VIA EDGAR

December 23, 2021

Attention: Kathryn Jacobson Robert Littlepage Kathleen Krebs Larry Spirgel

United States Securities and Exchange Commission Division of Corporation Finance Office of Technology 100 F Street, NE Washington, D.C. 20549

Re: Power & Digital Infrastructure Acquisition Corp. Amendment No. 4 to Registration Statement on Form S-4 Filed December 10, 2021 File No. 333-258720

Ladies and Gentlemen:

Set forth below are the responses of Power & Digital Infrastructure Acquisition Corp. (the "*Company*" or "*XPDI*") to comments received from the staff of the Division of Corporation Finance (the "*Staff*") of the Securities and Exchange Commission (the "*Commission*") by letter dated December 22, 2021, with respect to the Company's Amendment No. 4 to Registration Statement on Form S-4, File No. 333-258720, filed with the Commission on December 10, 2021 (the "*Preliminary Registration Statement*").

In addition, concurrently with the submission of this letter, the Company is filing Amendment No. 5 to the Preliminary Registration Statement on Form S-4 ("*Amendment No. 5*") in response to the Staff's comments.

For your convenience, each response is prefaced by the exact text of the Staff's corresponding comment in bold, italicized text. Unless otherwise specified, all references to page numbers and captions in the responses below correspond to Amendment No. 5, and capitalized terms used but not otherwise defined in the responses below have the meanings given to them in Amendment No. 5.

Amendment No. 4 to Form S-4 filed December 10, 2021

Core Scientific Holding Co. Notes to Unaudited Consolidated Financial Statements 3. Summary of Significant Accounting Policies Fair Value Measurements, page F-108

- 1. We note your response to comment 2 and your disclosures on page F-110 regarding the effects of unobservable inputs "in isolation" in connection with fair value measurement of convertible notes and reissue our comment in part. Please additionally disclose:
 - the interrelationships among unobservable inputs and how they might magnify or mitigate the effect of changes in such unobservable inputs on Level 3 fair value measurement. Refer to ASC 820-10-50-2(g).
 - the weighted average for the range of values of significant unobservable inputs used to develop Level 3 fair value measurement. Refer to ASC 820-10-50-2(bbb)(2); and

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- the nature of the payment in kind interest (PIK), whether it constitutes additional notes that have identical terms as the outstanding notes or other securities.
 - RESPONSE:

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The Company respectfully acknowledges the Staff's comment and advises the Staff that it has revised the disclosure on pages F-108, F-110, F-111 and F-121 of Amendment No. 5 as requested.

2. For fair value measurement purposes, please disclose your unit of account for Unsecured Convertible Notes. It is unclear why you disclose on page F-109 that Level 3 financial instruments included only <u>certain</u> of the same series of unsecured convertible notes issued during the same time frame (August and early September 2021). We also note that the time lapse between the issue date and the reporting date for Level 2 and Level 3 Unsecured Convertible Notes issued in August and September 2021 and Level 2 Unsecured Convertible notes issued late September 2021 was not significant.

RESPONSE:

The Company respectfully acknowledges the Staff's comment and advises the Staff that it has revised the disclosure on page F-110 of Amendment No. 5 in response to the Staff's comment.

3. We note your presentation of convertible notes in the aggregate on pages F-109 and F-110. Please revise to disaggregate such notes based on their respective units of account or class.

RESPONSE:

The Company respectfully acknowledges the Staff's comment and advises the Staff that it has revised the disclosure on page F-109 of Amendment No. 5 as requested.

If any additional supplemental information is required by the Staff or if you have any questions regarding the foregoing, please contact Debbie Yee of Kirkland & Ellis LLP at (713) 836-3630.

Sincerely,

POWER & DIGITAL INFRASTRUCTURE ACQUISITION CORP.

 By:
 /s/ Patrick C. Eilers

 Name:
 Patrick C. Eilers

 Title:
 Chief Executive Officer

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