

Last Energy White Paper: Hermetically Sealed Containment

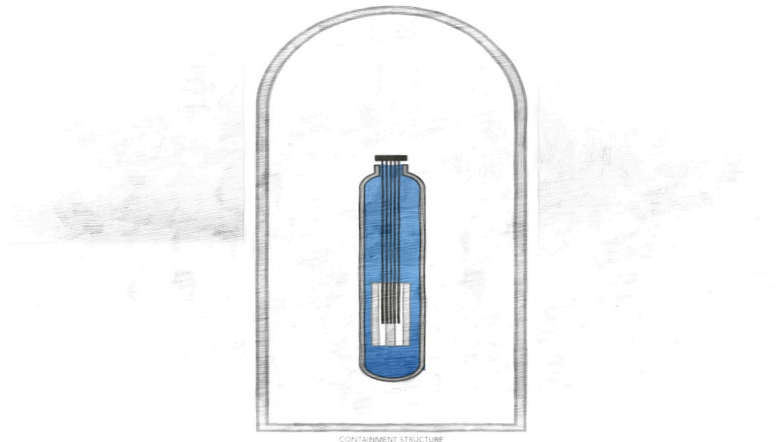
Introduction:

Last Energy, a US based Pressurized Water Reactor developer, would like to operate a pilot reactor on the path towards commercialization. The purpose of this document is to create an alignment on a specific safety premise, which will form the foundation of subsequent submissions. We are not requesting feedback on how this premise intersects with the totality of licensing requirements.

Description of System Attributes:

- A reactor will sit inside of a hermetically sealed containment structure, fully isolating radioactive material from the public and environment. There are no openings or pathways for materials to escape. There is no provision for access or maintenance to the interior of containment.
- The shielding will be sufficient such that any radiation generated internally, when measured externally, will be indistinguishable from background levels of radiation.
- Analysis will be provided that demonstrates such containment and shielding despite any challenge to its integrity, from all credible external or internal forces or events including but not limited to mechanical, chemical, thermal, seismic, and environmental stresses.
- Preservation of the containment's shielding and containment functionality will be pre-funded and maintained indefinitely.
- The containment structure will be situated on private property with no public access.

Illustrative Graphic:



Our Claim:

A system with these attributes will not affect the health and safety of the public.

Feedback Requested:

Does the NRC concur with this claim? If not, please list the remaining concerns. If so, as a next step, we'd like to mutually decide on the minimum set of analysis necessary to substantiate the attributes listed.