Senate Committee on Utilities
Hearing on SB171
Wednesday, February 12, 2025

Proponent Testimony for SB171

Kansas Department of Health and Environment

Jason Meinholdt, Radiation Control Program

Chairman Fagg and Honorable Members of the Senate Committee on Utilities,

Thank you for the opportunity to speak in favor of Senate Bill 171. SB 171 will allow the Kansas Department of Health and Environment to create a licensing structure and fees for the establishment of nuclear fusion systems in the state. This bill will allow the agency and the state of Kansas to be ready to better implement the necessary measures needed to allow these technologically advanced systems to be developed in our state. This future thinking measure will help us address the challenges other states have faced when it comes to creating licensing and regulations to oversee the establishment of these systems. Allow me to provide you with some context on what brings us to you with this bill today.

Kansas became an Agreement State with the U.S. Nuclear Regulatory Commission (NRC) effective January 1, 1965[1]. As such, Kansas accepted oversight and authority for regulation of certain radioactive materials. To carry out the responsibilities of the act, K.S.A. 48-1606 addresses the subject of collection of fees as follows: "(c)(7) The secretary may: fix, charge and collect fees for licenses and registration, and renewals thereof, issued under the nuclear energy development and radiation control act to cover all or any part of the cost of administering such act…".

Ongoing advancements in power generation technologies are rapidly evolving, with the industry nearing the realization of viable nuclear fusion systems. On April 14, 2023, the Nuclear Regulatory Commission (NRC) voted unanimously to regulate nuclear fusion systems under its existing byproduct materials regulations (10 C.F.R. Part 30), while introducing limited scope rulemaking[2]. Although the NRC maintains sole authority for the licensing and inspection of nuclear fission reactors (under 10 C.F.R. Part 50), this decision grants NRC Agreement States, such as Kansas, the authority to license nuclear fusion systems in accordance with State rules and regulations.

Despite the perception that nuclear fusion technology may still be distant, it has garnered significant attention in both the public and private sectors. According to the International Atomic Energy Agency (IAEA) Fusion Device Information System[3], the United States currently has 21 operating fusion systems, with an additional three under construction and 21 planned. Of these systems, 16 are publicly owned and 29 are privately operated.

At present, Kansas does not have a specific licensing fee category for nuclear fusion systems, which may involve highly complex license applications. Nuclear fusion systems vary significantly in size and technical scope, often requiring extensive staff time—potentially hundreds or thousands of hours—to process the licensing. Given these complexities, it is conceivable that the closest existing licensing category for nuclear fusion systems would be a particle accelerator license,

which carries an annual fee of $300. Another possible category might be a research and development broad-scope license, which is subject to a $5,900 annual fee. However, neither of these categories would fully account for the costs incurred by the agency when licensing such technologically advanced nuclear fusion systems.

It is important to note that the proposed fee structure represents a statutory maximum, not the final fee that will be assessed. The exact fee will be determined through future regulatory amendments. Rather than following the standard flat-fee approach applied to other licensing categories, the agency intends to implement an hourly rate model based on actual staff time devoted to the licensing process, up to the statutory maximum. This model will allow the agency to more fairly distribute costs, ensuring that smaller, less complex systems do not subsidize the cost of larger projects, while larger, more complex systems are not undercharged.

Additionally in this bill will allow some updates and changes in the enforcement actions for the agency and establish its ability to assess late fees for facilities that submit their licenses or registration that are not timely renewed. This is due to an observed increasing number of licensees and registrants failing to submit annual fees on time. Unlike other regulatory programs, failure to pay radioactive materials license fees or X-ray device registration fees cannot lead to immediate termination of licenses or registrations, as radioactive materials and radiation-producing devices must be properly transferred or disposed of prior to license termination. In state fiscal year 2024, nearly 10% of radioactive materials licensees and 20% of X-ray device registrants submitted their fees late, many of which necessitated enforcement actions. It is the agency's goal to avoid late fees entirely, saving valuable staff time and ensuring a more efficient regulatory process by adding this measure to encourage timely renewal.

Thank you for your time and consideration as we encourage the passage of SB 171.

Jason Meinholdt
Radiation Control Program Director
Kansas Department of Health and Environment

References:

1. *Kansas – Nuclear Regulatory Commission State Agreement*. https://www.nrc.gov/cdn/nmss/pdf/ksagreements.pdf
2. *Nuclear Regulatory Commission Fusion regulation press release*. https://www.nrc.gov/cdn/doc-collection-news/2023/23-029.pdf
3. *IAEA – Fusion Device Information System*. https://nucleus.iaea.org/sites/fusionportal/Pages/FusDIS.aspx