

[] Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

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)		
NOETH ARTHUR A			ADVANCED ENERGY INDUSTRIES INC [AEIS]			<input checked="" type="checkbox"/> Director <input type="checkbox"/> 10% Owner		
(Last) (First) (Middle)			3. Date of Earliest Transaction (MM/DD/YYYY)			<input type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below)		
1625 SHARP POINT DRIVE			5/5/2004					
(Street)			4. If Amendment, Date Original Filed (MM/DD/YYYY)			6. Individual or Joint/Group Filing (Check Applicable Line)		
FORT COLLINS, CO 80525						<input checked="" type="checkbox"/> 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			
Common Stock								0	D	

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 or Indirect 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				
Director Stock Option (right to buy)	\$21.75							7/22/1997 (U)	7/22/2007	Common Stock	7500		7500	D	
Director Stock Option (right to buy)	\$11.6875							7/22/1998 (U)	7/22/2008	Common Stock	2500		10000	D	
Director Stock Option (right to buy)	\$35.00							7/22/1999 (U)	7/22/2009	Common Stock	2500		12500	D	
Director Stock Option (right to buy)	\$45.50							7/22/2000 (U)	7/22/2010	Common Stock	2500		15000	D	
Director Stock Option (right to buy)	\$29.53							7/23/2001 (U)	7/22/2011	Common Stock	2500		17500	D	
Director Stock Option (right to buy)	\$15.98							7/22/2002 (U)	7/22/2012	Common Stock	2500		20000	D	
Director Stock Option (right to buy)	\$10.67							5/7/2003 (U)	5/7/2013	Common Stock	5000		25000	D	
Director Stock Option (right to buy)	\$14.40	5/5/2004		A		5000		5/5/2004 (U)	5/5/2014	Common Stock	5000	\$14.40	30000 (U)	D	

Explanation of Responses:

- (1) The director stock option granted on July 22, 1997 is immediately exercisable as to 2,500 shares of Common Stock and will vest as to 2,500 shares on each of July 22, 1999 and July 22, 2000.
- (2) The director stock options granted on July 22, 1998, July 22, 1999, July 22, 2000, July 23, 2001, and July 22, 2002 will vest as to 2,500 shares of Common Stock on the third anniversary of the grant date.
- (3) The director stock options granted on May 7, 2003 and May 5, 2004 are immediately fully exercisable.
- (4) Mr. Noeth has been granted Director Stock Options (right to buy) totaling 30,000 shares of Common Stock with the above exercise prices and expiration dates.

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
NOETH ARTHUR A 1625 SHARP POINT DRIVE FORT COLLINS, CO 80525	X			

Signatures

Michael El-Hillow - Attorney-in-Fact 5/6/2004
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.

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.

POWER OF ATTORNEY

Know all by these presents, that the undersigned hereby constitutes and appoints each of Douglas S. Schatz, Michael El-Hillow, Gary D. Watkins and Catherine L. Kawakami, signing singly, the undersigned's true and lawful attorney-in-fact to:

(1) execute for and on behalf of the undersigned, in the undersigned's capacity as an officer and/or director of Advanced Energy Industries, Inc. (the "Company"), Forms 3, 4 and 5 in accordance with Section 16(a) of the Securities Exchange Act of 1934 and the rules thereunder;

(2) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such Form 3, 4, or 5 and timely file such form with the United States Securities and Exchange Commission and any stock exchange or similar authority; and

(3) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by such attorney-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorney-in-fact may approve in such attorney-in-fact's discretion.

The undersigned hereby grants to each such attorney-in-fact power and authority to do and perform any and every act and thing whatsoever requisite, necessary or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorney-in-fact, or such attorney-in-fact's substitute or substitutes, shall lawfully do or cause to be done by virtue of this Power of Attorney and the rights and powers herein granted.

The undersigned acknowledges that the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, are not assuming, nor is the Company assuming, any of the undersigned's responsibilities to comply with Section 16 of the Securities Exchange Act of 1934 and the rules thereunder.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms 3, 4, and 5 with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 14th day of April, 2004.

/s/ Arthur A. Noeth