

PROSPECTUS SUPPLEMENT NO. 4
(to Prospectus dated May 6, 2022)

Energy Vault Holdings, Inc.

Up to 111,151,176 Shares of Common Stock

5,166,666 Warrants to Purchase Common Stock

This prospectus supplement supplements the prospectus dated May 6, 2022, as previously supplemented (the “Prospectus”), which forms a part of our registration statement on Form S-1 (No. 333-262720). This prospectus supplement is being filed to update and supplement the information in the Prospectus with the information contained in our Current Report on Form 8-K, filed with the Securities and Exchange Commission on July 12, 2022 (the “Current Report”). Accordingly, we have attached the Current Report to this prospectus supplement.

The Prospectus and this prospectus supplement relate to the issuance by us of up to an aggregate of up to 9,583,256 shares of our common stock, \$0.0001 par value per share (“Common Stock”), issuable upon the exercise of our publicly-traded warrants (the “Public Warrants”) and up to 5,166,666 shares of our Common Stock issuable upon exercise of private placement warrants issued to our Founders (as defined in the Prospectus) (the “Private Warrants”). The Prospectus and this prospectus supplement also relate to the resale from time to time, upon the expiration of lock-up agreements, by (i) the selling stockholders named in the Prospectus or their permitted transferees of up to 96,401,254 shares of our Common Stock and (ii) the selling holders of Private Warrants.

Our Common Stock and Public Warrants are listed on the New York Stock Exchange under the symbols “NRGV” and “NRGV WS,” respectively. On July 11, 2022, the closing price of our Common Stock was \$7.81 per share and the closing price for our Public Warrants was \$1.92 per warrant.

We are an “emerging growth company” under applicable federal securities laws and will be subject to reduced public company reporting requirements.

INVESTING IN OUR SECURITIES INVOLVES RISKS THAT ARE DESCRIBED IN THE “RISK FACTORS” SECTION BEGINNING ON PAGE 9 OF THE PROSPECTUS.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities to be issued under this prospectus supplement or the Prospectus or determined if this prospectus supplement or the Prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is July 12, 2022.

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934
Date of Report (Date Earliest Event Reported): July 10, 2022

Energy Vault Holdings, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

001-39982
(Commission
File Number)

85-3230987
(IRS Employer
Identification No.)

4360 Park Terrace Drive
Suite 100
Westlake Village, California 91361
(Address of Principal Executive Offices) (Zip Code)

(Registrant's telephone number, including area code): (805) 852-0000

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.0001	NRGV	New York Stock Exchange
Redeemable warrants, each whole warrant exercisable for one share of common stock at an exercise price of \$11.50 per share	NRGV WS	New York Stock Exchange

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 8.01. Other Events

On February 11, 2022, we consummated the previously announced business combination (the “Closing”) pursuant to that certain Business Combination Agreement and Plan of Reorganization (the “Business Combination Agreement”), dated September 8, 2021, by and among Novus Capital Corporation II (“Novus”), NCCII Merger Corp., a wholly owned subsidiary of Novus incorporated in the State of Delaware (“Merger Sub”), and Energy Vault, Inc., a Delaware corporation (“Legacy Energy Vault”). At the Closing, Merger Sub merged with and into Legacy Energy Vault, with Legacy Energy Vault surviving the merger as our wholly owned subsidiary (the “Merger” and collectively with the other transactions described in the Business Combination Agreement, the “Business Combination”). As a result of the Business Combination, Legacy Energy Vault became our wholly owned subsidiary. In addition, certain of our executives, including all our named executive officers, held equity awards under the Energy Vault, Inc. 2020 Stock Plan prior to the Closing that vested or will vest according to the satisfaction of (i) a time-based service requirement and (ii) a liquidity event vesting requirement, which was satisfied on a “Qualified Transaction” (which, as defined in the applicable award agreements, included the Closing), whereupon the time-based service requirement would be deemed satisfied with respect to 50% or more of the total number of shares underlying such grant (the “Accelerated Shares”) as set forth in the applicable award agreements.

On July 10, 2022, the company and all current executive officers that hold Accelerated Shares entered into agreements (the “New Lock-Up Agreements”) pursuant to which they agreed, subject to certain exceptions, not to (i) sell, offer to sell, contract or agree to sell, hypothecate, pledge, grant any option to purchase or otherwise dispose of or agree to dispose of, directly or indirectly, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Securities Exchange Act promulgated thereunder, with regards to the shares of our common stock underlying 50% of their Accelerated Shares, or in the case of Mr. Piconi, our chief executive officer and director, 100% of his Accelerated Shares, or securities convertible into or exercisable or exchangeable for such shares of our common stock (the “Relocked Shares”), (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any of the Relocked Shares, whether any such transaction is to be settled by delivery of such securities, in cash or otherwise or (iii) publicly announce any intention to effect any transaction specified in clause (i) or (ii).

100% of Energy Vault’s senior officers, whose shares previously vested on an accelerated basis, elected to participate in the voluntary New Lock-Up Agreements which results in senior officer participants subjecting 50% of their accelerated shares (approximately 1.8 million shares) to additional transfer restrictions. In addition, Robert Piconi, Chairman and Chief Executive Officer of Energy Vault agreed to a New Lock-Up Agreement, subjecting 100% of his accelerated shares (approximately 4.9 million in total) to additional transfer restrictions that will expire in July 2025. The New Lock-Up Agreements represent approximately 6.7 million shares held by senior officers and the Chairman and Chief Executive Officer, which in total represent approximately 5% of the outstanding shares of the Company.

Under the New Lock-Up Agreements, the Relocked Shares shall be released from such transfer restrictions to the extent that the Relocked Shares would have vested in accordance with the time-based service requirements set forth in the applicable award agreements but for the applicable acceleration provisions set forth in such agreements, subject to the following:

- 33% of the Relocked Shares shall be released on the first trading day on which the closing price of the our common stock as reported on the New York Stock Exchange over any twenty (20) trading days within the preceding thirty (30) consecutive trading day period is greater than or equal to \$15.00 (which shall be equitably adjusted to reflect certain corporate transactions);
 - 33% of the Relocked Shares shall be released on the first trading day on which the closing price of the our common stock as reported on the New York Stock Exchange over any twenty (20) trading days within the preceding thirty (30) consecutive trading day period is greater than or equal to \$17.50 (which shall be equitably adjusted to reflect certain corporate transactions); and
 - The remaining Relocked Shares shall be released on the first trading day on which the closing price of our common stock as reported on the New York Stock Exchange over any twenty (20) trading days within the
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preceding thirty (30) consecutive trading day period is greater than or equal to \$20.00 (which shall be equitably adjusted to reflect certain corporate transactions).

The executives who entered into the New Lock-Up Agreements with us also entered into lock-up agreements with us (the "Prior Lock-Up Agreements") in connection with the Closing. The New Lock-Up Agreements do not modify, supersede or amend the Prior Lock-Up Agreements in any way.

The foregoing description of the New Lock-Up Agreements is a summary only and is qualified in its entirety by reference to the form of Lock-Up Agreement, a copy of which is attached as Exhibit 10.1 to this Current Report on Form 8-K and is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits

(d) Exhibits

Exhibit No.	Description
10.1	Form of New Lock-Up Agreement
104	Cover page Interactive Data File (formatted as Inline XBRL).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ENERGY VAULT HOLDINGS, INC.

By: /s/ Josh McMorrow

Name: Josh McMorrow

Title: Chief Legal Officer

Date: July 12, 2022

Energy Vault Holdings, Inc.
4360 Park Terrace Drive
Suite 100
Westlake Village, California 91361
Re: New Lock-Up Agreement

Ladies and Gentlemen:

The undersigned (the "Securityholder") was granted equity pursuant to the Energy Vault, Inc. 2020 Stock Plan and an applicable award agreement that vested or will vest according to the satisfaction of (i) a time-based service requirement and (ii) a liquidity event vesting requirement, and upon the satisfaction of such liquidity event vesting requirement, the time-based service requirement would be deemed satisfied with respect to 50% or more of the total number of shares underlying such award (the "Accelerated Shares") as set forth in the applicable award agreement.

On February 11, 2022, in accordance with the Business Combination Agreement and Plan of Reorganization (the "BCA") entered into by and among Energy Vault Holdings, Inc. (f/k/a Novus Capital Corporation II), a Delaware corporation (the "Company"), NCCII Merger Corp., a Delaware corporation ("Merger Sub") and Energy Vault, Inc., a Delaware corporation ("Legacy Energy Vault"), pursuant to which, among other things, Merger Sub was merged with and into Legacy Energy Vault on the date hereof (the "Merger" and together with the transactions contemplated by the BCA, the "Business Combination"), with Legacy Energy Vault surviving the Merger as a wholly owned subsidiary of the Company. As a result of the Business Combination, the "liquidity event vesting requirement" was satisfied.

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Securityholder hereby agrees with the Company as follows:

1. Subject to the exceptions set forth herein, the Securityholder agrees not to, without the prior written consent of the Company, (i) sell, offer to sell, contract or agree to sell, hypothecate, pledge, grant any option to purchase or otherwise dispose of or agree to dispose of, directly or indirectly, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations of the Securities and Exchange Commission promulgated thereunder, any shares of Common Stock, par value \$0.0001 per share, of the Company ("Common Stock") underlying _____% of the Securityholder's Accelerated Shares, or any securities convertible into or exercisable or exchangeable for such shares of the Company's Common Stock (the "Relocked Shares"), (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any of the Relocked Shares, whether any such transaction is to be settled by delivery of such securities, in cash or otherwise or (iii) publicly announce any intention to effect any transaction specified in clause (i) or (ii) (the actions specified in clauses (i)-(iii), collectively, "Transfer"), subject to the release provisions set forth in Section 3 hereof.

2. The restrictions set forth in paragraph 1 shall not apply to:

(i) in the case of an entity, Transfers (A) to another entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act of 1933, as amended) of the undersigned, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the undersigned or affiliates of the undersigned or who shares a common investment advisor with the undersigned or (B) as part of a distribution or transfer to direct or indirect members, general partners, limited partners or shareholders of the undersigned, or each of their employees or officers;

(ii) in the case of an individual, Transfers by bona fide gift to members of the individual's immediate family (as defined below) or to a trust, the beneficiary of which is a member of one of the individual's immediate family, an affiliate of such person or to a charitable organization;

- (iii) in the case of an individual, Transfers by virtue of laws of descent and distribution upon death of the individual;
- (iv) in the case of an individual, Transfers by operation of law or pursuant to a court order, such as a qualified domestic relations order, divorce decree or separation agreement;
- (v) in the case of an individual, Transfers to a partnership, limited liability company or other entity of which the undersigned and/or the immediate family (as defined below) of the undersigned are the legal and beneficial owner of all of the outstanding equity securities or similar interests;
- (vi) in the case of an entity that is a trust, Transfers to a beneficiary of the trust or to the estate of a beneficiary of such trust;
- (vii) in the case of an entity, Transfers by virtue of the laws of the state of the entity's organization and the entity's organizational documents upon dissolution of the entity;
- (viii) the exercise of stock options or warrants to purchase shares of Common Stock or the vesting of stock awards or restricted stock unit awards of Common Stock, it being understood that all such shares of Common Stock received by the undersigned upon such exercise, vesting or transfer will remain subject to the restrictions of this Letter Agreement, and (x) any related transfer of shares of Common Stock to the Company in connection therewith (1) deemed to occur upon the "cashless" or "net" exercise of such options or warrants or (2) for the purpose of paying the exercise price of such options or warrants or for paying taxes due as a result of the exercise of such options or warrants, the vesting of such options, warrants or restricted stock unit awards, or as a result of the vesting of such shares of Common Stock; (y) solely with respect to shares of Common Stock underlying restricted stock units, any related sale of shares of Common Stock solely to cover the tax withholding liability related to such vesting of restricted stock unit awards through a broker in accordance with the terms of the applicable equity incentive plan or arrangement approved by the Company's Board of Directors;
- (ix) Transfers to the Company pursuant to any contractual arrangement in effect at the effective time of the Merger that provides for the repurchase by the Company or forfeiture of Common Stock or other securities convertible into or exercisable or exchangeable for Common Stock in connection with the termination of the Securityholder's service to the Company;
- (x) the entry, by the Securityholder, at any time after the effective time of the Merger, of any trading plan providing for the sale of shares of Common Stock by the Securityholder, which trading plan meets the requirements of Rule 10b5-1(c) under the Exchange Act (as may be amended from time to time), provided, however, that such plan does not provide for, or permit, the sale of any shares of Common Stock that have not been released from the restrictions set forth in Section 1 hereof pursuant to Section 3 hereof and no public announcement or filing is voluntarily made or required regarding such plan while the restrictions set forth in Section 1 hereof apply to such shares;
- (xi) transactions in the event of completion of a liquidation, merger, stock exchange or other similar transaction which results in all of the Company's securityholders having the right to exchange their shares of Common Stock for cash, securities or other property;
- (xii) transactions to satisfy any U.S. federal, state, or local income tax obligations of the Securityholder (or its direct or indirect owners) arising from a change in the U.S. Internal Revenue Code of 1986, as amended (the "Code"), or the U.S. Treasury Regulations promulgated thereunder (the "Regulations") after the date on which the BCA was executed by the parties, and such change prevents the Merger from qualifying as a "reorganization" pursuant to Section 368 of the Code (and the Merger does not qualify for similar tax-free treatment pursuant to any successor or other provision of the Code or Regulations taking into account such changes), in each case solely and to the extent necessary to cover any tax liability as a direct result of the transaction; and
- (xiii) the creation of any charge, lien, mortgage, pledge or other security interest or posting as collateral of any Common Stock of the Company in connection with a bona fide loan transaction provided that the Lock-Up Shares transferred in connection with enforcement of such loan transaction remain subject to the terms of this letter and any lender transferee agrees in writing to be bound by the restrictions set forth herein
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provided, however, that (A) in the case of clauses (i) through (vii) and clause (xi), these permitted transferees must enter into a written agreement, in substantially the form of this Letter Agreement (it being understood that any references to “immediate family” in the agreement executed by such transferee shall expressly refer only to the immediate family of the Securityholder and not to the immediate family of the transferee), agreeing to be bound by these Transfer restrictions. For purposes of this agreement, “immediate family” shall mean a spouse, domestic partner, child (including by adoption), father, mother, brother or sister of the undersigned, and lineal descendant (including by adoption) of the undersigned or of any of the foregoing persons; and “affiliate” shall have the meaning set forth in Rule 405 under the Securities Act of 1933, as amended.

3. The Relocked Shares shall be released from the restrictions set forth in Section 1 hereof to the extent that the Relocked Shares would have vested in accordance with the time-based service requirement set forth in the applicable award agreement but for the applicable acceleration provisions set forth in such agreement, subject to the following:
- a. 33% of the Relocked Shares shall be released on the first trading day on which the closing price of the Company’s Common Stock as reported on the New York Stock Exchange over any twenty (20) trading days within the preceding thirty (30) consecutive trading day period is greater than or equal to \$15.00 (which shall be equitably adjusted to reflect stock splits, reverse stock splits, stock dividends, reorganizations, recapitalizations, reclassifications, combination, exchange of shares or other like change or transaction with respect to the Common Stock occurring on or after the date of these resolutions);
 - a. 33% of the Relocked Shares shall be released on the first trading day on which the closing price of the Company’s Common Stock as reported on the New York Stock Exchange over any twenty (20) trading days within the preceding thirty (30) consecutive trading day period is greater than or equal to \$17.50 (which shall be equitably adjusted to reflect stock splits, reverse stock splits, stock dividends, reorganizations, recapitalizations, reclassifications, combination, exchange of shares or other like change or transaction with respect to the Common Stock occurring on or after the date of these resolutions); and
 - b. The remaining Relocked Shares shall be released on the first trading day on which the closing price of the Company’s Common Stock as reported on the New York Stock Exchange over any twenty (20) trading days within the preceding thirty (30) consecutive trading day period is greater than or equal to \$20.00 (which shall be equitably adjusted to reflect stock splits, reverse stock splits, stock dividends, reorganizations, recapitalizations, reclassifications, combination, exchange of shares or other like change or transaction with respect to the Common Stock occurring on or after the date of these resolutions).
4. In furtherance of the foregoing, the Company, and any duly appointed transfer agent for the registration or transfer of the securities described therein, are hereby authorized to decline to make any transfer of securities if such transfer would constitute a violation or breach of this Letter Agreement.
5. This Letter Agreement constitutes the entire agreement and understanding of the parties hereto in respect of the subject matter hereof and supersedes all prior understandings, agreements or representations by or among the parties hereto, written or oral, to the extent they relate in any way to the subject matter hereof or the transactions contemplated hereby and for clarity does not modify, supersede or amend the lock-up agreement that the undersigned entered into in connection with the closing of the Business Combination. This Letter Agreement may not be changed, amended, modified or waived (other than to correct a typographical error) as to any particular provision, except by a written instrument executed by the undersigned Securityholder and the Company.
6. No party hereto may assign either this Letter Agreement or any of its rights, interests or obligations hereunder without the prior written consent of the other party. Any purported assignment in violation of this paragraph shall be void and ineffectual and shall not operate to transfer or assign any interest or title to the purported assignee. This Letter Agreement shall be binding on the Securityholder and each of its respective successors, heirs and assigns and permitted transferees.
7. This Letter Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Delaware, without giving effect to conflicts of law principles that would result in the application of the substantive laws of another jurisdiction. The parties hereto (i) all agree that any action, proceeding, claim or dispute arising out of, or relating in any way to, this Letter Agreement shall be brought and enforced in the Delaware Chancery Court, and irrevocably submit to such jurisdiction and venue, which jurisdiction and venue shall be
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exclusive and (ii) waive any objection to such exclusive jurisdiction and venue or that such courts represent an inconvenient forum.

8. This Letter Agreement shall terminate upon the date that all Relocked Shares have been released from the transfer restrictions set forth in Section 1 hereof, as provided in Section 3 hereof.

[Remainder of Page Intentionally Left Blank]

Very truly yours,

If stockholder is an individual:

Signature:

Print Name:

[Signature Page to Lock-Up Agreement]