

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

June 17, 2025

James Walker Chief Executive Officer Nano Nuclear Energy Inc. 10 Times Square, 30th Floor New York, NY 10018

> Re: Nano Nuclear Energy Inc. Registration Statement on Form S-3 Filed June 9, 2025 File No. 333-287886

Dear James Walker:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Please contact Irene Barberena-Meissner at 202-551-6548 with any questions.

Sincerely,

Division of Corporation Finance Office of Energy & Transportation