NANO NUCLEAR ENERGY INC. 10 Times Square, 30th Floor New York, New York 10018

October 22, 2024

VIA EDGAR

U.S. Securities and Exchange Commission Division of Corporation Finance Office of Energy & Transportation 100 F Street, N.E. Washington, D.C. 20549

Attention: Michael Purcell

Re: Nano Nuclear Energy Inc. Registration Statement on Form S-1 Filed October 21, 2024 File No. 333-282750

Dear Mr. Purcell:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, Nano Nuclear Energy Inc., hereby requests acceleration of effectiveness of the above referenced Registration Statement on Form S-1 so that it will become effective at 4:30 p.m., Eastern Time, on Wednesday, October 23, 2024 (the "Effective Time"). The Company hereby grants to each of Richard I. Anslow, Esq. and Lawrence A. Rosenbloom, Esq. of Ellenoff Grossman & Schole LLP the authority to communicate to the staff of the U.S. Securities and Exchange Commission one or more requests for any potential deferral of the Effective Time.

Very truly yours,

/s/ James Walker James Walker Chief Executive Officer

cc: Ellenoff Grossman & Schole LLP