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U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

**Submission of X Energy, LLC (X-energy) Technical Report: Technology Description of the Xe-100 Reactor**

The purpose of this letter is to submit the subject technical report on behalf of X Energy, LLC ("X-energy"). This submission provides additional information on the X-energy Xe-100 commercial reactor design in order to provide the NRC staff background on the state of technology development and overall plant operations. This information is provided to augment the technical description sections of X-energy's topical reports and white papers for more efficient and effective pre-application reviews. No formal or informal feedback is specifically requested on this report.

This report contains commercially sensitive, proprietary information and, as such, we are requesting that this information be withheld from public disclosure in accordance with 10 CFR 2.390, "Public inspections, exemptions, request for withholding," paragraph (a)(4). Enclosure 1 is the Non-Public version of the report which contains non-redacted sensitive information. This proprietary information is appropriately marked and an affidavit providing the basis for this request is provided in Enclosure 2. A redacted copy of the report that contains non-proprietary content will be completed and submitted separately.

Additionally, certain information in this report was determined to contain Export Controlled Information (ECI). This information must be protected from disclosure pursuant to 10 CFR 810.

If you have any questions or require additional information, please contact Travis Chapman at [tchapman@x-energy.com](mailto:tchapman@x-energy.com).

Sincerely,

DocuSigned by:  
A handwritten signature in black ink that reads "Martin van Staden".  
0C0C2508D0DD425

Dr. Martin van Staden  
Vice President, Xe-100 Program Manager  
X Energy, LLC



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Enclosures:

1) Xe-100 Technical Report: Technology Description of the Xe-100 Reactor

2) Affidavit