

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934  
or Section 30(h) of the Investment Company Act of 1940

Check this box if no longer subject to  
Section 16. Form 4 or Form 5  
obligations may continue. See  
Instruction 1(b).

Check this box to indicate that a  
transaction was made pursuant to a  
contract, instruction or written plan for  
the purchase or sale of equity  
securities of the issuer that is intended  
to satisfy the affirmative defense  
conditions of Rule 10b5-1(c). See  
Instruction 10.

|                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Name and Address of Reporting Person*<br><u>Hare Diane Elizabeth</u><br><br>(Last) (First) (Middle)<br><u>10 TIMES SQUARE, 30TH FLOOR</u><br><br>(Street)<br><u>NEW YORK NY 10018</u><br><br>(City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol<br><u>Nano Nuclear Energy Inc. [ NNE ]</u><br>Foreign Trading Symbol<br><br>3. Date of Earliest Transaction (Month/Day/Year)<br><u>10/01/2026</u><br><br>4. If Amendment, Date of Original Filed (Month/Day/Year) | 5. Relationship of Reporting Person(s) to Issuer<br>(Check all applicable)<br><input checked="" type="checkbox"/> Director 10% Owner<br>Officer (give title below) Other (specify below)<br><br>6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br>Form filed by More than One Reporting Person |
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Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) |   | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) |            |       | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|---|-------------------------------------------------------------------|------------|-------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|
|                                 |                                      |                                                    | Code                           | V | Amount                                                            | (A) or (D) | Price |                                                                                               |                                                          |                                                       |

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned  
(e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) |   | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |     | 6. Date Exercisable and Expiration Date (Month/Day/Year) |                 | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--------------------------------------------|--------------------------------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|---|----------------------------------------------------------------------------------------|-----|----------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|
|                                            |                                                        |                                      |                                                    | Code                           | V | (A)                                                                                    | (D) | Date Exercisable                                         | Expiration Date |                                                                                   |                                            |                                                                                                    |                                                           |                                                        |
| Restricted Stock Units <sup>(1)</sup>      | (1)                                                    | 10/01/2026                           |                                                    | A                              |   | 9,536 <sup>(1)</sup>                                                                   |     | (1)                                                      | (1)             | Common Stock                                                                      | 9,536                                      | \$0                                                                                                | 0                                                         | D                                                      |

Explanation of Responses:

1. Represents Restricted Stock Units ("RSUs") granted on October 1, 2026 ("Grant Date") under the Issuer's 2025 Equity Incentive Plan ("2025 Plan") based on a value per RSU of \$15.73, the closing price of the Issuer's common stock as reported on The Nasdaq Capital Market on October 1, 2026. Each RSU represents the right to receive one share of the Issuer's common stock, subject to the terms and conditions set forth in the award of such RSUs by the Issuer to the Reporting Person pursuant to a Restricted Stock Unit Award Agreement and the 2025 Plan. The RSUs shall vest on the first anniversary of the Grant Date, subject to the Reporting Person's continued service with the Issuer through the vesting date. Any applicable fraction of an RSU that would otherwise be vested will be accumulated and will vest only when a whole RSU has accumulated.

/s/ Diane Hare

10/05/2026

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.