September 18, 2024

Division of Corporation Finance
Office of Manufacturing
U. S. Securities and Exchange Commission
100 F Street, NE Washington DC 20549

Attention: Heather Clark Melissa Gilmore

Re: NET Power Inc. Form 10-K for the Year Ended December 31, 2023 Filed March 11, 2024 File No. 001-40503

Dear Ms. Clark and Ms. Gilmore,

NET Power Inc. (the "Company") is in receipt of the letter dated September 11, 2024 from the staff of the U.S. Securities and Exchange Commission ("the Staff") with respect to the above referenced Annual Report on Form 10-K for the year ended December 31, 2023. We are responding to the Staff's comments included in the letter. For ease of reference, we have set forth the Staff's comments in bold italics and the Company's responses below.

Form 10-K for the Year Ended December 31, 2023

Financial Statements

Notes to Consolidated Financial Statements

Note 13 - Leases

Office Lease, page F-31

1. We note your response to prior comment 2. You indicate that the lease met the criteria for contract combination according to ASC 842-10-25-19. In this regard, please tell us how the amount of consideration to be paid in the Roney Street lease depends on the price or performance of the Measurement Building lease per ASC 842-10-25-19b. In addition, please demonstrate how the rights to use building represent a single lease component in accordance with ASC 842-10-25-19c and 842-10-15-28.

Company Response:

The Company respectfully acknowledges the Staff's comment. As noted within ASC 842-10-25-19, only one of the three criteria (a-c) in that paragraph needs to be met in order for the contract combination guidance to apply to two or more contracts, at least one of which is or contains a lease, that are entered into at or near the same time with the same counterparty (or related parties). The Company has concluded that the criterion in ASC 842-10-25-19a has been met as the execution of the Lease Termination Agreement for the Measurement Building Lease was negotiated in conjunction with the execution of the Roney Street Lease. They were also executed on the same day with the same commercial objective of securing adequate corporate office space due to the Company's growth. In particular: (1) the early exit of

the Measurement Building Lease was contingent on the execution of the Roney Street Lease; (2) the lease termination date for the Measurement Building Lease was defined as the commencement date of the Roney Street Lease; (3) the Roney Street Lease was negotiated in conjunction with the Lease Termination Agreement for the Measurement Building Lease; and (4) the Company physically moved from the Measurement Building location to the Roney Street location. Therefore, the Company concluded that the criterion in ASC 842-10-25-19a is met and the contract combination guidance in ASC 842-10-25-19 applies without further consideration of ASC 842-10-25-19b or 25-19c.

Finally, for additional clarification, the Company did not consider the remaining two months of the Measurement Building Lease and the Roney Street Lease to be a single lease component. Rather, upon executing the two agreements and concluding that the contract combination guidance applies, management identified two separate lease components and allocated the revised consideration in the combined, modified contract between these two separate lease components. The Lease Termination Agreement required the Company to pay a total of \$347,230 to terminate the Measurement Building Lease, of which \$342,379 was allocated to the Roney Street Lease and \$4,851 was allocated to the Measurement Building Lease based on the relative standalone price of each component.

2. In a related matter, you state that you considered ASC 842-10-25-8 to determine whether the Roney Street lease was a separate contract. Please demonstrate how the increase in lease payments of the Roney Street lease was not commensurate with the standalone price.

Company Response:

The Company respectfully acknowledges the Staff's comment. After concluding that the Lease Termination Agreement for the Measurement Building Lease and the execution of the Roney Street Lease should be accounted for as a single, combined contract in accordance with ASC 842-10-25-19, management evaluated whether ASC 842-10-25-8 would apply, which would result in the Roney Street Lease still being accounted for as a separate contract. Subsection 8.6.2.1 of the Deloitte Roadmap, *Leases*, December 2023 edition and Question 6.7.09 of KPMG's Leases Handbook, September 2024 edition, indicate that a modification cannot be accounted for as a separate contract under ASC 842-10-25-8 if the modification also affects the existing lease components (rather than simply adding a new lease component at its standalone price). This is also consistent with the discussion included in paragraph BC172 of the "Basis for Conclusions" for Accounting Standards Update 2016-02. Accordingly, since the combined, modified contract reduced the remaining lease term of the Measurement Building Lease to two months in addition to adding a new lease component for the Roney Street Lease, the guidance in ASC 842-10-25-8 does not apply, regardless of whether the increase in lease payments was commensurate with the standalone price of the Roney Street Lease.

Further, even if the guidance in ASC 842-10-25-8 were to apply, the total change in consideration of the combined, modified contract included the \$347,230 termination fee for the Measurement Building Lease in addition to the lease payments under the Roney Street Lease, which resulted in the total change in consideration not being commensurate with the standalone price of the Roney Street Lease.

3. We note your conclusion that you accounted for the transaction as a modification that reduces the lease term in accordance with ASC 842-10-25-11(b) rather than as a modification that terminates the lease in accordance with ASC 842-10-25-11(c). Please further explain the factors in determining your conclusion, including how your early exit of the Measurement Building Lease going into effect two months after the amendment was signed versus an immediate exit of the property was a factor.

Company Response:

The Company respectfully acknowledges the Staff's comment. In the Lease Termination Agreement executed on August 11, 2023, the Company agreed to terminate the Measurement Building Lease on the commencement date of the Roney Street Lease, which was estimated to be early October 2023. Accordingly, as of the contract modification date, August 11, 2023, the expected remaining lease term for the Measurement Building Lease was reduced from its original expiration date of June 1, 2027, to approximately two months. Because the Company retained the right to use the Measurement Building space for a two-month period and did not terminate the right to use that space immediately, the modification was considered a reduction in lease term in accordance with ASC 842-10-25-11b as opposed to a lease termination in accordance with ASC 842-10-25-11c. This accounting is consistent with the interpretive guidance included in subsection 8.6.3.7.2 of the Deloitte Roadmap, *Leases*, December 2023 edition, and Question 6.7.30 of KPMG's Leases Handbook, September 2024 edition.

Please contact me by telephone at 832.746.4731 or via email at Kelly.Rosser@netpower.com with any additional questions.

Sincerely,

/s/ Kelly Rosser

Kelly Rosser Chief Accounting Officer