

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 - *	2. Issuer Name and Ticker or Trading Symbol	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)
JEFFERIES D CRAIG	ADVANCED ENERGY INDUSTRIES INC [AEIS]	<input type="checkbox"/> Director <input type="checkbox"/> 10% Owner
(Last) (First) (Middle)	3. Date of Earliest Transaction (MM/DD/YYYY)	<input checked="" type="checkbox"/> X Officer (give title below) <input type="checkbox"/> Other (specify below)
1625 SHARP POINT DRIVE	7/20/2004	EVP and Chief Marketing Officer
(Street)	4. If Amendment, Date Original Filed (MM/DD/YYYY)	6. Individual or Joint/Group Filing (Check Applicable Line)
FORT COLLINS, CO US		<input checked="" type="checkbox"/> X Form filed by One Reporting Person
(City) (State) (Zip)		<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

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				
Employee Stock Option (right to buy)	\$7.61							4/16/2004 (1)	4/16/2013	Common Stock	80000		80000	D	
Employee Stock Option (right to buy)	\$19.24							7/23/2004 (1)	7/23/2013	Common Stock	25000		105000	D	
Employee Stock Option (right to buy)	\$22.52							10/15/2004 (1)	10/15/2013	Common Stock	25000		130000	D	
Employee Stock Option (right to buy)	\$22.30							2/11/2005 (1)	2/11/2014	Common Stock	17500		147500	D	
Employee Stock Option (right to buy)	\$20.81							4/14/2005 (1)	4/14/2014	Common Stock	17500		165000	D	
Employee Stock Option (right to buy)	\$12.80	7/20/2004		A		17500		7/20/2005 (1)	7/20/2014	Common Stock	17500	\$12.80	182500 (2)	D	

Explanation of Responses:

- (1) Stock options dated 04/16/2003, 07/23/2003, 10/15/2003, 02/11/2004, 04/14/2004 and 07/20/2004 are such that 1/4 of the shares become exercisable on the first anniversary following the date of grant, and the remaining shares become exercisable in equal increments each quarter for 3 years thereafter.
- (2) Mr. Jeffries has Employee Stock Options (right to buy) for a total of 182,500 shares of Common Stock.

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
JEFFERIES D CRAIG 1625 SHARP POINT DRIVE FORT COLLINS, CO US			EVP and Chief Marketing Officer	

Signatures

Michael El-Hillow - Attorney-in-Fact

7/21/2004

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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