



April 13, 2022

Kenneth Erwin
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Nuclear Innovation Alliance Comments on the, “Notice of Intent To Conduct Scoping Process and Prepare Environmental Impact Statement; Kairos Energy, LLC, Kairos Test Reactor” [Docket ID NRC-2021-0193]

Dear U.S. Nuclear Regulatory Commission Staff:

The Nuclear Innovation Alliance (NIA) appreciates the opportunity to comment on the environmental scoping for the Kairos’ test reactor, Hermes, and to express our support for the reactor’s construction at the East Tennessee Technology Park Heritage Center site in Oak Ridge, TN. During its review process, NRC will be in a position to demonstrate flexibility and to set precedent in its assessment of the unique characteristics of this first-of-a-kind reactor technology and any potential environmental impacts. This experience will also generate lessons learned that will be applicable to future advanced reactor environmental reviews. The rapid scaling of innovative advanced reactor technologies is essential for deep decarbonization and climate change mitigation. The Hermes reactor is a 35 MWth test reactor that will inform the development of subsequent larger-scale Kairos commercial reactors. Insights and conclusions from the Hermes’ environmental impact statement will have relevance to Kairos’ subsequent reactor license applications. Efficient environmental reviews are a critical step in the licensing process to swiftly confront climate change, demonstrate first-of-a-kind technology, and result in more equitable environmental outcomes.

During the Hermes’ environmental scoping, NIA recommends utilizing performance-based principles so the scope of the review is commensurate with the reasonably conceivable hazards, environmental impacts, and source term. NIA encourages NRC staff to limit the scope of its review to topics relevant to the Hermes’ licensing decision and to scale the review as necessary, based on the documented findings. In NRC’s assessment of risks, there should also be an emphasis on the positive environmental impact of nuclear energy and the role of the Hermes test reactor in enabling future advanced nuclear reactors.

Thank you for your consideration of NIA’s comments. We appreciate the work of NRC staff as it completes the environmental scoping for the Kairos test reactor, Hermes. NIA welcomes further discussion on this topic. Please contact me if you require additional information or have any questions.

Sincerely,

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