

FORM 4

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

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

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF
SECURITIES**

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

1. Name and Address of Reporting Person * Rasmus Robert E. (Last) (First) (Middle) C/O ADVANCED EMISSIONS SOLUTIONS, INC., 8051 E MAPLEWOOD AVE STE 210 (Street) GREENWOOD VILLAGE, CO 80111 (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol Advanced Emissions Solutions, Inc. [ADES]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) Chief Executive Officer
3. Date of Earliest Transaction (MM/DD/YYYY) <p align="center">7/17/2023</p>		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person
Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned		

1. Title of Security (Instr. 3)	2. Trans. Date	2A. Deemed Execution Date, if any	3. Trans. 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			
Common Stock	7/17/2023		A ⁽¹⁾		422,221	A	\$1.8947	422,221	D	
Common Stock	7/17/2023		A ⁽¹⁾		527,779	A	\$1.8947	527,779	I	By RER Legacy Investments II LLC. ⁽²⁾

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

1. Title of Derivate Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Trans. Date	3A. Deemed Execution Date, if any	4. Trans. 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		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 of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Stock Option (right to buy)	\$3	7/17/2023		A		1,000,000		Ⓡ	7/17/2033	Common Stock	1,000,000	\$0	1,000,000	D	
Restricted Stock Units	Ⓡ	7/17/2023		A		400,000		Ⓡ	Ⓡ	Common Stock	400,000	\$0	400,000	D	

Explanation of Responses:

- (1) Mr. Rasmus agreed to acquire the shares of the Issuer's common stock, par value \$0.001 (the "Common Stock"), reported on this row from the Company for cash pursuant to a subscription agreement entered into with the Issuer.
- (2) The shares of Common Stock reported on this row are held by RER Legacy Investments II LLC ("RER Legacy"). Mr. Rasmus is the ultimate control person of RER Legacy, and an indirect beneficial owner of these shares. Mr. Rasmus disclaims beneficial ownership of these shares except to the extent of his pecuniary interest therein.
- (3) Represents options to purchase Common Stock granted to Mr. Rasmus as an employment inducement award. The options will vest ratably in three equal annual installments on each anniversary of the date of grant.
- (4) Represents restricted stock units ("RSUs") granted to Mr. Rasmus as an employment inducement award. Each RSU represents the right to receive one share of Common Stock upon vesting and settlement.

- (5) 250,000 RSUs vest when the volume weighted average price ("VWAP") of the Common Stock over a 30-day period equals \$10.00 per share and 150,000 RSUs vest when the VWAP over a 30-day period equals \$15.00 per share, in each case, prior to the third anniversary of the date of grant.

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Rasmus Robert E. C/O ADVANCED EMISSIONS SOLUTIONS, INC. 8051 E MAPLEWOOD AVE STE 210 GREENWOOD VILLAGE, CO 80111	X		Chief Executive Officer	

Signatures

/s/ Robert E. Rasmus

7/19/2023

**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.

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