

From: Peter Hastings <hastings@kairospower.com>
Sent: Tuesday, June 30, 2020 6:19 PM
To: AdvancedReactors-GEIS Resource
Cc: Darrell Gardner
Subject: [External_Sender] Comments on Scoping of an Advanced Nuclear Reactor Generic Environmental Impact Statement (Docket ID: NRC-2020-0101)
Attachments: KP-NRC-2006-006 Kairos Power Input to GEIS Scoping (for submittal).pdf

Kairos Power provided input to the NRC staff via regarding a generic environmental impact statement (GEIS) for advanced nuclear reactors (ANRs) under docket NRC-2019-0226. The Nuclear Energy Institute (NEI) provided comments earlier today on scoping an advanced reactor GEIS under docket NRC-2020-0101. The attached letter serves to reiterate points made previously in Kairos Power's previous input, to endorse NEI's comments, and to amplify on some key considerations.

Please refer to the attached letter.

If you have any difficulty opening the attachment or have any questions, feel free to contact me at your convenience.

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Subject: [External_Sender] Comments on Scoping of an Advanced Nuclear Reactor
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June 30, 2020

Project No. 99902069

Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
ATTN: Program Management, Announcements and Editing Staff

Submitted via *AdvancedReactors-GEIS.resource@nrc.gov*

Subject: Kairos Power LLC
Comments on Scoping of an Advanced Nuclear Reactor Generic Environmental Impact Statement
Docket ID: NRC-2020-0101

- References:
1. Kairos Power to Office of Administration, *Generic Environmental Impact Statement for Advanced Nuclear Reactors, Comments to Docket ID NRC-2019-0226*, January 24, 2020
 2. Nuclear Energy Institute, *NEI Comments on Scoping of an Advanced Nuclear Reactor Generic Environmental Impact Statement [Docket ID: NRC-2020-0101]*, June 30, 2020


Kairos Power provided input to the NRC staff via Reference 1 regarding a generic environmental impact statement (GEIS) for advanced nuclear reactors (ANRs) under docket NRC-2019-0226. The Nuclear Energy Institute (NEI) provided comments via Reference 2 on June 30, 2020, on scoping an advanced reactor GEIS under docket NRC-2020-0101. This letter serves to reiterate points made previously in Reference 1, to endorse NEI's comments under Reference 2, and to amplify on some key considerations.

Kairos Power agrees with NEI's conclusion that the staff's proposed scope for the ANR GEIS is unduly narrow, and that their recommendations would lead to an ANR GEIS that encompasses a wider array of advanced nuclear technologies without greatly increasing the time and effort required to develop the ANR GEIS, thereby providing substantially more benefit than the narrower approach.

Additionally, Kairos Power strongly encourages the NRC staff to consider the proposed approach from Reference 1, repeated in the enclosure to this letter. These suggestions have the potential to make environmental analyses substantially more efficient and reduce unnecessary regulatory burden associated with duplicative evaluations.

Kairos Power sincerely appreciates the opportunity to provide input for the staff's consideration. If you have any questions or need any additional information, please contact Darrell Gardner at gardner@kairospower.com or (704) 769-1226, or myself at hastings@kairospower.com or (704) 650-1700.

Sincerely,



Peter Hastings, PE
Vice President, Regulatory Affairs and Quality

Enclosure: Proposed Approach for Advanced Reactor Generic NEPA Evaluation

xc (w/enclosure):

Robert Taylor, Deputy Director for New Reactors, Office of Nuclear Reactor Regulation, USNRC
John Monninger, Director, Division of Advanced Reactors and Non-Power Production and Utilization Facilities, USNRC

John Tappert, Director, Division of Rulemaking, Environmental, and Financial Support, USNRC

Kenneth Erwin, Chief, Environmental Review New Reactors Branch, USNRC

Jack Cushing, Senior Project Manager, Environmental Review New Reactors Branch, USNRC

Benjamin Beasley, Chief, Advanced Reactor Licensing Branch, USNRC

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Marcus Nichol, Senior Director, Nuclear Energy Institute

Proposed Approach for Advanced Reactor Generic NEPA Evaluation

Kairos Power suggests a focused, progressive use of programmatic and/or generic environmental impact statements, combined with judicious use of categorical exclusions and/or environmental assessments, as the best approach to ensuring efficient use of limited applicant and agency resources and focused NRC environmental reviews under the National Environmental Policy Act (NEPA).

There is simply no benefit to continually reevaluating (and potentially re-litigating) matters on a site-by-site basis when impacts already are demonstrated to be small and could be captured through robust generic analyses. NEPA is intended to *inform* agency decision-making on major federal actions (issuance of a reactor license in this case), and to use reasonable, *best-estimate* values in providing that information. Accordingly, the demonstration of minimal environmental impact for a given resource should not be assessed using a “beyond reasonable doubt” standard, but rather NEPA’s well-established “rule of reason.” Thus, when evidence of small impact abounds (refer, for example, to Reference 2 cited in the letter transmitting this proposal), additional assessments do not serve NEPA’s goals or promote efficient use of applicant and NRC resources. As the courts have noted, an environmental impact statement (EIS) is required to furnish only such information as appears reasonably necessary under the circumstances for evaluation of the project.

Elements of such an approach could include some or all of the following.

1. First and foremost, NRC should establish an approach whereby impacts reasonably can be judged to be small, based on the *presumption of compliance* with NRC licenses and other federal, state, and local environmental permits:
 - a. Based on the conditions required by applicable federal, state, and local licenses and permits, it is reasonable to presume that such licenses and permits will apply conditions to minimize impact where limits are established to applicable resource areas; such limits as are established through applicable statutes, codes, and standards obviously do not warrant second-guessing under NEPA. Moreover, the NRC may properly assume that a licensee will comply with concrete and enforceable conditions and requirements imposed by competent federal, state, or local governmental entities. Notably, the staff, the Commission, and NRC licensing boards have applied these principles in other contexts (e.g., the GEIS for license renewal) and in prior NRC adjudications (including, for example, the recent Turkey Point subsequent license renewal proceeding).
 - b. Based on a *best-estimate* approach, there is no reasonable basis to presume a facility will not be operated in conformance with its applicable licenses or permits; even in the event of compliance lapses, it is reasonable to assume internal and external oversight will result in a return to compliance. Again, there is ample precedent demonstrating the NRC’s application of this principle in other licensing contexts and proceedings.
 - c. Such an approach should better inform and streamline staff assessments of radiological, water, land, and air impacts, for example, by properly accounting for applicant compliance with federal, state, and local licenses and permits.
2. NRC should consider development of, and possible tiering from, a nationwide programmatic EIS that establishes the many areas where deployment of commercial nuclear power is known to result in a small (or positive) environmental impact:
 - a. Based on hundreds of reactor operating years, we know socioeconomic impacts of power reactor operation are overwhelmingly positive.

- b. Based on the technology, we know that the carbon emission impact (i.e., avoided greenhouse gas emissions) is overwhelmingly positive.
 - c. Based on the technology's availability and reliability, we know that its impact on grid stability and avoidance of interrupted energy supply is overwhelmingly positive.
 - d. Other resource areas should be evaluated to identify those where prior reactor-related EISs have consistently concluded impacts are small.
3. NRC should consider one or more generic EISs that conclude:
 - a. Using similar logic to that applied in item 1. above, and based on applicable regulations, fuel cycle, transportation, and waste disposal impacts will be small;
 - b. Commercial, technical, and other practical considerations will drive site selection in a way that impacts to resource areas such as land and water use would be small;
 - c. Site-specific resource assessments (see below) will preclude overlooking a clearly superior site.
4. Site-specific resources/resource impacts (e.g., flora, fauna, historic preservation, etc.) can be protected and/or mitigated adequately such that a combination of categorical exclusions (using criteria developed as part of new guidance), environmental assessments, and/or mitigated FONSI provides adequate information to support NRC NEPA review of the major federal action.
5. NEPA requires that the NRC exercise its "independent judgment" in identifying and assessing the reasonably foreseeable impacts of a proposed licensing action. However, this duty to perform an independent review does not mean that NRC must always perform a wholly independent analysis from scratch, or that it must re-create or replicate competent and professional environmental data and studies that already have been done by other agencies, so long as it confirms they are relevant and scientifically reasonable. That is, when conducting a NEPA review, the Staff may – and indeed should – rely substantially upon a state's analysis where the state has regulatory authority over the subject matter and relevant expertise.
6. Finally, the NRC should strongly consider eliminating the practice of offering the opportunity for contested adjudicatory hearings on NEPA review issues—a practice that is unique to the NRC. Neither the Atomic Energy Act nor NEPA requires the conduct of contested adjudicatory hearings on NEPA issues. As with design certifications, ample opportunity for public participation in the NEPA component of the licensing process is already guaranteed through other procedural vehicles—the public scoping process (including related meetings and comment opportunities), opportunities for public comments on NRC's draft environmental review documents (GEIS, EIS, EA) and guidance documents (e.g., standard review plans, regulatory guides), and the NRC's legal obligation to address all public comments in its final environmental review documents and to prepare a record of decision.