

PROSPECTUS SUPPLEMENT NO. 2
(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 May 17, 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 May 17, 2022, the closing price of our Common Stock was \$10.71 per share and the closing price for our Public Warrants was \$1.60 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 May 18, 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): May 11, 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)

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

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 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

Non-Employee Director Compensation Program

On May 11, 2022, the Compensation Committee of the Board of Directors (the “Board”) of Energy Vault Holdings, Inc. (the “Company”) approved a non-employee director compensation program.

Pursuant to the approved non-employee director compensation program, non-employee directors will receive an annual cash retainer of \$75,000, paid quarterly in arrears. The Company will reimburse non-employee directors for their reasonable out-of-pocket expenses incurred in connection with attending Board and Board committee meetings. In addition, non-employee directors will receive grants of equity awards under the Company’s 2022 Equity Incentive Plan (the “2022 Plan”). Upon joining the Board, a new non-employee director will receive restricted stock units (“RSUs”) with an approximate grant date value of \$200,000, and committee chairs will be granted additional RSUs with a target value of \$15,000. This new director equity award will vest in three annual installments on each anniversary of the date of grant subject to the director’s continued service on the board through each such anniversary. In connection with each annual meeting of stockholders, each non-employee director who will continue to serve on the Board will receive RSUs with an approximate grant date value of \$100,000. These annual equity awards will vest in full on the earlier of the one-year anniversary of the date of grant or the date of the next annual meeting of stockholders subject to the director’s continued service on the board through such date. Both new director equity awards and annual equity awards will vest in full in the event of a change in control while the non-employee director remains in service.

The summary description of the non-employee director compensation program set forth above does not purport to be complete and is qualified in its entirety by reference to the full text of such program, a copy of which will be filed with the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2022.

Bonus Plan

On May 11, 2022 the Compensation Committee of the Board approved the Energy Vault Holdings, Inc. Incentive Bonus Plan (the “Bonus Plan”) pursuant to which the Company may adopt bonus programs for employees of the Company and its affiliates, including its executive officers. Bonuses may be based on performance criteria established by the plan administrator which may be based on Company or individual performance, on an absolute or relative basis, and may be paid in cash or in the form of equity awards granted under the 2022 Plan or another equity plan maintained by the Company.

The summary description of the Bonus Program set forth above does not purport to be complete and is qualified in its entirety by reference to the full text of such program, a copy of which will be filed with the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2022.
Updates to the 2022 Plan

On May 11, 2022, the Compensation Committee of the Board approved forms of award agreements for awards of RSUs and stock options, in each case, under the 2022 Plan.

The forms of agreements will be filed with the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2022.

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: May 17, 2022