

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

February 9, 2024

James Walker Chief Executive Officer Nano Nuclear Energy Inc. 1411 Broadway, 38th Floor New York, NY 10018

Re: Nano Nuclear Energy Inc.
Amendment No. 1 to Draft Registration Statement on Form S-1
Submitted January 31, 2024
CIK 0001923891

Dear James Walker:

We have reviewed your amended draft registration statement and have the following comments.

Please respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe a comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to this letter and your amended draft registration statement or filed registration statement, we may have additional comments.

Amendment No. 1 to Draft Registration Statement on Form S-1

History of Securities Issuances, page 83

1. Please revise your disclosure to indicate the section of the Securities Act or rule under which exemption from registration is claimed and state briefly the facts relied upon to make the exemption available. See Item 701(d) of Regulation S-K.

General

2. We note you disclose that your estimated expenditures of approximately \$4 million over the next twelve months focus on progressing your development of advanced nuclear microreactors. We also note you disclose that you plan to acquire a nuclear business services and consultancy provider by the end of 2024. Please revise to clarify whether

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you intend to apply any proceeds from this offering to such acquisition and if such acquisition costs are included in your estimated expenditures of \$4 million over the next twelve months.

Please contact Joseph Klinko at 202-551-3824 or Karl Hiller at 202-551-3686 if you have questions regarding comments on the financial statements and related matters. Please contact Cheryl Brown at 202-551-3905 or Karina Dorin at 202-551-3763 with any other questions.

Sincerely,

Division of Corporation Finance Office of Energy & Transportation

cc: Lawrence A. Rosenbloom, Esq.