- **Title IV – Nuclear Fuel Cycle, Supply Chain, Infrastructure, and Workforce**

1. Directs the NRC to enhance its ability to qualify and license accident-tolerant fuels and advanced nuclear fuels that can increase safety and economic competitiveness for existing reactors and the next generation of advanced reactors.
2. Directs the NRC to evaluate advanced manufacturing techniques to reduce reactor construction time and cost.

- **Title V – Improving Commission Efficiency**

1. Provides flexibility for the NRC to better manage and invest its resources in activities that support NRC modernization efforts and address staffing issues, including additional hiring.
2. Requires the NRC to update its mission statement to include that the NRC’s nuclear licensing and regulation be efficient and not unnecessarily limit the benefits of nuclear energy technology to society.
3. Directs the NRC to establish a licensing structure to support an efficient, timely, and predictable regulatory review.
4. Directs the NRC to streamline the National Environmental Policy Act environmental review process.

All told, the ADVANCE Act shows a sincere appetite among U.S. policymakers to innovate regulation in an industry viewed as critical but somewhat stagnant of late. Passage of the act notwithstanding, the Biden administration has signaled its own support for advanced nuclear reactor technologies. For example, on June 17, 2024, the DOE [announced](#) plans to provide \$900 million in support for the initial U.S. deployment of Generation III+ small modular reactors, including support for two “first mover” teams of utility, reactor vendor, constructor, and end users or off-takers committed to deploying a first plant. In

addition, the NRC is working to propose a new, optional licensing pathway for advanced reactors in 10 C.F.R. Part 53 by the end of the year. While updated licensing regulations for advanced reactors has been under consideration for years, congressional actions to address statutory challenges and provide funding signal a real possibility for commercial licensing of advanced reactors in the United States.

## CONTACTS

If you have any questions regarding this Sidley Update, please contact the Sidley lawyer with whom you usually work, or

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