

Questions and Answers for 2026 Regulatory Information Conference Session TH19:
Forward with Fusion – Deployment Through Collaboration

This document contains some of the questions that were submitted by attendees of the session 2026 RIC TH19 that could not be addressed by the panel due to time constraints. This is not a comprehensive list of all submissions received.

I noticed in the roadmap slide there is a "design license" for fusion machines. Why does the NRC feel that should be a requirement [E. Harvey]?

The NRC is exploring options for upfront safety reviews of fusion machine designs that could be leveraged across the National Materials Program to promote efficient licensing of mass-manufactured fusion machines. This potential review process is envisioned as an optional certification or registration pathway for entities pursuing fusion machine designs intended for duplication and deployment at multiple locations across NRC and Agreement State jurisdiction.

When you see local opposition to fusion, is it typically just because of confusion with fission or have you found other things driving the opposition [L. Perlas]?

It is typically the confusion between fission and fusion to include the level of radioactivity, emergency response plans, environmental safety, and waste management.

What are the benefits for Chesterfield County hosting the fusion facility? (Taxes, workforce?) [L. Perlas]

The benefits for Chesterfield County primarily center around workforce opportunities, influx of money into the local economy from this increased workforce, and additional tax dollars.

How does the plan for licensing differ for Magnetic Confinement Fusion and Inertial Confinement Fusion designs [E. Harvey]?

The NRC's proposed fusion rule and guidance is written to be technology inclusive and scalable to the radiological hazards associated with a given fusion machine, regardless of its approach to achieving fusion. Thus, the confinement method will not have an impact on the licensing pathway itself. However, variance in the radiological risk associated with various designs could drive differences in application review time.

How, if at all, will export controls under 10 CFR Part 110 be revised to account for fusion equipment and components [E. Harvey]?

The NRC's proposed fusion rule does not include any changes to export controls related to fusion machines because a comprehensive export control framework currently exists. This framework is consistent with international policy, obligations, and commitments, as well as U.S. law and regulations. If the United States, in conjunction with the international export control community, as well as the IAEA, determine that fusion machines may warrant additional export controls and safeguards, then the U.S. Government can evaluate and adjust its national framework at that time, including whether the NRC should exert export authority over fusion machines. Changes to Part 110 within the NRC's proposed fusion rule are limited to proposed updated definitions of "byproduct material" and "particle accelerator."

The urgency of our energy challenges demands licensing approaches that can be successful and enabling at scale. NRC's byproduct material framework has examples, like the Sealed Source and Device Registry, where one safety review supports efficient nationwide deployment while maintaining rigorous oversight. As fusion moves toward commercialization of standardized, mass-manufactured machines, what opportunities does the NRC see to apply similar models or concepts that reduce burden across the NMP and Agreement States through a single common safety finding [E. Harvey]?

In response to Section 205 of the ADVANCE Act, the NRC conducted a study of performance-based, risk-informed regulatory frameworks to gain insights that could be leveraged in the development of guidance or regulations to support efficient licensing of mass-manufactured fusion machines (See [Fusion and the ADVANCE Act](#)). As commercial fusion technology matures, the NRC will use the lessons learned from this study to explore options for regulatory pathways that could reduce regulatory burden for fusion machines designed for scaled deployment across NRC and Agreement State jurisdictions.

Do the regulations under development by NRC cover space applications [E. Harvey]?

The NRC does not have regulatory authority over the use of radioactive material for non-terrestrial space applications. Thus, the proposed NRC regulations for fusion machines would not apply to fusion technology used in space.