November 6, 2023

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

Re: Nano Nuclear Energy Inc.

Draft Registration Statement on Form S-1

Submitted October

CIK 0001923891

Dear James Walker:

10, 2023

We have reviewed your

draft registration statement and have the following comments.

 $\hbox{ Please respond to this letter by providing the requested information and either submitting }$

an amended draft registration statement or publicly filing your registration statement on $% \left(1\right) =\left(1\right) +\left(1\right) +$

 $\ensuremath{\mathtt{EDGAR}}.$ 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.

 $\label{eq:After reviewing the information you provide in response to this letter and your amended$

draft registration statement or filed registration statement, we may have additional comments.

Draft Registration Statement on Form S-1 submitted October 10, 2023

Prospectus Summary Overview, page 1

We note your disclosure on page 11 that you anticipate it will take several years for you to commence generating meaningful revenues. Please revise your disclosure to describe in more detail your plan of operations for the next twelve months, including the anticipated timeline and expenditures for these events. Also describe in more detail your plans for providing nuclear service support and consultation services. In that regard, we note your disclosure that it represents your most near-term revenue generating opportunity and your disclosure elsewhere that you have already identified several nuclear business services and consultancy providers, which have been assessed as potentially suitable for acquisition. We note various references to your collaborations, partnerships and coordinations, including your collaboration with INL, academic partnerships, and coordinations James Walker

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with DOE and INL. Please describe such arrangements in greater detail and, to the extent $% \left(1\right) =\left(1\right) +\left(1\right) +\left$

there are any agreements governing such arrangements, please file them as exhibits to

your registration statement.

Our Vision, Market Opportunity and Key Government Support, page $2\,$

3. We note your disclosure that you believe you are differentiated from your competitors in

many ways, including, among other things, secured government contracts. Please revise to

disclose material terms of these contracts in the prospectus and file them as exhibits to $% \left(1\right) =\left(1\right) +\left(1\right) +$

your registration statement, or explain why you believe that filing such contracts is not

required. Refer to Item 601(b) of Regulation S-K.

Risk Factors, page 11

4. We note that pursuant to a subscription agreement signed in the nine months ended June

30, 2023, a subscriber purchased 2,000,000 shares of common stock and has a put

 $% \left(1\right) =\left(1\right) +\left(1\right) +\left($

exercise of this put right.

Cautionary Note Regarding Forward-Looking Statements, page 31

5. Please note that Section 21E of the Securities Exchange Act of 1934 and Section 27A of

the Securities Act of 1933 do not apply to initial public offerings. Accordingly, please $\,$

revise to remove these references.

Use of Proceeds, page 32

6. We note your disclosure regarding your use of proceeds for the research and development

of products and technology, including design optimization, test work and scoping studies.

If known, please revise to disclose the approximate amount of proceeds intended to be

used for each purpose you identify. If the anticipated proceeds will not be sufficient to

 $% \left(1\right) =\left(1\right) +\left(1\right) +\left($

funds needed.

Management's Discussion and Analysis

Factors and Trends Affecting Our Business and Results of Operations, page 36

7. We note your disclosures on pages 15, 37, and 53 referencing opportunities that would

 $% \left(1\right) =\left(1\right) +\left(1\right) +\left($

services and consultancy providers" you have assessed as "potentially suitable for

 ${\tt costs;"}$ also on page 2 of having "secured government contracts and [a] world class team."

Please revise these disclosures as necessary to clarify the extent and status of any $\ensuremath{\mathsf{S}}$

 $\,$ negotiations and plans for specific acquisitions, or to clarify if there are none. If you have

any tentative agreements for acquisitions of specific businesses, identify the company or $% \left\{ 1\right\} =\left\{ 1\right\} =$

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business and counterparties, describe the nature and scope of its operations, the expected

amount and form of purchase consideration, and any uncertainties governing the $% \left(1\right) =\left(1\right) +\left(1\right) +\left($

likelihood of completion and the expected timeframe.

Business, page 42

8. Please revise this section to provide a clear description of the current status of any

products, facilities and services that you offer or plan to offer. For example, please clarify

the current design and/or development stage of your micro nuclear reactor business and

whether a working prototype has been created, the status of your submissions to the $\ensuremath{\mathsf{DOE}}$

and/or NRC regarding your HALEU Fuel Fabrication Business, whether you have

commenced scoping and cost estimation work for your fuel fabrication facility, and

whether you have any agreements relating to the site identified for your fuel fabrication $\ensuremath{\mathsf{S}}$

facility and the several nuclear business services and consultancy providers that you have $% \left(1\right) =\left(1\right) +\left(1\right)$

identified and assessed as potentially suitable for acquisition.

The U.S. Nuclear Energy Market, page 43

9. With respect to each statement attributed to industry publications and reports, please

revise to disclose the title and year of publication of such reports.

Prospectus Summary

Our Vision, Market Opportunity and Key Government Support, page 44

10. We note your disclosure that receiving no external support will not inhibit you from

advancing your research, business or technology, and your investor base includes capital $% \left(1\right) =\left(1\right) +\left(1\right) +\left$

raised from industry professions that found your company to have enormous

potential. Please revise to ensure your disclosure here and under Prospectus Summary is

balanced and gives equal prominence to the risks and challenges you face. For example,

you should address that your limited operating history and early stage of business makes $\,$

an evaluation of your business and prospects very difficult, you have a new and unproven

technology model and will need to raise substantial amounts of additional capital to

implement your business plans. We also note you disclose that you have secured important high placed government contacts. Please explain how this benefits your

plan of operations and provide balancing disclosure, as applicable. Management

Executive Officers, page 63

11. Please revise to clarify Mr. Walker's business experience during the past five years. Refer

to Item 401(e)(1) of Regulation S-K. In addition, we note that your officers appear to

allocate their time to other businesses. Please include an appropriately captioned risk

factor to discuss, if true, that certain executive officers serve in their positions on a part-

time basis and/or otherwise clarify the number of hours they have agreed to dedicate to the $\,$

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business affairs of your company. To the extent material, please also identify and describe

any potential conflicts of interest that exist, or may exist, as a result of your executive $% \left(1\right) =\left(1\right) +\left(1\right)$

officers' outside business relationships.

Our Executive Advisory Board, page 65

12. If material, please include disclosure that describes the role or function of the Executive $\,$

Advisory Board, and indicates whether there are any rules or procedures governing this

board. Please also disclose whether and how members of the advisory board are

compensated.

Executive and Director Compensation, page 71

13. Please provide director compensation information in the tabular format required by Item

 $402\,(\text{r})$ of Regulation S-K. Certain Relationships and Related Party Transactions, page 77

14. Please revise to provide all the information required by Item 404(d) of Regulation S-

 $\ensuremath{\mathrm{K}}$ and ensure you describe each related party transaction individually rather than on an

aggregate basis.

Financial Statements, page F-1

15. Please update your filing to include audited financial statements covering the fiscal year

ended September 30, 2023 in any amendment filed on or after November 15, 2023, and $\,$

prior to the effective date, consistent with Rule 8-08(b) of Regulation S-X.

Exhibits

16. Please discuss the material terms of and file as exhibits to your registration statement any

 $% \left(1\right) =\left(1\right) \left(1\right)$ material agreements, including your exclusive license for high capacity HALEU fuel

transportation basket design and your Strategic Partnership Project Agreement No.

 $23\mbox{SP817},$ or tell us why you believe you are not required to do so. In addition, we note

you have entered into a consulting agreement with each of your executive officers and $% \left(1\right) =\left(1\right) +\left(1$

directors, other than Mr. Yu, and a consulting agreement with I Financial Ventures Group $\,$

LLC where Mr. Yu is the sole member and manager. Please file all executed consulting

 $% \left(1\right) =\left(1\right) \left(1\right)$ agreements as exhibits to the registration statement, or explain why you believe they are

not required. Refer to Item 601(b) of Regulation S-K.

General

17. Please supplementally provide us with copies of all written communications, as defined in

Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf,

present to potential investors in reliance on Section $5\left(d\right)$ of the Securities Act, whether or

 $% \left(1\right) =\left(1\right) +\left(1\right) +\left($

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with the review of this filing to discuss how to submit the materials, if any, to us for our $\ensuremath{\mathsf{S}}$

review.

18. We note your risk factor disclosure that your executive officers, directors, and principal

stockholders will continue to have substantial control over your company after this

offering and will be able to exercise a significant level of control over all matters requiring

stockholder approval. Please advise whether you will be a controlled company under

NYSE rules. If so, please include appropriate disclosure of this status on the prospectus

cover page and Prospectus Summary. Please also disclose the corporate governance

exemptions available to a controlled company and whether you intend to rely on these

exemptions.

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 $% \left(1\right) =\left(1\right) +\left(1\right$

Cheryl Brown at 202-551-3905 or Karina Dorin at 202-551-3763 with any other questions.

Sincerely,

FirstName LastNameJames Walker

Division of

Transportation
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cc: Lawrence A. Rosenbloom, Esq.
FirstName LastName