

FORM 4

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

OMB APPROVAL
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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 * Marken Greg <small>(Last) (First) (Middle)</small> 8051 E MAPLEWOOD AVE, STE 210, C/O ADVANCED EMISSIONS SOLUTIONS, INC. <small>(Street)</small> GREENWOOD VILLAGE, CO 80111 <small>(City) (State) (Zip)</small>	2. Issuer Name and Ticker or Trading Symbol Advanced Emissions Solutions, Inc. [ADES] 3. Date of Earliest Transaction (MM/DD/YYYY) <p align="center">3/23/2023</p>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) CEO
4. If Amendment, Date Original Filed (MM/DD/YYYY) 		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
Rule 10b5-1(c) Transaction Indication <input type="checkbox"/> 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.		

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	3/23/2023		A		90,871	A	\$0	195,790	D	
Common Stock	3/23/2023		F		9,379	D	\$1.97	186,411	D	

Table II - Derivative Securities 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. 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				
Performance Share Units	(1)	3/23/2023		A		90,871		(1)	3/10/2026 (1)	Common Stock	181,742 (2)	\$0	90,871	D	

Explanation of Responses:

- (1) Each Performance Share Unit ("PSU") represents a contingent right to receive one share of the Company's common stock upon vesting of the PSU, which will occur, if at all, no later than March 10, 2026 subject to the reporting person's continuous service with the Company or its related entities and the achievement of certain pre-established goals to be measured as of December 31, 2025.
- (2) Represents the maximum number of PSUs that will vest, if at all, which is 200% of the target award.

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Marken Greg 8051 E MAPLEWOOD AVE, STE 210 C/O ADVANCED EMISSIONS SOLUTIONS, INC. GREENWOOD VILLAGE, CO 80111			CEO	

Signatures

/s/ Greg P. Marken

3/27/2023

**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.

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 control number.