

The Fusion Energy Act would promote the development of fusion energy by codifying the Nuclear Regulatory Commission's (NRC) decision to establish a regulatory framework for fusion energy systems under its byproduct materials framework.

SUMMARY

The Fusion Energy Act will support the growth of a competitive commercial fusion energy industry by establishing an appropriate framework for regulating fusion technologies. To date, fusion energy is the subject of substantial private and public investment around the world due to its potential to supply significant amounts of clean energy. Providing regulatory certainty for private industry will allow them to continue progressing toward commercialization.

HISTORY:

Fusion energy has received renewed interest over the past decade, garnering almost \$6 billion in private investment. The NRC's decision to regulate fusion under its "byproduct material" framework is a significant milestone, and the Fusion Energy Act would codify this decision. The House version of the Fusion Energy Act, H.R.5244, was passed on February 29, 2024, as part of the Atomic Energy Advancement Act. The Senate version of the Fusion Energy Act, S.4151, was introduced on April 22, 2024, and passed on June 18, 2024 in the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy (ADVANCE) Act as part of the Fire Grants and Safety Act (S. 870).

SPECIFICS:

The Fusion Energy Act amends the Atomic Energy Act of 1954 and the Nuclear Energy Innovation and Modernization Act to codify the regulation of fusion machines under the byproduct materials framework located in 10 CFR Part 30.

- Amends the Atomic Energy Act of 1954 and the Nuclear Energy Innovation and Modernization Act to add a definition of fusion machines.
- Directs the NRC to complete a rulemaking by the end of 2027 to establish an optional technology-inclusive regulatory framework for fusion machine applicants
- Requires the NRC to complete a report on licensing mass-manufactured fusion machines, using the Federal Aviation Administration as a model.

ORIGINAL SPONSORS:

S.4151

Sen. John Cornyn (R-TX)
Sen. Cory Booker (D-NJ)
Sen. Todd Young (R-IN)
Sen. Patty Murray (D-WA)

H.R.5244

Rep. Donald Beyer (D-VA)
Rep. Chuck Fleischmann (R-TN)
Rep. Jay Obernolte (R-CA)

COSPONSORS:

H.R.5244

Rep. Byron Donalds (R-FL-19), Rep. Brandon Williams (R-NY-22), Rep. Dan Newhouse (R-WA-4), Rep. Mikie Sherrill (D-NJ-11), Rep. Sharice Davids (D-KS-3), Rep. Jake Auchincloss (D-MA-4)

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