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## The Fusion Energy Act of 2024

Fusion Energy – where atoms join together to create heavier ones and release energy – has the ***potential to produce abundant clean electricity*** without harmful side effects like carbon emissions or long-lived radioactive waste. As the U.S. seeks to decarbonize the grid by 2050, we must seek out opportunities to advance fusion commercialization.

The Fusion Energy Act bolsters the authority of the Nuclear Regulatory Commission, accelerating the adoption of commercial fusion facilities and continuing the track record of U.S. leadership in this crucial energy technology.

### What the bill would do:

- Streamline the implementation of commercial fusion by codifying the Nuclear Regulatory Commission's (NRC) unanimous, bipartisan vote to create a regulatory framework for fusion energy systems under NRC's byproduct materials process.
- Require the NRC to study and report to Congress within one year regarding licensing commercial fusion machines, including streamlining considerations.

### Why it's needed:

- **Global Competition:** The U.S. has long invested in fusion energy through the Department of Energy's National Laboratories. This support has enabled U.S. leadership in fusion, including through Lawrence Livermore's groundbreaking demonstration of fusion ignition in December 2022. With China spending over \$1.5 billion a year on fusion, the U.S. must act to streamline federal regulations to win the international race to commercial fusion.
- **Carbon Free Energy:** Fusion energy can be harnessed to produce incredible quantities of clean, reliable, carbon-free, and safe energy. According to the International Atomic Energy Agency, fusion could generate four times more energy per kilogram of fuel than fission reactions in nuclear power plants.
- **Regulatory Certainty:** Companies seeking to build out commercial facilities for advancing fusion technologies will be able to rely on a consistent regulatory framework designed to streamline construction efforts while also providing the best assurance of public safety and security. A stable regime of fusion regulations will instill confidence in the private sector of the long-term economic viability of fusion energy, encouraging greater investments and innovation.

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