ADVANCED ENERGY INDUSTRIES INC

FORM 10-Q
(Quarterly Report)

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Address	1625 SHARP POINT DR
	FT COLLINS, Colorado 80525
Telephone	970-221-4670
CIK	0000927003
Industry	Electronic Instr. & Controls
Sector	Technology
Fiscal Year	12/31

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

FORM 10-Q

(Mark One)

[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the quarterly period ended September 30, 2003.

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the transition period from _____to _____.

Commission file number: **000-26966**

ADVANCED ENERGY INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Delaware	**84-0846841**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1625 Sharp Point Drive, Fort Collins, CO	**80525**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(970) 221-4670**

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes [X] No [ ].

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act). Yes [X] No [ ].

As of October 27, 2003, there were 32,341,482 shares of the registrant's Common Stock, par value $0.001 per share, outstanding.

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PART I FINANCIAL INFORMATION

ITEM 1. UNAUDITED FINANCIAL STATEMENTS

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands)

	September 30, 2003 (Unaudited)	December 31, 2002 (Unaudited)
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 33,004	$ 70,188
Marketable securities	103,376	102,159
Accounts receivable, net	53,967	43,885
Income tax receivable	14,089	14,720
Inventories	58,579	57,306
Other current assets	6,727	6,828
Deferred income tax assets, net	—	17,510
Total current assets	269,742	312,596
PROPERTY AND EQUIPMENT, net	43,426	41,178
OTHER ASSETS:		
Deposits and other	5,451	5,181
Goodwill and intangibles, net	87,051	86,601
Demonstration and customer service equipment, net	4,250	6,086
Deferred debt issuance costs, net	3,266	4,091
Total assets	$413,186	$455,733
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Trade accounts payable	$ 21,023	$ 16,055
Accrued payroll and employee benefits	9,590	9,348
Other accrued expenses	18,000	19,964
Acquisition related escrow	—	1,675
Customer deposits and deferred revenue	1,385	77
Capital lease obligations, current portion	98	691
Senior borrowings, current portion	12,784	14,506
Accrued interest payable on convertible subordinated notes	1,810	2,338
Total current liabilities	64,690	64,654
LONG-TERM LIABILITIES:		
Capital leases, net of current portion	841	669
Senior borrowings, net of current portion	6,665	9,996
Deferred income tax liabilities, net	3,777	8,663
Convertible subordinated notes payable	187,718	187,718
Other long-term liabilities	697	694
	199,698	207,740
Total liabilities	264,388	272,394
STOCKHOLDERS' EQUITY	148,798	183,339
Total liabilities and stockholders' equity	$413,186	$455,733

The accompanying notes to condensed consolidated financial statements
are an integral part of these condensed consolidated balance sheets.

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)

	Three Months Ended September 30,	
	2003 (Unaudited)	2002 (Unaudited)
SALES	$ 68,567	$70,674
COST OF SALES	45,474	44,074
Gross profit	23,093	26,600
OPERATING EXPENSES:		
Research and development	12,979	12,185
Sales and marketing	7,329	9,738
General and administrative	6,340	7,245
Restructuring charges	1,011	3,220
Intangible asset impairment	1,175	—
Total operating expenses	28,834	32,388
LOSS FROM OPERATIONS	(5,741)	(5,788)
OTHER INCOME (EXPENSE):		
Interest income	358	749
Interest expense	(2,817)	(3,164)
Foreign currency gain (loss)	290	(220)
Other expense, net	(92)	(162)
	(2,261)	(2,797)
Loss before income taxes	(8,002)	(8,585)
(PROVISION) BENEFIT FOR INCOME TAXES	(19,436)	3,005
NET LOSS	$(27,438)	$ (5,580)
BASIC AND DILUTED LOSS PER SHARE	$ (0.85)	$ (0.17)
BASIC AND DILUTED WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING	32,286	32,073

	Nine Months Ended September 30,	
	2003 (Unaudited)	2002 (Unaudited)
SALES	$187,671	$181,454
COST OF SALES	126,355	117,168
Gross profit	61,316	64,286
OPERATING EXPENSES:		
Research and development	38,897	36,020
Sales and marketing	23,920	25,201
General and administrative	17,487	21,073
Litigation damages and expenses	—	5,313
Restructuring charges	3,288	3,220
Intangible asset impairment	1,175	—
Total operating expenses	84,767	90,827

LOSS FROM OPERATIONS	(23,451)	(26,541)
OTHER INCOME (EXPENSE):		
Interest income	1,322	2,465
Interest expense	(8,443)	(9,652)
Foreign currency gain	299	4,387
Other expense, net	(529)	(570)
	(7,351)	(3,370)
Loss before income taxes	(30,802)	(29,911)
(PROVISION) BENEFIT FOR INCOME TAXES	(11,000)	10,469
NET LOSS	$ (41,802)	$ (19,442)
BASIC AND DILUTED LOSS PER SHARE	$ (1.30)	$ (0.61)
BASIC AND DILUTED WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING	32,217	31,994

The accompanying notes to condensed consolidated financial statements are an integral part of these condensed consolidated statements.

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Nine Months Ended September 30,	
	2003 (Unaudited)	2002 (Unaudited)
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$(41,802)	$(19,442)
Adjustments to reconcile net loss to net cash used in operating activities –		
Depreciation and amortization	17,630	13,924
Amortization of deferred debt issuance costs	824	1,005
Amortization of deferred compensation	363	393
Provision (benefit) for deferred income taxes	8,956	(1,352)
Unrealized loss (gain) on foreign currency forward contracts	57	(1,394)
Loss on disposal of property and equipment	1,882	329
Impairment of marketable security	175	—
Impairment of intangible asset	1,175	—
Changes in operating assets and liabilities (net of assets and liabilities acquired) –		
Accounts receivable, net	(9,347)	(10,009)
Inventories	(2,100)	(579)
Other current assets	784	(462)
Deposits and other	1,066	272
Demonstration and customer service equipment	(2,945)	(2,028)
Trade accounts payable	4,451	7,643
Accrued payroll and employee benefits	25	269
Customer deposits and other accrued expenses	(1,475)	(136)
Income taxes payable/receivable, net	774	(4,911)
Unrealized gain on intercompany foreign currency loan	—	(3,695)
Net changes in operating assets and liabilities (net of assets and liabilities acquired)	(8,767)	(13,636)
Net cash used in operating activities	(19,507)	(20,173)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of marketable securities	(1,004)	(1,990)
Sale of marketable securities	—	90,420
Proceeds from sale of assets	4,793	—
Purchase of property and equipment	(15,618)	(7,272)
Purchase of investments and advances	(400)	(1,997)
Acquisition of Aera Japan Limited, net of cash acquired	—	(35,689)
Acquisition of Dressler HF Technik GmbH, net of cash acquired	(1,675)	(14,395)
Acquisition of interest of LITMAS, net of cash acquired	—	(400)
Net cash (used in) provided by investing activities	(13,904)	28,677
CASH FLOWS FROM FINANCING ACTIVITIES:		
Payments on notes payable and capital lease obligations	(6,765)	(6,382)
Proceeds from exercise of stock options and other awards	1,860	1,623
Net cash used in financing activities	(4,905)	(4,759)
EFFECT OF CURRENCY TRANSLATION ON CASH	1,132	1,553
(DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(37,184)	5,298
CASH AND CASH EQUIVALENTS, beginning of period	70,188	81,955
CASH AND CASH EQUIVALENTS, end of period	$ 33,004	$ 87,253
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid for interest	$ 8,606	$ 9,123

Cash paid (received) for income taxes, net	$ 345	$ (2,398)
Assets sold for note receivable	$ 1,538	$ —

The accompanying notes to condensed consolidated financial statements are an integral part of these condensed consolidated statements.

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
SEPTEMBER 30, 2003
(UNAUDITED)

(1) BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

In the opinion of management, the accompanying interim unaudited condensed consolidated balance sheets, statements of operations and cash flows contain all adjustments necessary to present fairly the financial position of Advanced Energy Industries, Inc., a Delaware corporation, and its wholly owned subsidiaries (the "Company") at September 30, 2003 and December 31, 2002, and the results of their operations for the three- and nine-month periods ended September 30, 2003 and 2002, and cash flows for the nine-month periods ended September 30, 2003 and 2002.

The unaudited financial statements presented herein have been prepared in accordance with the instructions to Form 10-Q and do not include all the information and note disclosures required by accounting principles generally accepted in the United States. The financial statements should be read in conjunction with the audited financial statements and footnotes thereto contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2002, filed March 27, 2003.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Company's management to make estimates and assumptions that affect the amounts reported and disclosed in the financial statements and accompanying footnotes. Actual results could differ materially from those estimates.

GOODWILL AND INTANGIBLES — Goodwill and certain other intangible assets with indefinite lives, if present, are not amortized. Instead, goodwill and other intangible assets are subject to periodic (at least annual) tests for impairment. The impairment testing is performed in two steps: (i) the Company assesses goodwill for a potential impairment loss by comparing the fair value of a reporting unit with its carrying value, and (ii) if an impairment is indicated by a reporting unit whose fair value is less than its carrying amount, the Company measures the amount of impairment loss by comparing the implied fair value of goodwill with the carrying amount of that goodwill.

In the fourth quarter of 2002, the Company completed its evaluation of the goodwill and intangible assets recorded as a result of the acquisitions of Aera, which it acquired on January 18, 2002, Dressler, which it acquired on March 28, 2002, and the remaining 40.5% of LITMAS that the Company did not previously own on April 2, 2002. In the fourth quarter of 2002, the Company also performed its annual goodwill impairment test, and concluded that because the estimated fair value of the Company's reporting units exceeded their carrying amounts, no impairment of goodwill was indicated. As the Company is required to perform the test for impairment at least annually, it is reasonably possible that a future test may indicate impairment, and the amount of impairment may be material to the Company.

Goodwill and other intangibles consisted of the following as of December 31, 2002:

	Original Gross Carrying Amount	Accumulated Amortization	Cumulative Effect of Changes in Exchange Rates	Net Carrying Amount	Weighted-average Useful Life (Years)
	(In thousands, except weighted-average useful life)				
Amortizable intangibles:					
Technology-based	$ 9,378	$(3,715)	$ 937	$ 6,600	6
Contract-based	9,210	(3,634)	936	6,512	4
Other	8,500	(537)	1,298	9,261	17
Total amortizable intangibles	27,088	(7,886)	3,171	22,373	10
Goodwill	58,629	—	5,599	64,228	
Total goodwill and intangibles	$85,717	$(7,886)	$8,770	$86,601	

Goodwill and other intangibles consisted of the following as of September 30, 2003:

	Original Gross Carrying Amount	Accumulated Amortization	Cumulative Effect of Changes in Exchange Rates	Net Carrying Amount	Weighted-average Useful Life (Years)
	(In thousands, except weighted-average useful life)				
Amortizable intangibles:					
Technology-based	$ 7,304	$(3,526)	$ 1,303	$ 5,081	6
Contract-based	9,210	(5,292)	1,419	5,337	4
Other	8,500	(1,178)	1,952	9,274	17
Total amortizable intangibles	25,014	(9,996)	4,674	19,692	10
Goodwill	58,629	—	8,730	67,359	
Total goodwill and intangibles	$83,643	$(9,996)	$13,404	$87,051	

Aggregate amortization expense related to other intangibles for the three-month periods ended September 30, 2003 and 2002 was approximately $1.1 million and $1.6 million, respectively, and approximately $3.5 million for the nine-month periods ended September 30, 2003 and 2002. Estimated amortization expense related to the Company's acquired intangibles fluctuates with changes in foreign currency exchange rates between the U.S. dollar and the Japanese yen and the euro. Estimated amortization expense for each of the five years 2004 through 2008 is as follows:

	(In thousands)
2004	$ 4,050
2005	4,050
2006	2,164
2007	840
2008	676

During the third quarter of 2003, the Company determined that one of its mass flow controller products would require a significant technological investment in order to conform to changing customer technologies which would enable it to be accepted by the semiconductor capital equipment industry. As a result, the Company performed an assessment of the carrying value of the related intangible asset. This assessment consisted of estimating the intangible asset's fair value and comparing the estimated fair value to the carrying value of the asset. The Company estimated the intangible asset's fair value using a cash flow model assuming the technological investment was made, discounted at discount rates consistent with the risk of the related cash flows, and applying a hypothetic royalty rate to the projected revenue stream. Based on this analysis the Company determined that the fair value of the intangible asset was minimal and recorded an impairment of the carrying value of approximately $1.2 million, which has been reported as an intangible asset impairment in the accompanying condensed consolidated financial statements.

FOREIGN CURRENCY TRANSLATION — The functional currency of the Company's foreign subsidiaries is their local currency. Assets and liabilities of international subsidiaries are translated to U.S. dollars at period-end exchange rates, and statement of operations activity and cash flows are translated at average exchange rates during the period. Resulting translation adjustments are recorded as a separate component of stockholders' equity.

Transactions denominated in currencies other than the local currency are recorded based on exchange rates at the time such transactions arise. Subsequent changes in exchange rates result in foreign currency transaction gains and losses which are reflected in income as unrealized (based on period end translation) or realized (upon settlement of the transactions). Unrealized transaction gains and losses applicable to permanent investments by the Company in its foreign subsidiaries are included as cumulative translation adjustments, and unrealized translation gains or losses applicable to non-permanent intercompany receivables from or payables to the Company and its foreign subsidiaries are included in income.

The Company recognized gains on foreign currency transactions of approximately $290,000 and $299,000 for the three- and nine-month periods ended September 30, 2003, respectively. In the second quarter of 2002, the Company recognized a net foreign currency gain of approximately $4.5 million, the

majority of which was related to an intercompany loan of Japanese yen (which was settled in January 2003) that Advanced Energy U.S. made to its subsidiary Advanced Energy Japan K.K. ("AE-Japan") (which has a functional currency of yen) for the purpose of effecting the acquisition of Aera. The loan was transacted in the first quarter of 2002, for approximately 5.7 billion yen (approximately $44 million based on an exchange rate of 130:1). During the first quarter of 2002, the exchange rate between the U.S. dollar and the Japanese yen remained relatively stable, and an immaterial loss was recorded related to this intercompany loan. During the second quarter of 2002, the U.S. dollar weakened significantly against the yen to approximately 119:1, resulting in a gain of approximately $4.6 million.

REVENUE RECOGNITION — The Company generally recognizes revenue upon shipment of its products and spare parts, at which time title passes to the customer, as its shipping terms are FOB shipping point, the price is fixed and collectibility is reasonably assured. Generally, the Company does not install its products. In certain limited instances, some customers have negotiated product acceptance provisions relative to specific orders. Under these circumstances the Company defers revenue recognition until the related acceptance provisions have been satisfied. Revenue deferrals are reported as customer deposits and deferred revenue in the accompanying condensed consolidated balance sheets.

In certain instances, the Company requires its customers to pay for a portion or all of their purchases prior to the Company building or shipping these products. Cash payments received prior to shipment are recorded as customer deposits and deferred revenue in the accompanying balance sheets, and then recognized as revenue upon shipment of the products. The Company does not offer price protection to its customers or allow returns, unless covered by the Company's normal policy for repair of defective products.

The Company has an arrangement with one of its major customers, a semiconductor capital equipment manufacturer, in which completed products are shipped to the customer and held by it in its warehouse. The customer draws products from this inventory as needed, at which time title passes to the customer and the Company recognizes revenue. The customer is subject to the Company's normal warranty policy for repair of defective products.

In certain instances the Company delivers products to customers for evaluation purposes. In these arrangements, the customer retains the products for specified periods of time without commitment to purchase. On or before the expiration of the evaluation period, the customer either rejects the product and returns it to the Company, or accepts the product. Upon acceptance, title passes to the customer, the Company invoices the customer for the product, and revenue is recognized. Pending acceptance by the customer, such products are reported on the Company's balance sheet at an estimated value based on the lower of cost or market, and are included in the amount for demonstration and customer service equipment, net of accumulated depreciation.

INCOME TAXES — The Company accounts for income taxes in accordance with SFAS No. 109, "Accounting for Income Taxes." SFAS No. 109 requires deferred tax assets and liabilities to be recognized for temporary differences between the tax basis and financial reporting basis of assets and liabilities, computed at current tax rates, as well as for the expected tax benefit of net operating loss and tax credit carryforwards. During the third quarter of 2003, the Company recorded a valuation allowance of $22.4 million against all of its United States and foreign net deferred tax assets in jurisdictions where the Company has recognized significant operating losses. This valuation allowance was recorded because the Company has incurred significant operating losses in 2001, 2002 and year-to-date through September 30, 2003. Given such experience, and along with continuing volatility in our customers' industries, management could not conclude that it was more likely than not that the net deferred tax asset would be realized. While there are indications that the industries in which the Company operates may improve in 2004 and 2005, these indications have not yet resulted in a substantial increase in orders from the Company's customers. Accordingly, the Company's management, in accordance with SFAS No. 109, in evaluating the recoverability of the net deferred tax asset, placed greater weight on the Company's historical results as compared to projections regarding future taxable income. If the Company generates future taxable income, in the appropriate tax jurisdiction, against which these tax attributes may be applied,

some portion or all of the valuation allowance will be reversed and a corresponding reduction in income tax expense will be reported in future periods.

When recording acquisitions, the Company has recorded valuation allowances due to the uncertainty related to the realization of certain deferred tax assets existing at the acquisition dates. The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed. Any reversals of valuation allowances recorded in purchase accounting will be reflected as a reduction of goodwill in the period of reversal.

RESTRUCTURING COSTS — Restructuring charges include the costs associated with actions taken by the Company in response to the continuing downturn in the semiconductor capital equipment industry and as a result of the ongoing execution of the Company's strategy. These charges consist of costs that are incurred to exit an activity or cancel an existing contractual obligation, including closure of facilities and employee termination related charges.

Effective January 1, 2003, the Company adopted SFAS No. 146, "Accounting for Exit or Disposal Activities." This statement addresses significant issues regarding the recognition, measurement and reporting of costs that are associated with exit and disposal activities, including restructuring activities that were previously accounted for pursuant to the guidance set forth in Emerging Issues Task Force ("EITF") Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity." SFAS No. 146 is effective for exit or disposal activities that are initiated after December 31, 2002. The adoption of SFAS No. 146 did not have a material effect on the Company's financial position or results of operations, however expense recognition of certain restructuring activities in 2003 have been reported in later periods under SFAS No. 146 than would have been the case under EITF Issue No. 94-3.

At the end of 2002, the Company announced major changes in its operations to occur through the end of 2003. These included establishing a new manufacturing facility in China, consolidating worldwide sales forces, a move to Tier 1 suppliers, primarily in Asia, and the intention to close or sell certain facilities.

Associated with the above plan, the Company recognized charges of approximately $1.0 million in the third quarter of 2003 that consisted primarily of the recognition of expense for involuntary employee termination benefits associated with the Company's second quarter headcount reduction, asset impairments incurred as a result of exiting its Longmont, Colorado manufacturing facilities, and the involuntary termination of 20 employees in the third quarter of 2003.

In the second quarter of 2003, the Company recognized charges that consisted primarily of the involuntary termination of 55 manufacturing and administrative personnel in the Company's U.S. operations. Certain of the employees were terminated and paid prior to the end of the second quarter of 2003, which resulted in restructuring charges totaling approximately $768,000 for the three months ended June 30, 2003. In addition, certain employees were required to render service beyond a minimum retention period (generally 60 days). In accordance with SFAS No. 146, the Company measured the termination benefits at the communication date, but approximately $170,000 was recognized as expense during the third quarter of 2003, and approximately $170,000 will be recognized as expense in the fourth quarter of 2003 as these employees complete their service requirement.

The Company also recorded charges totaling approximately $1.5 million in the first quarter of 2003 primarily associated with manufacturing and administrative personnel headcount reductions in the Company's Japanese operations. In accordance with Japanese labor regulations the Company offered voluntary termination benefits to all of its Japanese employees. The voluntary termination benefits were accepted by 36 employees prior to March 31, 2003, with termination dates in the second quarter of 2003. All termination benefits were paid in the second quarter of 2003.

At September 30, 2003, outstanding liabilities related to the 2003 and 2002 restructuring charges were approximately $3.2 million. At December 31, 2002, outstanding liabilities related to the 2002 restructuring charges were approximately $6.0 million. Liabilities for restructuring charges are reported as part of other accrued expenses on the accompanying condensed consolidated balance sheets.

The Company recorded restructuring charges totaling $9.1 million in 2002, primarily associated with changes in operations designed to reduce redundancies and better align the Company's Aera mass flow controller business within its operating framework. The Company's restructuring plans and associated costs consisted of $6.0 million to close and consolidate certain manufacturing facilities, and $3.1 million for related headcount reductions of approximately 223 employees.

The following table summarizes the components of the restructuring charges, the payments and non-cash charges, and the remaining accrual as of September 30, 2003:

	Employee Severance and Termination Costs	Facility Closure Costs	Total Restructuring Charges
		(In thousands)	
Accrual balance December 31, 2001	$ 965	$ 462	$ 1,427
Third quarter 2002 restructuring charge	1,033	2,187	3,220
Payments in the first nine months of 2002	(1,424)	(408)	(1,832)
Accrual balance September 30, 2002	574	2,241	2,815
Fourth quarter 2002 restructuring charge	2,021	3,819	5,840
Payments in the fourth quarter of 2002	(988)	(1,678)	(2,666)
Accrual balance December 31, 2002	1,607	4,382	5,989
First quarter 2003 restructuring charge	1,509	—	1,509
Second quarter 2003 restructuring charge	670	98	768
Third quarter 2003 restructuring charge	704	307	1,011
Payments in the first nine months of 2003	(4,193)	(1,916)	(6,109)
Accrual balance September 30, 2003	$ 297	$ 2,871	$ 3,168

STOCK-BASED COMPENSATION — Prior to May 7, 2003 the Company had five stock-based compensation plans, which are more fully described in Note 16 to the Company's Form 10-K for the year ended December 31, 2002. On May 7, 2003 the Company's stockholders approved the 2003 Stock Option Plan (the "2003 Plan"), the 2003 Non-Employee Directors' Stock Option Plan (the "2003 Directors' Plan") and an amendment to the Employee Stock Purchase Plan ("ESPP").

The 2003 Plan provides for the issuance of up to 3,250,000 shares of common stock. Shares may be issued under the 2003 Plan on exercise of incentive stock options or non-qualified stock options granted under the 2003 Plan or as restricted stock awards. Stock appreciation rights may also be granted under the 2003 Plan, and the shares represented by the stock appreciation rights will be deducted from shares issuable under the 2003 Plan. The exercise price of incentive stock options and non-qualified stock options may not be less than the market value of the Company's common stock on the date of grant. The Company has the discretion to determine the vesting period of options granted under the 2003 Plan, however option grants will generally vest over four years, contingent upon the optionee continuing to be an employee, director or consultant of the Company. As of September 30, 2003, 2,732,000 shares of common stock were available for grant under this plan. The Company's 1995 Employee Stock Option Plan terminated upon stockholder approval of the 2003 Plan, however existing stock options outstanding under the 1995 Employee Stock Option Plan remain outstanding according to their original terms.

The 2003 Directors' Plan provides for the issuance of up to 150,000 shares of common stock on exercise of non-qualified stock options granted under the 2003 Directors' Plan. The exercise price of options granted under the 2003 Directors' Plan may not be less than the market value of the Company's common stock on the date of grant. Non-employee directors are automatically granted an option to purchase 15,000 shares on the first date elected or appointed as a member of the Company's board, and 5,000 shares on any date re-elected as a member of the board. Options granted on the date first elected or appointed as a member of the Company's board immediately vest as to one-third of the shares subject to the grant, then another one-third on each of the first two anniversaries of the date granted, provided the optionee continues to be a director. Options granted upon re-election are immediately exercisable. As of September 30, 2003, 125,000 shares of common stock were available for grant under this plan. The Company's Non-Employee Directors Stock Option Plan terminated upon stockholder approval of the 2003

Directors' Plan, however existing stock options outstanding under the Non-Employee Directors Stock Option Plan remain outstanding according to their original terms.

The Company's ESPP was amended to increase the number of common shares reserved for issuance under the plan from 200,000 shares to 400,000 shares. At September 30, 2003, approximately 185,000 shares remained available for future issuance.

The Company accounts for employee stock-based compensation using the intrinsic value method prescribed by APB Opinion No. 25, "Accounting for Stock Issued to Employees" and related interpretations. With the exception of certain options granted in 1999 and 2000 by a shareholder of Sekidenko prior to its acquisition by the Company (which was accounted for as a pooling of interests), all options granted under these plans have an exercise price equal to the market value of the underlying common stock on the date of grant. Therefore, no stock-based compensation cost is reflected in the Company's net loss.

Had compensation cost for the Company's plans been determined consistent with the fair value-based method prescribed by SFAS No. 123, "Accounting for Stock-Based Compensation," the Company's net loss would have increased to the following adjusted amounts:

	Three Months Ended		Nine Months Ended	
	September 30, 2003	September 30, 2002	September 30, 2003	September 30, 2002
	(Unaudited) (In thousands, except per share data)			
Net loss:				
As reported	$(27,438)	$(5,580)	$(41,802)	$(19,442)
Adjustment for stock-based compensation determined under fair value based method for all awards, net of related tax effects	(2,562)	(2,875)	(8,003)	(7,558)
Less: Compensation expense recognized in net loss	74	82	226	246
As adjusted	$(29,926)	$(8,373)	$(49,579)	$(26,754)
Basic and diluted loss per share:				
As reported	$ (0.85)	$ (0.17)	$ (1.30)	$ (0.61)
As adjusted	(0.93)	(0.26)	(1.54)	(0.84)

Cumulative compensation cost recognized with respect to options that are forfeited prior to vesting is reflected as a reduction of compensation expense in the period of forfeiture. Compensation expense related to awards granted under the Company's employee stock purchase plan is estimated until the period in which settlement occurs, as the number of shares of common stock awarded and purchase price are not known until settlement.

For SFAS No. 123 purposes, the fair value of each option grant and purchase right granted under the ESPP are estimated on the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

	Three Months Ended		Nine Months Ended	
	September 30, 2003	September 30, 2002	September 30, 2003	September 30, 2002
OPTIONS:				
Risk-free interest rates	2.87%	3.81%	2.89%	4.19%
Expected dividend yield rates	0.0%	0.0%	0.0%	0.0%
Expected lives	7 years	7 years	7 years	7 years
Expected volatility	86.95%	88.05%	87.24%	87.71%
ESPP:				
Risk-free interest rates	1.10%	1.91%	1.39%	1.99%
Expected dividend yield rates	0.0%	0.0%	0.0%	0.0%
Expected lives	0.5 years	0.5 years	0.5 years	0.5 years
Expected volatility	71.92%	88.00%	81.49%	88.00%

Based on the Black-Scholes option pricing model, the weighted-average estimated fair value of employee stock option grants was $14.89 and $14.01 for the three months ended September 30, 2003 and 2002, respectively, and was $9.59 and $20.42 for the nine months ended September 30, 2003 and 2002, respectively. The weighted-average estimated fair value of purchase rights granted under the ESPP was $4.74 and $12.72 for the three months ended September 30, 2003 and 2002, respectively, and was $4.71 and $10.87 for the nine months ended September 30, 2003 and 2002, respectively.

EARNINGS PER SHARE — Basic (loss) earnings per share ("EPS") is computed by dividing net (loss) income by the weighted-average number of common shares outstanding during the period. The computation of diluted EPS is similar to the computation of basic EPS, except that the numerator is increased to exclude certain charges which would not have been incurred, and the denominator is increased to include the number of additional common shares that would have been outstanding (using the if-converted and treasury stock methods), if securities containing potentially dilutive common shares (convertible notes payable, options and warrants) had been converted to such common shares, and if such assumed conversion is dilutive. Due to the Company's net loss for the three- and nine- month periods ended September 30, 2003 and 2002, basic and diluted EPS are the same, as the assumed conversion of all potentially dilutive securities would be anti-dilutive. Potential shares of common stock issuable under options and warrants for common stock at September 30, 2003 and 2002 were approximately 4.1 million and 3.3 million, respectively. Potential shares of common stock issuable upon conversion of the Company's convertible subordinated notes payable were approximately 5.4 million and 5.8 million, respectively.

DERIVATIVE INSTRUMENTS — The Company, including its subsidiaries, enters into foreign currency forward contracts with counterparties to mitigate foreign currency exposure from foreign currency denominated trade purchases and intercompany receivables and payables. These derivative instruments are not held for trading or speculative purposes.

To the extent that changes occur in currency exchange rates, the Company is exposed to market risk on its open derivative instruments. This market risk exposure is generally offset by the gain or loss recognized upon the translation of its intercompany payables and receivables. Foreign currency forward contracts are entered into with major commercial U.S., Japanese and German banks that have high credit ratings, and the Company does not expect the counterparties to fail to meet their obligations under outstanding contracts. Foreign currency gains and losses under these arrangements are not deferred. The Company generally enters into foreign currency forward contracts with maturities ranging from one to eight months, with contracts outstanding at September 30, 2003 maturing through February 2004. The Company did not seek specific hedge accounting treatment for its foreign currency forward contracts.

The Company's subsidiary AE-Japan enters into foreign currency forward contracts to buy U.S. dollars to mitigate currency exposure from its payable position arising from trade purchases and intercompany transactions with its parent. At September 30, 2003, AE-Japan held foreign currency forward contracts with notional amounts of $6.5 million and market settlement amounts of $6.8 million for an unrealized loss position of approximately $300,000 that has been included in foreign currency gain (loss) in the accompanying condensed consolidated statements of operations.

During 2003, the Company's subsidiary Advanced Energy Industries GmbH ("AE-Germany") entered into foreign currency forward contracts to buy U.S. dollars to mitigate currency exposure from its payable position arising from trade purchases and intercompany transactions with its parent. At September 30, 2003, AE-Germany held foreign currency forward contracts with notional amounts of $400,000 and market settlement amounts of $409,000 for an unrealized loss position of approximately $9,000 that has been included in foreign currency gain (loss) in the accompanying condensed consolidated statements of operations.

NEW ACCOUNTING PRONOUNCEMENTS — In May 2003, the FASB issued SFAS No. 150, "Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity". SFAS No. 150 establishes standards on the classification and measurement of financial instruments with

characteristics of both liabilities and equity. SFAS No. 150 is effective for financial instruments entered into or modified after May 31, 2003 and for all financial instruments at the beginning of the first interim period beginning after June 15, 2003. The adoption of SFAS No. 150 did not have an impact on the Company's financial position or results of operations.

In April 2003, the FASB issued SFAS No. 149, "Amendment of Statement 133 on Derivative Instruments and Hedging Activities". SFAS No. 149 amends SFAS No. 133 to provide clarification on the financial accounting and reporting of derivative instruments and hedging activities and requires contracts with similar characteristics to be accounted for on a comparable basis. SFAS No. 149 is effective for contracts entered into or modified after June 30, 2003. The adoption of SFAS No. 149 did not have an impact on the Company's financial position or results of operations.

In January 2003 the FASB issued FASB Interpretation No. 46, "Consolidation of Variable Interest Entities" ("FIN No. 46"). This interpretation clarifies existing accounting principles related to the preparation of consolidated financial statements when the equity investors in an entity do not have the characteristics of a controlling financial interest or when the equity at risk is not sufficient for the entity to finance its activities without additional subordinated financial support from others parties. FIN No. 46 requires a company to evaluate all existing arrangements to identify situations where a company has a "variable interest" (commonly evidenced by a guarantee arrangement or other commitment to provide financial support) in a "variable interest entity" (commonly a thinly capitalized entity) and further determine when such variable interests require a company to consolidate the variable interest entities' financial statements with its own. FIN No. 46 is effective immediately for all variable interest entities created after January 31, 2003, and is effective for all variable interest entities created prior to that date beginning January 1, 2004. The adoption of FIN No. 46 did not, nor is it expected to, have a material impact on the Company's financial position or results of operations.

In November 2002 the EITF reached a consensus on Issue No. 00-21, "Revenue Arrangements with Multiple Deliverables." EITF Issue No. 00-21 addresses revenue recognition on arrangements encompassing multiple elements that are delivered at different points in time, defining criteria that must be met for elements to be considered to be a separate unit of accounting, and addressing the allocation of consideration among determined separate units of accounting. EITF Issue No. 00-21 is effective for revenue arrangements entered into by the Company beginning July 1, 2003. The adoption of EITF Issue No. 00-21 did not have a material impact on the Company's financial position or results of operations.

In November 2002 the FASB issued FASB Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others" ("FIN No. 45"). This interpretation requires a liability to be recognized at the time a company issues a guarantee for the fair value of obligations assumed under certain guarantee agreements. Additional disclosures about guarantee agreements are also required in interim and annual financial statements, including a roll forward of a company's product warranty liabilities. The disclosure provisions of FIN No. 45 were effective for the Company as of December 31, 2002. The provisions for initial recognition and measurement of guarantee agreements are effective on a prospective basis for guarantees that are issued or modified after December 31, 2002. The adoption of FIN No. 45 did not have a material impact on the Company's financial position or results of operations.

In April 2002 the FASB issued SFAS No. 145, "Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections." This statement rescinds SFAS No. 4, "Reporting Gains and Losses from Extinguishment of Debt," which required all gains and losses from extinguishments of debt to be aggregated and, if material, classified as an extraordinary item, net of income taxes. As a result, the criteria in Accounting Principles Board Opinion No. 30 will now be used to classify those gains and losses. Any gain or loss on the extinguishment of debt that was classified as an extraordinary item in prior periods presented that does not meet the criteria in APB 30 for classification as an extraordinary item shall be reclassified. The Company adopted the provisions of SFAS No. 145 on January 1, 2003. The adoption of this Statement will require the Company to reclassify its pretax extraordinary gain of $4,223,000 recorded during the fourth quarter of 2002 to income from continuing operations in the Company's 2003 Annual Report on Form 10-K, and in future filings.

RECLASSIFICATIONS — Certain prior period amounts have been reclassified to conform to the current period presentation.

(2) ACQUISITIONS

LITMAS — During 1998 the Company acquired a 29% ownership interest in LITMAS, a privately held, North Carolina-based early-stage company that designed and manufactured plasma gas abatement systems and high-density plasma sources. The purchase price consisted of $1 million in cash. On October 1, 1999, the Company acquired an additional 27.5% interest in LITMAS for an additional $560,000. The purchase price consisted of $385,000 in the Company's common stock and $175,000 in cash. The acquisition was accounted for using the purchase method of accounting and resulted in $523,000 allocated to intangible assets as goodwill. The results of operations of LITMAS have been consolidated in the Company's consolidated financial statements from the date the controlling interest of 56.5% was acquired. On October 1, 2000, the Company acquired an additional 3.0% interest in LITMAS for an additional $250,000, bringing the Company's ownership interest in LITMAS to 59.5%. On April 2, 2002, the Company completed its acquisition of the 40.5% of LITMAS that it did not previously own, by issuing approximately 120,000 shares of the Company's common stock valued at approximately $4.2 million, and approximately $400,000 of cash. The acquisition of the remaining minority interest in LITMAS resulted in approximately $5 million of additional goodwill. In the fourth quarter of 2002, the Company reviewed this asset for impairment under the provisions of SFAS No. 142. Based on this evaluation, an impairment was not indicated. The Company will continue to review this asset in the future for impairment.

DRESSLER — On March 28, 2002, the Company completed its acquisition of Dressler HF Technik GmbH ("Dressler"), a privately owned Stolberg, Germany-based provider of power supplies and matching networks, for a purchase price of approximately $15 million in cash and a $1.7 million escrow. The escrow fund was retained by the Company until January 2003, at which time the related escrow liability was settled. The purchase price was also subject to a $3.0 million earn-out provision if Dressler achieved certain key business objectives by March 30, 2003. These business objectives were not met prior to the expiration date.

The Company believes that Dressler will expand the Company's product offerings to customers in the semiconductor, data storage, and flat panel equipment markets due to its strong power product portfolio that includes a wide range of power levels and RF frequencies. In addition, with inroads already made into the laser and medical markets, Dressler will be used to explore new market opportunities for the Company. Dressler will also strengthen the Company's presence in the European marketplace. Dressler has well- established relationships with many European customers, who look to Dressler for innovative technical capability, quality products, and highly responsive customer service. The Company also expects to achieve synergies in product technology, production efficiency, logistics and worldwide service.

The acquisition was accounted for using the purchase method of accounting in accordance with SFAS No. 141, "Business Combinations," and the operating results of Dressler are reflected in the accompanying condensed consolidated financial statements prospectively from the date of acquisition. The tangible assets acquired and liabilities assumed were recorded at estimated fair values as determined by the Company's management. Goodwill and other intangible assets were recorded at estimated fair values based upon independent appraisals. In the fourth quarter of 2002, the Company finalized its purchase price allocation.

The purchase price, as finalized, was allocated to the net assets of Dressler as summarized below:

	(In thousands)
Cash and cash equivalents	$ 680
Accounts receivable	1,939
Inventories	1,111
Other current assets	83
Fixed assets	260
Goodwill	9,405
Other intangibles	7,750
Other assets	19
Accounts payable	(314)
Accrued payroll	(39)
Other accrued expenses	(474)
Deferred tax liability	(2,945)
Income taxes payable	(725)
	$16,750

The excess purchase price over the estimated fair value of tangible net assets acquired was allocated to goodwill and intangibles (see Note 1). In the fourth quarter of 2002, the Company reviewed these assets for impairment under the provisions of SFAS No. 142. Based on this evaluation, an impairment was not indicated. The Company will continue to review these assets in the future for impairment. The Company recognized approximately $1.8 million and $450,000 of amortization expense related to these amortizable intangibles acquired from Dressler in the nine-month periods ended September 30, 2003 and 2002, respectively.

Prior to the combination, there were transactions between the Company and Dressler in 2001 and the first three months of 2002. In 2001, the Company purchased approximately $2 million of inventory from Dressler, and Dressler purchased approximately $200,000 of inventory from the Company. In the first three months of 2002, the Company purchased approximately $500,000 of inventory from Dressler. These purchases were made in the normal course of the Company's business.

AERA — On January 18, 2002, the Company completed its acquisition of Aera Japan Limited ("Aera"), a privately held Japanese corporation. The Company effected the acquisition through its wholly owned subsidiary, AE-Japan, which purchased all of the outstanding stock of Aera. The aggregate purchase price paid by AE-Japan was 5.73 billion Japanese yen (approximately $44 million, based upon an exchange rate of 130:1), which was funded from the Company's available cash. In connection with the acquisition, AE-Japan assumed approximately $34 million of Aera's debt. Aera, which is headquartered in Hachioji, Japan, has manufacturing facilities there and manufacturing, sales and service offices in Kirchheim, Germany; and Bundang, South Korea; and sales and service offices in Dresden, Germany and Edinburgh, Scotland. In response to the continuing downturn in the semiconductor capital equipment industry and as a result of the ongoing execution of the Company's strategy, the Company closed its Edinburgh, Scotland facility during the third quarter of 2003, and plans to close its Kirchheim, Germany facility later in 2003. Aera supplies the semiconductor capital equipment industry with product lines that include digital mass flow controllers, pressure-based mass flow controllers, liquid mass flow controllers, ultrasonic liquid flow meters and liquid vapor delivery systems.

The Company believes that Aera provides it with a key leadership position in the gas delivery market and expands the Company's offering of critical sub-system solutions that enable the plasma-based manufacturing process used in the manufacture of semiconductors, as well as providing improved access to potential Asian-based customers for the Company's other products.

The acquisition was accounted for using the purchase method of accounting in accordance with SFAS No. 141, "Business Combinations," and the operating results of Aera are reflected in the accompanying condensed consolidated financial statements prospectively from the date of acquisition. The tangible assets acquired and liabilities assumed were recorded at estimated fair values as determined by the Company's management. Goodwill and other intangible assets were recorded at estimated fair values based upon independent appraisals. In the fourth quarter of 2002, the Company finalized its purchase price allocation.

The purchase price, as finalized, was allocated to the net assets of Aera as summarized below:

	(In thousands)
Cash and cash equivalents	$ 8,276
Marketable securities	115
Accounts receivable	8,405
Inventories	19,243
Other current assets	530
Fixed assets	13,388
Goodwill	24,869
Other intangibles	12,500
Other assets	427
Accounts payable	(2,329)
Accrued payroll	(2,924)
Other liabilities	(2,164)
Deferred tax liability	(4,765)
Current portion of long-term debt	(12,008)
Long-term debt	(19,598)
	$ 43,965

There were no transactions between the Company and Aera prior to the combination. The excess purchase price over the estimated fair value of tangible net assets acquired was allocated to goodwill and intangibles (see Note 1). In the fourth quarter of 2002, the Company reviewed these assets for impairment under the provisions of SFAS No. 142. Based on this evaluation, an impairment was not indicated. The Company will continue to review these assets in the future for impairment. The Company recognized approximately $1.1 million and $2.2 million of amortization expense related to the amortizable intangibles acquired from Aera in the nine-month periods ended September 30, 2003 and 2002, respectively.

Had the acquisitions of Aera and Dressler occurred on January 1, 2002, the pro forma, unaudited, combined results of operations for the Company, Aera and Dressler for the nine-month period ended September 30, 2002 would not have differed materially from the reported results of operations for the Company.

(3) MARKETABLE SECURITIES

MARKETABLE SECURITIES consisted of the following:

	September 30, 2003 (Unaudited)	December 31, 2002 (Unaudited)
	(In thousands)	
Commercial paper	$ 82,636	$ 65,250
Municipal bonds and notes	18,500	34,100
Institutional money markets	2,240	2,809
Total marketable securities	$103,376	$102,159

These marketable securities are stated at period end market value. The commercial paper consists of high credit quality, short-term preferreds with maturities or reset dates of approximately 120 days.

(4) ACCOUNTS RECEIVABLE

ACCOUNTS RECEIVABLE consisted of the following:

	September 30, 2003 (Unaudited)	December 31, 2002 (Unaudited)
	(In thousands)	
Domestic	$14,169	$16,475
Foreign	39,083	27,378
Allowance for doubtful accounts	(2,508)	(3,056)
Trade accounts receivable	50,744	40,797
Other	3,223	3,088
Total accounts receivable	$53,967	$43,885

(5) INVENTORIES

Inventories include costs of materials, direct labor and manufacturing overhead. Inventories are valued at the lower of cost or market, computed on a first-in, first-out basis and are presented net of reserves for obsolete and excess inventory. Inventory is written down or written off when it becomes obsolete, generally because of engineering changes to a product or discontinuance of a product line, or when it is deemed excess. These determinations involve the exercise of significant judgment by management, and as demonstrated in recent periods, demand for the Company's products is volatile and changes in expectations regarding the level of future sales can result in substantial charges against earnings for obsolete and excess inventory. Inventories consisted of the following:

	September 30, 2003 (Unaudited)	December 31, 2002 (Unaudited)
	(In thousands)	
Parts and raw materials	$42,680	$40,147
Work in process	4,142	4,435
Finished goods	11,757	12,724
Total inventories	$58,579	$57,306

(6) STOCKHOLDERS' EQUITY

COMPREHENSIVE LOSS for the Company consists of net loss, foreign currency translation adjustments and net unrealized holding gains (losses) on available-for-sale marketable investment securities as presented below:

	Nine Months Ended September 30, 2003 (Unaudited)	Nine Months Ended September 30, 2002 (Unaudited)
	(In thousands)	
Net loss, as reported	$(41,802)	$(19,442)
Adjustment to arrive at comprehensive net loss, net of taxes:		
Unrealized holding gain (loss) on available-for-sale marketable securities	1,025	(2,480)
Cumulative translation adjustments	4,014	2,855
Comprehensive net loss	$(36,763)	$(19,067)

STOCKHOLDERS' EQUITY consisted of the following (in thousands, except par value):

	September 30, 2003 (Unaudited)	December 31, 2002 (Unaudited)
Common stock, $0.001 par value, 70,000 shares authorized, 32,337 and 32,140 shares issued and outstanding, respectively	$ 32	$ 32

Additional paid-in capital	140,288	138,429
Retained earnings	2,391	44,193
Deferred compensation	(179)	(542)
Unrealized holding gains (losses) on available-for-sale securities, net of tax	992	(33)
Cumulative translation adjustments, net of tax	5,274	1,260
Total stockholders' equity	$148,798	$183,339

(7) CONVERTIBLE SUBORDINATED NOTES PAYABLE

The Company has approximately $121.5 million of 5.00% convertible subordinated notes outstanding ("5.00% Notes"). These notes mature September 1, 2006, with interest payable on March 1 st and September 1 st of each year beginning March 1, 2002. At September 30, 2003, approximately $500,000 of interest expense related to the 5.00% Notes was accrued as a current liability.

The Company has approximately $66.2 million of 5.25% convertible subordinated notes outstanding ("5.25% Notes"). These notes mature November 15, 2006, with interest payable on May 15 th and November 15 th each year beginning May 15, 2000. At September 30, 2003, approximately $1.3 million of interest expense related to the 5.25% Notes was accrued as a current liability.

(8) COMMITMENTS AND CONTINGENCIES

GUARANTEES — The Company offers warranty coverage for its products for periods ranging from 12 to 60 months after shipment, with the majority of its products ranging from 18 to 24 months. The Company estimates the anticipated costs of repairing products under warranty based on the historical cost of the repairs and expected failure rates. The assumptions used to estimate warranty accruals are reevaluated periodically in light of actual experience and, when appropriate, the accruals are adjusted. The Company's determination of the appropriate level of warranty accrual is subjective and based on estimates. Estimated warranty costs are recorded at the time of sale of the related product, are adjusted as appropriate and are considered a cost of sales.

The following summarizes the activity in the Company's warranty reserves during the nine-month period ended September 30, 2003:

	Balance at Beginning of Period	Additions Charged to Expense	Deductions	Balance at End of Period
		(In thousands)		
Reserve for warranty obligations	$9,402	$6,970	$(9,403)	$6,969

DISPUTES AND LEGAL ACTIONS — The Company is involved in disputes and legal actions arising in the normal course of its business. While the Company currently believes that the amount of any ultimate potential loss would not be material to the Company's financial position, the outcome of these actions is inherently difficult to predict. In the event of an adverse outcome, the ultimate potential loss could have a material adverse effect on the Company's financial position or reported results of operations in a particular period. An unfavorable decision, particularly in patent litigation, could require material changes in production processes and products or result in the Company's inability to ship products or components found to have violated third-party patent rights. The Company accrues loss contingencies in connection with its litigation when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated.

In May 2002, the Company recognized approximately $5.3 million of litigation damages and related legal expenses pertaining to a judgment entered by a jury against the Company and in favor of MKS Instruments, Inc. ("MKS") in a patent-infringement suit in which the Company was the defendant. The Company has entered into a settlement agreement with MKS allowing it to sell the infringing product subsequent to the date of the jury award. The settlement agreement is in effect until all patents subject to the litigation expire. Under the settlement agreement, royalties payable to MKS from sales of the licensed product were not material in any period presented.

In April 2003, the Company filed a claim in the United States District Court for the District of Colorado seeking a declaratory ruling that its new plasma source products Xstream™ With Active Matching Network™ ("Xstream Products") are not in violation of U.S. Patents held by MKS. In May 2003, MKS filed a patent infringement suit against the Company in the United States District Court in Wilmington,

Delaware, alleging that the Company's Xstream Products infringe five patents held by MKS. The Company believes that the Delaware court, in its May 2002 judgment in prior litigation between the Company and MKS, clearly defined the limits of the MKS technology. The Company specifically designed its Xstream Products not to infringe MKS's patents, with the advice of a team of independent experts. The Company intends to pursue its declaratory ruling and defend vigorously against the MKS complaint.

(9) SUPPLEMENTAL CASH FLOW DISCLOSURES

In the second quarter of 2003, as part of the Company's ongoing cost reduction measures, the Company committed to a plan to sell certain inventory and property and equipment assets to an unrelated third party at their respective net book values. These assets were primarily used in the manufacture of a component for the Company's direct current and radio frequency products and were sold on June 30, 2003. In conjunction with the sale, the Company received approximately $1.6 million in cash and a short-term note receivable for approximately $1.5 million in exchange for inventory with a carrying value of approximately $2.1 million and property and equipment with a carrying value of approximately $1.0 million.

In the fourth quarter of 2002 the Company announced plans to consolidate certain manufacturing facilities. In the third quarter 2003, the Company finalized the sale of its Longmont, Colorado facility for approximately $2.0 million in cash. The building and land had a carrying value of approximately $2.2 million, resulting in a loss of approximately $200,000 which has been recorded as restructuring expense in the accompanying condensed consolidated financial statements.

(10) SUBSEQUENT EVENT

As part of the Company's previously announced strategy to reduce its operating breakeven point, the Company made a strategic decision in the fourth quarter of 2003, to close its Voorhees, New Jersey manufacturing and design facility and transfer its operations to Fort Collins, Colorado. The Company expects to complete this closure in the first quarter of 2004.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Special Note on Forward-Looking Statements

The following discussion contains, in addition to historical information, forward-looking statements, within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Statements that are other than historical information are forward-looking statements. For example, statements relating to our beliefs, expectations and plans are forward-looking statements, as are statements that certain actions, conditions or circumstances will continue. Forward-looking statements involve risks and uncertainties, which are difficult to predict and many of which are beyond our control. As a result, our actual results may differ materially from the results discussed in the forward-looking statements. We assume no obligation to update any forward-looking statements or the reasons why our actual results might differ.

Risk and Uncertainties

We have invested significant human and financial resources to establish a China-based manufacturing facility and transition our supply base to Tier 1 Asian suppliers.

As part of our strategy to reduce our operating cash flow breakeven point to a quarterly revenue level of approximately $60 million we are relying on lower labor and component costs associated with our new China-based manufacturing facility and transition to Tier 1 Asian suppliers. This strategy involves significant risks including:

- our customers may not accept products manufactured at our Chinese facility;
- our customers have strict "copy exact" requirements which may delay or prevent acceptance of lower cost components from Tier 1 Asian suppliers;
- we may not be able to successfully comply with China's strict governmental regulations;
- we may not be able to attract and retain key personnel in our Chinese facility;
- we may incur significant costs to test and repair products manufactured in our China facility to mitigate the risk of shipping lower quality products to our customers;
- the Chinese government may allow the yuan to float against the U.S. dollar, which could significantly increase our operating costs;
- disruption of our United States employee base.

The occurrence of any of theses factors among others could significantly impact our goal to reduce our operating cash flow breakeven point, as well as result in significant costs, expenditures and asset impairments.

Our quarterly operating results fluctuate significantly and are difficult to predict.

Our quarterly operating results have fluctuated significantly, and we expect them to continue to experience significant fluctuations. Fluctuations in our quarterly results historically have resulted in corresponding changes in the market prices of our securities. Our quarterly operating results are affected by a variety of factors, many of which are beyond our control and difficult to predict. These factors include:

- changes in economic conditions in the semiconductor and semiconductor capital equipment industries and other industries in which our customers operate;
- the timing and nature of orders placed by our customers;
- changes in customers' inventory management practices;
- customer cancellations of previously placed orders and shipment delays;
- pricing competition from our competitors;
- customer demands to reduce prices, enhance features, improve reliability, shorten delivery times and extend payment terms;
- component shortages or allocations or other factors that change our levels of inventory or substantially increase our spending on inventory or result in manufacturing delays;
- the introduction of new products by us or our competitors;
- declines in macroeconomic conditions;
- potential litigation especially regarding intellectual property; and
- our exposure to currency exchange rate fluctuations between the several functional currencies in foreign locations in which we have operations.

The semiconductor and semiconductor capital equipment industries are highly volatile, which impacts our operating results.

The semiconductor and semiconductor capital equipment industries have historically been cyclical because of sudden changes in demand for semiconductors and manufacturing capacity. The rate of changes in demand, including end demand, is accelerating, and the effect of these changes is occurring sooner, exacerbating the volatility of these cycles. These changes affect the timing and amount of our customers' equipment purchases and investments in new technology, as well as our costs and operations.

During periods of declining demand for semiconductor equipment components, our customers typically reduce purchases, delay delivery of products and cancel orders. We might incur significant charges as we seek to align our cost structure with the reduction in sales. In addition, we might not be able to respond adequately or quickly enough to the declining demand. Our inability to reduce costs would adversely affect our operating results.

During periods of growth in the semiconductor and semiconductor capital equipment

industries, we might not be able to acquire or develop sufficient manufacturing capacity or inventory to meet our customers' increasing demand for our products. In addition, we might be required to make substantial capital investments to increase capacity.

A significant portion of our sales is concentrated among a few customers.

Our ten largest customers accounted for 55% and 57% of our total sales in the third quarters of 2003 and 2002, respectively, and 53% and 55% of our total sales in the first nine months of 2003 and 2002, respectively. Our largest customer, Applied Materials, accounted for 17% and 28% of our total sales in the third quarters of 2003 and 2002, and 19% and 29% of our total sales in the nine-month periods ended September 30, 2003 and 2002, respectively. The loss of any of our significant customers or a material reduction in any of their purchase orders would significantly harm our business, financial condition and results of operations. Given the nature of our customer base, we are also subject to significant pricing pressure.

The markets in which we operate are highly competitive.

We face substantial competition, primarily from established companies, some of which have greater financial, marketing and technical resources than we do. Our primary competitors are Celerity Group, Inc.; Comdel; Daihen Corp.; Huettinger Elektronik GmbH and Co. KG; Kyosan Electric Manufacturing Co. Ltd.; MKS Instruments, Inc.; Mykrolis Corp.; Shindingen; and STEC, Inc., a Horiba Group Company. We expect that our competitors will continue to develop new products in direct competition with ours, improve the design and performance of their products and introduce new products with enhanced performance characteristics.

To remain competitive, we must improve and expand our products and product offerings. In addition, we may need to maintain a high level of investment in research and development and expand our sales and marketing efforts, particularly outside of the United States. We might not be able to make the technological advances and investments necessary to remain competitive. Our inability to improve and expand our products and product offerings would have an adverse affect on our sales and results of operations.

We are exposed to risks associated with previous acquisitions and potential future acquisitions

We have made, and may in the future make, acquisitions of, or significant investments in, businesses with complementary products, services and technologies. Acquisitions involve numerous risks, including but not limited to:

- diversion of management's attention from other operational matters;
- the inability to realize expected synergies resulting from the acquisition;
- failure to commercialize purchased technology;
- significant and unanticipated capital investments required to integrate acquired businesses and technologies;

- retaining existing customers and strategic partners of acquired companies;
- increased levels of intangible asset amortization expense;
- potential material impairment of acquired intangible assets; and
- dilution of earnings.

Mergers and acquisitions are inherently subject to multiple significant risks. If we are unable to effectively manage these risks our business, financial condition and results of operations will be adversely affected.

We might not be able to compete successfully in international markets or meet the service and support needs of our international customers.

For the nine-month periods ended September 30, 2003 and 2002 our sales to customers outside the United States were approximately 53% and 37% of our total sales. Our success in competing in international markets is subject to our ability to manage various risks and difficulties, including but not limited to:

- our ability to develop relationships with suppliers and other local businesses;
- compliance with product safety requirements and standards that are different from those of the United States;
- variations in enforcement of intellectual property and contract rights in different jurisdictions;
- trade restrictions and political instability;
- the ability to provide sufficient levels of technical support in different locations;
- collecting past due accounts receivable from foreign customers; and
- changes in tariffs, taxes and foreign currency exchange rates.

Our ability to implement our business strategies and maintain market share will be compromised, if we are unable to manage these, and other international risks successfully.

Component shortages exacerbated by our dependence on sole and limited source suppliers could affect our ability to manufacture products and systems, and can delay our shipments.

Our business depends on our ability to manufacture products that meet the rapidly changing demands of our customers. Our ability to manufacture depends in part on the timely delivery of parts, components and subassemblies from suppliers. We rely on sole and limited source suppliers for some of our parts, components and subassemblies that are critical to the manufacturing of our products. This reliance involves several risks, including the following:

- the potential inability to obtain an adequate supply of required parts, components or subassemblies;
- the potential for a sole source provider to cease operations;

- our potential need to fund the operating losses of a sole source provider;
- reduced control over pricing and timing of delivery of parts, components and subassemblies; and
- the potential inability of our suppliers to develop technologically advanced products to support our growth and development of new products.

If we are unable to successfully qualify additional suppliers and manage relationships with our existing and future suppliers, we will experience shortages of parts, components or subassemblies, increased material costs and shipping delays for our products, which will adversely affect our results of operations and relationships with current and prospective customers.

We are highly dependent on our intellectual property and are exposed to various risks related to legal proceedings and claims.

Our success depends significantly on our proprietary technology. We attempt to protect our intellectual property rights through patents and non-disclosure agreements. However, we might not be able to protect our technology, and competitors might be able to develop similar technology independently. In addition, the laws of some foreign countries might not afford our intellectual property the same protections as do the laws of the United States. Our intellectual property is not protected by patents in several countries in which we do business, and we have limited patent protection in some other countries. If we are unable to successfully protect our intellectual property, our results of operations will be adversely affected.

Defending against intellectual property litigation is costly. We have recently faced significant intellectual property litigation, which resulted in us recording approximately $5.3 million in litigation damages and expenses in 2002. In May 2003, MKS Instruments, Inc. filed a patent infringement suit against us in the United States District Court in Wilmington, Delaware, alleging that our Xstream™ With Active Matching Network™ products infringe five patents held by MKS. We intend to defend vigorously against the MKS complaint. However, an adverse determination in the MKS or any future litigation could cause us to lose proprietary rights, subject us to significant liabilities to third parties, require us to seek licenses or alternative technologies from others or prevent us from manufacturing or selling our products and impact future revenue. Any of these events could threaten our business, financial condition and results of operations.

We must achieve design wins to retain our existing customers and to obtain new customers.

The constantly changing nature of semiconductor fabrication technology causes equipment manufacturers to continually design new systems. We must work with these manufacturers early in their design cycles to modify our equipment or design new equipment to meet the requirements of the new systems. Manufacturers typically choose one or two vendors to provide the components for use with the early system shipments.

Selection as one of these vendors is called a design win. It is critical that we achieve these design wins in order to retain existing customers and to obtain new customers.

Once a manufacturer chooses a component for use in a particular product, it is likely to retain that component for the life of that product. Our sales and growth could experience material and prolonged adverse effects if we fail to achieve design wins. In addition, design wins do not always result in substantial sales or profits.

We believe that equipment manufacturers often select their suppliers based on factors such as long-term relationships. Accordingly, we may have difficulty achieving design wins from equipment manufacturers who are not currently customers. In addition, we must compete for design wins for new systems and products of our existing customers, including those with whom we have had long-term relationships. If we are not successful in achieving design wins our sales and results of operations will be adversely impacted.

Our success depends upon our ability to attract and retain key personnel.

Our success depends in large part upon our ability to attract, retain and motivate key employees, including our senior management team and our technical, marketing and sales personnel. These employees may voluntarily terminate their employment with us at any time. The process of hiring employees with the combination of skills and attributes required to carry out our strategy can be extremely competitive and time consuming. We may not be able to successfully retain existing personnel or identify, hire and integrate new personnel. If we lose the services of key personnel for any reason, including retirement, or are unable to attract additional qualified personnel, our business, financial condition and results of operations will be adversely affected.

Warranty costs on certain products may be in excess of historical experience.

In recent years we have experienced higher than expected levels of warranty costs on certain products. We have been required to repair, rework, and in some cases, replace, these products. Our warranty costs generally increase when we introduce newer, more complex products. We recorded warranty costs of approximately $7.0 million and $6.6 million for the nine-month periods ended September 30, 2003 and 2002, respectively. If such levels of warranty costs persist or increase in the future, our financial condition and results of operations will be adversely affected.

We are subject to numerous governmental regulations.

We are subject to federal, state, local and foreign regulations, including environmental regulations and regulations relating to the design and operation of our products and control systems. We might incur significant costs as we seek to ensure that our products meet safety and emissions standards, many of which vary across the states and countries in which our products are used. In the past, we have invested significant resources to redesign our products to comply with these directives. We believe we are in compliance with current applicable regulations, directives and standards and have obtained all

necessary permits, approvals and authorizations to conduct our business. However, compliance with future regulations, directives and standards could require us to modify or redesign some products, make capital expenditures or incur substantial costs. If we do not comply with current or future regulations, directives and standards:

- we could be subject to fines;
- our production could be suspended; or
- we could be prohibited from offering particular products in specified markets.

Our inability to comply with current or future regulations, directives and standards will adversely affect our operating results.

Our Chief Executive Officer owns a significant percentage of our outstanding common stock, which could enable him to control our business and affairs.

Douglas S. Schatz, our Chief Executive Officer owned approximately 33.8% of our common stock outstanding as of September 30, 2003. This stockholding gives Mr. Schatz significant voting power. Depending on the number of shares that abstain or otherwise are not voted on a particular matter, Mr. Schatz may be able to elect all of the members of our board of directors and to control our business affairs for the foreseeable future.

Other

New risk factors emerge from time to time, and it is not possible for us to predict all such risk factors, nor can we assess the impact of all risk factors on our business, or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Our expectations, beliefs and projections are expressed in good faith and are believed to have a reasonable basis. However, we make no assurance that such expectations, beliefs or projections will be achieved.

Because of the risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results. We have no obligation or intent to release publicly any revisions to any forward-looking statements, whether as a result of new information, future events, or otherwise.

Critical Accounting Policies

The following discussion and analysis of our financial condition and results of operations is based upon our condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. In preparing our financial statements, we must make estimates and judgments that affect the reported amounts of assets and liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities at the date of our financial statements. Actual results may differ from these estimates under different

assumptions or conditions.

We believe that the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

- Valuation of intangible assets and goodwill
- Long-lived assets including intangibles subject to amortization
- Reserve for excess and obsolete inventory
- Reserve for warranty
- Fair value of derivative instruments
- Commitments and contingencies
- Revenue recognition
- Stock-based compensation
- Deferred income taxes

Please see the discussion of critical accounting policies in our Form 10-Q for the three- and six-month periods ended June 30, 2003, filed with the Securities and Exchange Commission on August 13, 2003.

OVERVIEW

We design, manufacture and support a group of key components and subsystems for vacuum process systems. Our primary products are complex power conversion and control systems. Our products also control the flow of gasses into the process chambers and provide thermal control and sensing within the chamber. Our customers use our products in plasma-based thin-film processing equipment that is essential to the manufacture of semiconductors; compact disks, DVDs and other digital storage media; flat-panel computer and television screens; coatings for architectural glass and optics; industrial laser and medical applications; and a power supply for advanced technology computer workstations. We also sell spare parts and repair services worldwide through our customer service and technical support organization.

We provide solutions to a diversity of markets and geographic regions. However, we are focused on the semiconductor capital equipment industry, which accounted for approximately 58% and 71% of our sales in the nine-month periods ended September 30, 2003 and 2002, respectively. Beginning in 2001 the semiconductor capital equipment industry saw the steepest cutback in capital equipment purchases in industry history. The continued industry downturn has resulted in a significant decrease in demand for semiconductor capital equipment and related components. Inventory buildups coupled with slower than expected personal electronics sales and slow global economic growth have caused semiconductor companies to re-evaluate their capital spending and initiate cost reduction measures. These factors resulted in lower sales and downward gross margin pressure for our products during the periods presented. We expect future sales to the semiconductor capital equipment industry to represent approximately 55% to 70% of our total revenue, depending upon the strength or weakness of the industry cycles.

We have incurred significant losses over the past ten quarters primarily as a result of lower revenues as well as duplicative manufacturing facilities associated with our new China-based manufacturing facility and transition to Tier 1 Asian suppliers. Over the past ten quarters, we have been unable to achieve profitability at current revenue levels and do not have confidence of a significant industry recovery in the short-term. We have established a goal of reducing our operating cash flow breakeven point to a quarterly revenue level of approximately $60 million by the end of 2003, but cannot provide any assurance that such goals or revenue levels are achievable in 2003.

Results of Operations

SALES

Sales were $68.6 million and $70.7 million in the third quarters of 2003 and 2002, and $187.7 million and $181.5 million in the nine-month periods ended September 30, 2003 and 2002, respectively. Our sales decreased approximately 3% quarter over quarter, and increased approximately 3% from the 2002 nine-month period to the 2003 nine-month period, primarily due to our acquisitions of Aera and Dressler in the first quarter of 2002 and strength in our non-semiconductor related markets. Our quarterly revenue levels continue to be extremely volatile due to significant fluctuations in demand for our products from the industries in which we operate, especially the semiconductor capital equipment industry.

Due to factors previously discussed, our sales to the semiconductor capital equipment industry declined from the 2002 periods during the three- and nine-month periods presented, while the other industries we serve showed varying levels of improvement.

The following tables summarize net sales and percentages of net sales by customer type for the three- and nine-month periods ended September 30, 2003 and 2002:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2003	2002	2003	2002
	(In thousands)			
Semiconductor capital equipment	$38,015	$48,068	$108,876	$129,139
Data storage	9,158	5,401	21,304	11,866
Flat panel display	7,148	5,837	19,081	10,764
Advanced product applications	14,246	11,368	38,410	29,685
	$68,567	$70,674	$187,671	$181,454

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2003	2002	2003	2002
Semiconductor capital equipment	56%	68%	58%	71%
Data storage	13	8	11	7
Flat panel display	10	8	10	6
Advanced product applications	21	16	21	16
	100%	100%	100%	100%

Applied Materials, Inc. is our largest customer and accounted for 17% and 28% of our sales for the three months ended September 30, 2003 and 2002, and 19% and 29% of our

sales for the nine months ended September 30, 2003 and 2002. No other customer accounted for more than 10% during these periods.

Our acquisitions of Aera and Dressler in the first quarter of 2002, our decline in sales to the semiconductor capital equipment industry, and the progression of electronics research and development and manufacturing to Asia has resulted in decreased sales in the United States and increased sales in Europe and Asia Pacific. This trend is expected to continue as more companies in the industries we serve seek to reduce costs by outsourcing and offshoring in regions other than the United States.

The following tables summarize net sales and percentages of net sales by geographic region for the three- and nine-month periods ended September 30, 2003 and 2002:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2003	2002	2003	2002
	(In thousands)			
United States and Canada	$29,752	$40,758	$ 87,129	$113,495
Europe	15,221	10,824	38,277	25,000
Asia Pacific	23,313	18,893	61,843	42,529
Rest of world	281	199	422	430
	$68,567	$70,674	$187,671	$181,454

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2003	2002	2003	2002
United States and Canada	44%	58%	47%	63%
Europe	22	15	20	14
Asia Pacific	34	27	33	23
Rest of world	—	—	—	—
	100%	100%	100%	100%

GROSS MARGIN

Our gross margin was 33.7% and 37.6% in the third quarters of 2003 and 2002, respectively. Our gross margin was 32.7% and 35.4% for the nine months ended September 30, 2003 and 2002, respectively. Our gross margin declined from the 2002 periods to the 2003 periods primarily due to duplicative costs associated with our China-based manufacturing facility, and transition to Tier 1 Asian suppliers.

While we expect the transition of a portion of our manufacturing to China and our move to Tier 1 Asian suppliers will improve our gross margins in future periods, factors that could cause our margins to be negatively impacted include, but are not limited to the following:

- costs associated with transitioning a portion of our manufacturing to our new China facility;
- unanticipated costs to comply with our customers' copy exact requirements, especially related to our China transition and move to Tier 1 Asian suppliers;
- the semiconductor industry's continued move to 300mm wafers and smaller line widths, which require new products that early in their life cycle and at low production levels, typically have lower margins than our established products;

- cost reduction programs initiated by semiconductor manufacturers and semiconductor capital equipment manufacturers, which negatively impact our average selling price;
- warranty costs in excess of historical rates and our expectations;
- increased levels of excess and obsolete inventory, either due to market conditions, the introduction of new products by our competitors, or our decision to discontinue certain product lines;
- significant patent litigation losses, resulting in unanticipated royalty costs; and
- erosion of our sales base, due to industry cycles, general economic conditions, customer migration and other factors.

We provide warranty coverage for our products ranging from 12 to 60 months, with the majority of our products ranging from 18 to 24 months, and estimate the anticipated cost of repairing our products under such warranties based on the historical cost of the repairs and expected product failure rates. The assumptions we use to estimate warranty accruals are re-evaluated periodically in light of actual experience, and when appropriate, the accruals are adjusted. Our determination of the appropriate level of warranty accrual is subjective and based on estimates. Should product failure rates differ from our estimates, actual costs could vary significantly from our expectations.

We recognized charges for warranty expense of $2.2 million and $2.6 million in the third quarters of 2003 and 2002 and $7.0 million and $6.6 million in the nine-month periods ended September 30, 2003 and 2002, respectively.

The following summarizes the activity in our warranty reserve during the three- and nine-month periods ended September 30, 2003:

	Balance at Beginning of Period	Additions Charged To Expense	Deductions	Balance at End of Period
		(In thousands)		
Reserve for warranty obligations three months ended September 30, 2003	$7,371	$2,188	$(2,590)	$6,969
Reserve for warranty obligations nine months ended September 30, 2003	$9,402	$6,970	$(9,403)	$6,969

As a result of the prolonged downturn in the semiconductor industry, semiconductor manufacturers and semiconductor capital equipment manufacturers are striving to reduce their costs. Any cost reduction programs initiated by semiconductor manufacturers and semiconductor capital equipment manufacturers could have a significant impact on our future gross margins.

RESEARCH AND DEVELOPMENT EXPENSES

We believe continued investment in the research and development of new products and subsystems is critical to our ability to serve new and existing markets, develop new products and improve existing product designs. However, we cannot provide assurance that the products and subsystems we develop will meet customer requirements when those products are introduced to the market. To be advantageously positioned for a

turnaround in demand, we continue to invest heavily in new product development even during industry downturns, which allows us to compete for ongoing design wins on our customers' new production tools. Since our inception, all of our research and development costs have been expensed as incurred.

Our research and development expenses were $13.0 million and $12.2 million in the third quarters of 2003 and 2002, respectively. Research and development expenses were $38.9 million and $36.0 million in the nine-month periods ended September 30, 2003 and 2002, respectively. Despite our cost reduction measures, our research and development expenses increased from the third quarter of 2002 to the third quarter of 2003 primarily due to expenditures to launch new radio frequency and direct current products. Our research and development expenses increased from the 2002 nine-month period to the 2003 nine-month period due to our acquisitions of Aera and Dressler in the first quarter of 2002 and the new product launches discussed above.

SALES AND MARKETING EXPENSES

As we have expanded our product offerings and sales channels through acquisitions, product development and the opening of new sales and service locations our sales and marketing efforts have become increasingly complex. We have continued the effort to market our products directly to end users, in addition to our traditional marketing to manufacturers of semiconductor capital equipment and other thin-film systems. Our sales and marketing expenses support domestic and international sales and marketing activities that include personnel, trade shows, advertising, and other selling and marketing activities.

Sales and marketing expenses were $7.3 million and $9.7 million in the third quarters of 2003 and 2002, respectively. This represents a 24.7% decrease from the third quarter of 2002 to the third quarter of 2003. Our sales and marketing expenses were $23.9 million and $25.2 million in the nine-month periods ended September 30, 2003 and 2002, representing a 5.0% decrease from the 2002 nine-month period to the 2003 nine-month period. The decrease during the periods presented was primarily due to our ongoing cost reduction measures, partially offset by depreciation of additional demonstration and customer service equipment.

GENERAL AND ADMINISTRATIVE EXPENSES

Our general and administrative expenses support our worldwide corporate, legal, patent, tax, financial, administrative, information systems and human resources functions in addition to our general management. General and administrative expenses were $6.3 million and $7.2 million in the third quarters of 2003 and 2002, and $17.5 million and $21.1 million in the nine-month periods ended September 30, 2003 and 2002, respectively. The 12.5% decrease in general and administrative expenses from the 2002 three-month period to the 2003 three-month period and the 17.0% decrease from the 2002 nine-month period to the 2003 nine-month period were primarily due to our ongoing cost reduction measures.

LITIGATION DAMAGES AND EXPENSES

During the second quarter of 2002, we recorded a charge of approximately $5.3 million pertaining to damages awarded by a jury in a patent infringement case in which we were the defendant, and legal expenses related to the judgment. MKS Instruments, Inc. was the plaintiff in the case, which was tried in a Delaware court. Sales of the product in question have accounted for less than 5% of total sales since the product's introduction. We have entered into a settlement agreement with MKS allowing us to sell the infringing product to our customer subsequent to the date of the jury award. Royalties payable to MKS under the settlement agreement from sales of the licensed product have not been material.

RESTRUCTURING CHARGES

At the end of 2002, we announced major changes in our operations to occur through the end of 2003. These included establishing a manufacturing location in China, consolidating worldwide sales forces, a move to Tier 1 suppliers, primarily in Asia, and the intention to close or sell certain facilities. We expect to incur restructuring charges totaling approximately $5.0 million for the year ending December 31, 2003.

Associated with the above plan, we recognized charges of approximately $1.0 million in the third quarter of 2003 that consisted primarily of the recognition of expense for involuntary employee termination benefits associated with our second quarter headcount reduction, asset impairments incurred as a result of exiting our Longmont, CO manufacturing facilities, and the involuntary termination of 20 employees in the third quarter of 2003.

In the second quarter of 2003, we recognized charges that consisted primarily of the involuntary termination of approximately 55 manufacturing and administrative personnel in our U.S. operations. Certain of the employees were terminated and paid prior to the end of the second quarter of 2003, which resulted in restructuring charges totaling approximately $768,000 for the three months ended June 30, 2003. In addition, certain employees will be required to render service beyond a minimum retention period (generally 60 days). In accordance with SFAS No. 146, we measured the termination benefits at the communication date, but approximately $170,000 was recognized as expense during the third quarter of 2003, and approximately $170,000 will be recognized as expense in the fourth quarter of 2003 as these employees complete their service requirement.

We also recorded charges totaling approximately $1.5 million in the first quarter of 2003 primarily associated with manufacturing and administrative personnel headcount reductions in the our Japanese operations. In accordance with Japanese labor regulations we offered voluntary termination benefits to all of our Japanese employees. The voluntary termination benefits were accepted by 36 employees prior to March 31, 2003 with termination dates in the second quarter of 2003. All termination benefits were paid

in the second quarter of 2003.

In the third quarter of 2002, we recorded restructuring charges of approximately $3.2 million to close two facilities and implement headcount reductions of approximately 100 employees.

INTANGIBLE ASSET IMPAIRMENT

During the third quarter of 2003, we determined that one of our mass flow controller products would require a significant technological investment in order to conform to changing customer technologies which would enable it to be accepted by the semiconductor capital equipment industry. As a result, we performed an assessment of the carrying value of the related intangible asset. This assessment consisted of estimating the intangible asset's fair value and comparing the estimated fair value to the carrying value of the asset. We estimated the intangible asset's fair value using a cash flow model assuming the technological investment was made, discounted at discount rates consistent with the risk of the related cash flow, and applying a hypothetic royalty rate to the projected revenue stream. Based on this analysis we determined that the fair value of the intangible asset was minimal and recorded an impairment of the carrying value of approximately $1.2 million, which has been reported as an intangible asset impairment in the accompanying condensed consolidated financial statements.

OTHER INCOME (EXPENSE)

Other income (expense) consists primarily of interest income and expense, foreign currency exchange gains and losses and other miscellaneous gains, losses, income and expense items.

Interest income was approximately $358,000 and $749,000 in the third quarters of 2003 and 2002, and $1.3 million and $2.5 million in the nine-month periods ended September 30, 2003 and 2002. The decrease in interest income for the periods presented was due to lower interest rates available for investment, and our lower level of investment in marketable securities resulting from our use of a portion of our liquid reserves to fund our operating losses and capital investments, and to repurchase approximately $15.4 million and $3.5 million of our 5.25% and 5.00% convertible subordinated notes in the fourth quarter of 2002.

Interest expense consists principally of interest on our convertible subordinated notes, borrowings under capital lease facilities, debt assumed in our acquisition of Aera, and amortization of our deferred debt issuance costs. Interest expense was approximately $2.8 million and $3.2 million in the third quarters of 2003 and 2002, and $8.4 million and $9.7 million in the nine-month periods ended September 30, 2003 and 2002, respectively. The decrease in interest expense was primarily due to our repurchase of approximately $15.4 million and $3.5 million of our 5.25% and 5.00% convertible subordinated notes in the fourth quarter of 2002.

Our foreign subsidiaries' sales are primarily denominated in currencies other than the U.S. dollar. We recorded a net foreign currency gain of $290,000 in the third quarter of 2003 and a net foreign currency loss of $220,000 in the third quarter of 2002. We recorded a net foreign currency gain of $299,000 and $4.4 million in the nine-month periods ended September 30, 2003 and 2002. The majority of our nine-month 2002 gain was related to an intercompany loan of Japanese yen, which was settled in January 2003, that we made to our wholly owned subsidiary Advanced Energy Japan K.K., which has a functional currency of yen, for the purpose of effecting the acquisition of Aera. The loan was transacted in the first quarter of 2002, for approximately 5.7 billion yen, approximately $44 million based on an exchange rate of 130:1. During the second quarter of 2002, the U.S. dollar weakened significantly against the yen to approximately 119:1, resulting in a gain of approximately $4.6 million.

We have entered into various foreign currency forward contracts to mitigate currency fluctuations in the Japanese yen and the euro. At September 30, 2003, our subsidiary AE-Japan held foreign currency forward contracts with notional amounts of $6.5 million and market settlement amounts of $6.8 million for an unrealized loss position of approximately $300,000 that has been included in foreign currency gain (loss) in the accompanying condensed consolidated statements of operations.

During 2003, our subsidiary AE-Germany entered into foreign currency forward contracts to buy U.S. dollars to mitigate currency exposure from its payable position arising from trade purchases and intercompany transactions. At September 30, 2003, AE-Germany held foreign currency forward contracts with notional amounts of $400,000 and market settlements amounts of $409,000 for an unrealized loss position of approximately $9,000 that has been included in foreign currency gain (loss) in the accompanying condensed consolidated statements of operations.

Miscellaneous expense was approximately $92,000 and $162,000 in the third quarters of 2003 and 2002 and $529,000 and $570,000 in the nine-month periods ended September 30, 2003 and 2002.

(PROVISION) BENEFIT FOR INCOME TAXES

We account for income taxes in accordance with SFAS No. 109, "Accounting for Income Taxes." SFAS No. 109 requires deferred tax assets and liabilities to be recognized for temporary differences between the tax basis and financial reporting basis of assets and liabilities, computed at current tax rates, as well as for the expected tax benefit of net operating loss and tax credit carryforwards. During the third quarter of 2003, we recorded a valuation allowance of $22.4 million against all of our United States and foreign net deferred tax assets in jurisdictions where we have recognized significant operating losses. This valuation allowance was recorded because we have incurred significant operating losses in 2001, 2002 and year-to-date through September 30, 2003. Given such experience, and along with continuing volatility in our customers' industries, management could not conclude that it was more likely than not that the net deferred tax asset would be realized. While there are indications that the industries in which we

operate may improve in 2004 and 2005, these indications have not yet resulted in a substantial increase in orders from our customers. Accordingly, our management, in accordance with SFAS No. 109, in evaluating the recoverability of the net deferred tax asset, placed greater weight on our historical results as compared to projections regarding future taxable income.

We expect our future effective tax rate to approximate 35%, subject to variations in the relative earnings or losses in the tax jurisdictions in which we have operations. If we generate future taxable income, in the appropriate tax jurisdiction, against which these tax attributes may be applied, some portion or all of the valuation allowance will be reversed and a corresponding reduction in income tax expense will be reported in future periods. However, if we do not generate future taxable income we will not realize future income tax benefits.

Our income tax benefit for the three- and nine-month periods ended September 30, 2002 was $3.0 million and $10.5 million, respectively and represented an effective rate of 35% in each period.

When recording acquisitions, we have recorded valuation allowances due to the uncertainty related to the realization of certain deferred tax assets existing at the acquisition dates. The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed. Reversals of valuation allowances recorded in purchase accounting will be reflected as a reduction of goodwill in the period of reversal.

Liquidity and Capital Resources

During the third quarter of 2003 our cash, cash equivalents and short-term marketable securities decreased by $13.0 million. We have not undertaken any external financing activities since 2001.

Operating activities used cash of $19.5 million in the first nine months of 2003, reflecting our net loss of $41.8 million partially offset by non-cash items of $31.1 million, increased by net working capital changes of approximately $8.8 million. Non-cash items primarily consisted of depreciation and amortization of $17.6 million; amortization of deferred debt issuance costs of $824,000; provision for deferred income taxes of $9.0 million; a loss on disposal of property and equipment of $1.9 million; and an intangible asset impairment of $1.2 million. Net working capital changes used cash of approximately $8.8 million and primarily consisted of a $9.3 million increase in accounts receivable; a $2.1 million increase in inventories; a $784,000 decrease in other current assets; a $1.1 million decrease in deposits and other; a $2.9 million increase in demonstration and customer service equipment; a $4.5 million increase in trade accounts payable; and a $1.5 million decrease in customer deposits and other accrued expenses.

Operating activities used cash of $20.2 million in the first nine months of 2002, reflecting our net loss of $19.4 million partially offset by non-cash items of $12.9

million, increased by net working capital changes of $13.7 million. Non-cash items primarily consisted of depreciation and amortization of $13.9 million; amortization of deferred debt issuance costs of $1.0 million; a benefit for deferred income taxes of $1.4 million; and an unrealized gain on foreign currency forward contracts of $1.4 million. Net working capital changes used cash of approximately $13.6 million and primarily consisted of a $10.0 million increase in accounts receivable; a $2.0 million increase in demonstration and customer service equipment; a $7.6 million increase in trade accounts payable; a $4.9 million increase in net taxes receivable; and a $3.7 million unrealized gain on an intercompany foreign currency loan discussed above.

We expect near-term future operating activities to continue to use cash. Any future decline in the industries in which we operate could substantially affect our ability to generate new sales and collect payments from our customers, could cause us to initiate future reductions in force requiring substantial severance payments, and other cash payments to exit certain operating activities, among other uses of cash. Conversely, as receivable and inventory balances tend to fluctuate with net sales, any future upturn in the industries we serve, primarily the semiconductor capital equipment industry, may result in an increase in our net receivables and inventory balances. We are typically required to use our cash reserves to finance our inventory purchases and extend credit to our customers to finance their purchases from us. We are unable to provide any assurance regarding our future cash flow from operations. In October 2003 we received an income tax refund of approximately $13.8 million.

Investing activities used cash of $13.9 million in the first nine months of 2003, and primarily consisted of the purchase of property and equipment for $15.6 million and the settlement of our escrow deposit liability related to our acquisition of Dressler in the first quarter of 2003 for $1.7 million, partially offset by proceeds from the sale of assets of $4.8 million. We expect the development of our China-based manufacturing facility to continue to require significant capital expenditures in the near term.

Investing activities provided cash of $28.7 million in the first nine months of 2002 and primarily consisted of cash generated from the sale of marketable securities of $90.4 million, offset by purchases of property and equipment of $7.3 million; the acquisition of Aera Japan Limited for $35.7 million net of $8.3 million of cash acquired; the acquisition of Dressler HF Technik GmbH for $14.4 million net of $680,000 of cash acquired; and the purchase of other investments of $2.0 million.

Investing cash flows experience significant fluctuations from period to period as we buy and sell marketable securities, which we convert to cash to fund strategic investments, acquisitions, and our operating cash flow, and as we transfer cash into marketable securities when we attain levels of cash that are greater than needed for current operations.

We plan to spend approximately $2.5 million to $3.5 million in the fourth quarter of 2003 for the acquisition of equipment, leasehold improvements and furnishings. Our planned level of capital expenditures is subject to frequent revisions because our business

experiences sudden changes as we move into industry upturns and downturns and expected sales levels change. In addition, fluctuations in foreign currency exchange rates may significantly impact our capital expenditures and depreciation expense recognized in a particular period.

Financing activities used cash of $4.9 million in the first nine months of 2003, and consisted of the repayment of notes payable and capital leases of $6.8 million, partially offset by proceeds from common stock transactions of $1.9 million. Financing activities used cash of $4.8 million in the first nine months of 2002, and consisted of the repayment of notes payable and capital lease obligations of $6.4 million, partially offset by proceeds from common stock transactions of $1.6 million.

As of September 30, 2003, we had working capital of $205.1 million, a decrease of $42.9 million from December 31, 2002. Our principal sources of liquidity consisted of $33.0 million of cash and cash equivalents and $103.4 million of marketable securities, and a credit facility consisting of a $25.0 million revolving line of credit, none of which was outstanding at September 30, 2003. Advances under the revolving line of credit bear interest at the prime rate (4.00% at October 27, 2003) minus 1%. Any advances under this revolving line of credit will be due and payable in May 2004. We are subject to covenants on our line of credit that provide certain restrictions related to working capital, net worth, acquisitions and payment and declaration of dividends. We were in compliance with all such covenants at September 30, 2003.

We have committed to advance up to $1.0 million to a privately held company in exchange for an exclusive intellectual property license. The amount and timing of this advance is dependent upon the privately held company achieving certain business development milestones.

We believe that our cash and cash equivalents, marketable securities, cash flow from operations and available borrowings, will be sufficient to meet our working capital needs for at least the next twelve months. After that time, we may require additional equity or debt financing to address our working capital, capital equipment or expansion needs. In addition, any significant acquisitions we make may require additional equity or debt financing to fund the purchase price, if paid in cash. There can be no assurance that additional funding will be available when required or that it will be available on terms acceptable to us. In 2006, when our convertible subordinated notes become due, it is possible we may need substantial funds to repay such debt, which totaled $187.7 million at September 30, 2003. Our 5.00% convertible subordinated notes of $121.5 million are due September 1, 2006, and our 5.25% convertible subordinated notes of $66.2 million are due November 15, 2006. Payment would be required if our common stock price remains below approximately $30 per share for the 5.00% convertible subordinated notes and approximately $50 per share for the 5.25% convertible subordinated notes, the prices at which we can effect conversion are not met in the market in which our stock is traded, and the holders of our notes choose not to otherwise convert. In such a situation there can be no assurance that we will be able to refinance the debt. We may continue to

repurchase additional notes in the open market from time to time, if market conditions and our financial position are deemed favorable for such purposes.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio and long-term debt obligations. We generally place our investments with high credit quality issuers and by policy are averse to principal loss and seek to protect and preserve our invested funds by limiting default risk, market risk and reinvestment risk. As of September 30, 2003, our investments in marketable securities consisted primarily of commercial paper, municipal and state bonds and notes and institutional money markets. These securities are highly liquid. Earnings on our marketable securities are typically invested into similar securities. In the first nine months of 2003, the rates we earned on our marketable securities approximated 1.7% on a before tax equivalent basis. The impact on interest income of a 10% decrease in the average interest rate would have resulted in approximately $130,000 less interest income in the first nine months of 2003.

The interest rates on our subordinated debt are fixed, specifically, at 5.25% for the $66.2 million of our debt due November 2006, and at 5.00% for the $121.5 million of our debt that is due September 2006. Our offerings of subordinated debt in 1999 and 2001 increased our fixed interest expense upon each issuance, though interest expense was partially reduced by the repurchase of a portion of these offerings in 2002. Because these rates are fixed, we believe there is no risk of increased interest expense.

The interest rates on our Aera Japan subsidiary’s $37 million credit lines are variable and currently range from 1.28% to 3.1%. We believe a 10% increase in the average interest rate on these instruments would not have a material effect on our financial position or results of operations.

Foreign Currency Exchange Rate Risk

We transact business in various foreign countries. Our primary foreign currency cash flows are generated in countries in Asia and Europe. During the first nine months of 2003, the U.S. dollar weakened approximately 6% against the Japanese yen, and approximately 10% against the euro. It is highly uncertain how currency exchange rates will fluctuate in the future. We have entered into various forward foreign currency exchange contracts to mitigate currency fluctuations in the Japanese yen and the euro. We will continue to evaluate various methods to minimize the effects of currency fluctuations when we translate the financial statements of our foreign subsidiaries into U.S. dollars. At September 30, 2003, our subsidiary AE-Japan held foreign currency forward contracts to purchase U.S. dollars with notional amounts of $6.5 million and

market settlement amounts of approximately $6.8 million for an unrealized loss position of approximately $300,000, and our AE-Germany subsidiary held foreign currency forward contracts to purchase U.S. dollars with notional amounts of $400,000 and market settlement amounts of approximately $409,000 for an unrealized loss position of approximately $9,000.

ITEM 4. CONTROLS AND PROCEDURES

(a) *Disclosure Controls and Procedures.* Under the supervision and with the participation of our chief executive officer and chief financial officer, we have implemented controls and other procedures that are designed to ensure that we record, process, summarize and report in a timely manner the information required to be disclosed by us in our Exchange Act reports, including this Form 10-Q ("disclosure controls and procedures"). Our disclosure controls and procedures include controls and procedures designed to ensure that material information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure. Our chief executive officer and chief financial officer evaluated our disclosure controls and procedures as of the end of the quarter covered by this Form 10-Q and concluded that such controls and procedures are effective.

(b) *Internal Control over Financial Reporting.* Under the supervision and with the participation of our chief executive officer and chief financial officer, we have implemented controls and other procedures that are designed to provide us with reasonable assurance as to the reliability of our financial reporting and the preparation of our financial statements for external purposes in accordance with generally accepted accounting principles ("internal control over financial reporting"). During the quarter covered by this Form 10-Q, there was no change in our internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we are party to various legal proceedings related to our business. Our Form 10-Q for the quarter ended June 30, 2003 includes a description of patent litigation between us and MKS Instruments, Inc. There were no material developments in that litigation during the quarter covered by this Form 10-Q.

ITEM 2. CHANGES IN SECURITIES AND USE OF PROCEEDS

Not applicable.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

None

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K

(a) Exhibits:

3.1	Restated Certificate of Incorporation, as amended
3.2	By-laws(1)
10.1	2003 Stock Option Plan*
10.2	2003 Non-Employee Directors' Stock Option Plan*
10.3	2001 Stock Option Plan*
10.4	2002 Stock Option Plan*
31.1	Certification of the Chief Executive Officer Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of the Chief Financial Officer Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of the Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of the Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

(1) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 33-97188), filed September 20, 1995, as amended.

* Compensation Plan

(b) Reports on Form 8-K

We filed the following reports on Form 8-K:

(i) We filed with the Securities and Exchange Commission a Current Report on Form 8-K on July 24, 2003 to furnish under Item 12 our press release announcing our results of operations for the three- and six-month periods ended June 30, 2003.

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, thereunto duly authorized.

ADVANCED ENERGY INDUSTRIES, INC.

/s/ Michael El-Hillow

Michael El-Hillow
Executive Vice President, Chief Financial Officer (Principal Financial Officer) November 3, 2003

INDEX TO EXHIBITS

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(1) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 33-97188), filed September 20, 1995, as amended.

* Compensation Plan

EXHIBIT 3.1

CERTIFICATE OF AMENDMENT

OF

RESTATED CERTIFICATE OF INCORPORATION

OF

ADVANCED ENERGY INDUSTRIES, INC.

Advanced Energy Industries, Inc., (hereinafter called the "Corporation") a Corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "General Corporation Law"), does hereby certify:

1. The name of the Corporation is Advanced Energy Industries, Inc.

2. The Restated Certificate of Incorporation of the Corporation is hereby amended by striking out Article IV(A) thereof and by substituting in lieu of said Article IV(A) the following new Article IV(A):

"A. This corporation is authorized to issue two classes of stock to be designated, respectively, "Common Stock" and "Preferred Stock." The total number of shares which the corporation is authorized to issue is seventy-one million (71,000,000) shares. Seventy million (70,000,000) shares shall be Common Stock, par value $0.001 per share, and one million (1,000,000) shares shall be Preferred Stock, par value $0.001 per share."

3. The amendment of the Restated Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of

Section 242 of the General Corporation Law of the State of Delaware.

Executed on this 10th day of May, 2002.

/s/ Michael El-Hillow

Michael El-Hillow,
Senior Vice President, Finance
and Administration

CERTIFICATE OF AMENDMENT

OF

RESTATED CERTIFICATE OF INCORPORATION

OF

ADVANCED ENERGY INDUSTRIES, INC.

Advanced Energy Industries, Inc., (hereinafter called the "Corporation") a Corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "General Corporation Law"), does hereby certify:

1. The name of the Corporation is Advanced Energy Industries, Inc.

2. The Restated Certificate of Incorporation of the Corporation is hereby amended by striking out Article IV.A thereof and by substituting in lieu of said Article IV.A the following new Article IV.A:

"A. This corporation is authorized to issue two classes of stock to be designated, respectively, "Common Stock" and "Preferred Stock." The total number of shares which the corporation is authorized to issue is fifty-six million (56,000,000) shares. Fifty-five million (55,000,000) shares shall be Common Stock, par value $0.001 per share, and one million (1,000,000) shares shall be Preferred Stock, par value $0.001 per share."

3. The amendment of the Restated Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

Executed on this 11th day of June, 2001.

/s/ Richard P. Beck

Richard P. Beck, Senior Vice
President, Chief Financial Officer,
and Assistant Secretary

RESTATED CERTIFICATE OF INCORPORATION

OF

ADVANCED ENERGY INDUSTRIES, INC.

Advanced Energy Industries, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY:

1. The name of the corporation is Advanced Energy Industries, Inc. The date of filing of its original Certificate of Incorporation with the Secretary of State was Friday, September 1, 1995.

2. This Restated Certificate of Incorporation has been duly adopted in accordance with Sections 228, 242 and 245 of the Delaware General Corporation Law.

3. This Restated Certificate of Incorporation restates and integrates and further amends the Certificate of Incorporation of this corporation by restating the text of the original Certificate of Incorporation in full to read as follows:

I.

The name of this corporation is ADVANCED ENERGY INDUSTRIES, INC.

II.

The address, including street, number, city, and county, of the registered office of the corporation in the State of Delaware is 32 Loockerman Square, Suite L-l00, City of Dover, 19904, County of Kent; and the name of the registered agent of the corporation in the State of Delaware at such address is The Prentice-Hall Corporation System, Inc.

III.

The purpose of this corporation is to engage in any lawful act or activity for which a corporation may be organized under the Delaware General Corporation Law.

IV.

A. This corporation is authorized to issue two classes of stock to be designated, respectively, "Common Stock" and "Preferred Stock." The total number of shares which the corporation is authorized to issue is thirty-one million (31,000,000) shares. Thirty million (30,000,000) shares shall be Common Stock, each having a par value of one-tenth of one cent ($.001). One million (1,000,000) shares shall be Preferred Stock, each having a par value of one-tenth of one cent ($.001). Effective upon filing of this Restated Certificate of Incorporation, each one (1) share of the Company's Common Stock shall be split into three (3) shares of Common Stock. Following such split the par value of each share of capital stock shall continue to be $.001.

B. The Preferred Stock may be issued from time to time in one or more series. The Board of Directors is hereby authorized, by filing a certificate (a "Preferred Stock Designation") pursuant to the Delaware General Corporation Law, to fix or alter from time to time the designation, powers, preferences and rights of the shares of each such series and the qualifications, limitations or restrictions of any wholly unissued series of Preferred Stock, and to establish from time to time the number of shares constituting any such series or any of them; and to increase or decrease the number of shares of any series subsequent to the issuance of shares of that series, but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be decreased in accordance with the foregoing sentence, the shares constituting such decrease shall resume the status that they had prior to the adoption of the resolution originally fixing the number of shares of such series.

V.

For the management of the business and for the conduct of the affairs of the corporation, and in further definition, limitation and regulation of the powers of the corporation, of its directors and of its stockholders or any class thereof, as the case may be, it is further provided that:

A.

(1) The management of the business and the conduct of the affairs of the corporation shall be vested in its Board of Directors. The number of directors which shall constitute the whole Board of Directors shall be fixed exclusively by one or more resolutions adopted by the Board of Directors.

(2) Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, directors shall be elected at each annual meeting of stockholders for a term of one year.

Each director shall serve until his successor is duly elected and qualified or until his death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

(3) Subject to the rights of the holders of any series of Preferred Stock, no director shall be removed without cause. Subject to any limitations imposed by law, the Board of Directors or any individual director may be removed from office at any time with cause by the affirmative vote of the holders of a majority of the voting power of all the then-outstanding shares of voting stock of the corporation, entitled to vote at an election of directors (the "Voting Stock").

(4) Subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors, shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders, except as otherwise provided by law, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified.

B.

(1) Subject to paragraph (h) of Section 43 of the Bylaws, the Bylaws may be altered or amended or new Bylaws adopted by the affirmative vote of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the Voting Stock. The Board of Directors shall also have the power to adopt, amend, or repeal Bylaws.

(2) The directors of the corporation need not be elected by written ballot unless the Bylaws so provide.

(3) Special meetings of the stockholders of the corporation may be called, for any purpose or purposes, by (i) the Chairman of the Board of Directors, (ii) the Chief Executive Officer, or (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption), and shall be held at such place, on such date, and at such time as the Board of Directors shall fix.

(4) Advance notice of stockholder nominations for the election of directors and of business to be brought by stockholders before any meeting of the stockholders of the corporation shall be given in the manner provided in the Bylaws of the corporation.

VI.

A. A director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the director derived an improper personal benefit. If the Delaware General Corporation Law is amended after approval by the stockholders of this Article to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

B. Any repeal or modification of this Article VI shall be prospective and shall not affect the rights under this Article VI in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification.

VII.

A. The corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation in the manner now or hereafter prescribed by statute, except as provided in paragraph B of this Article VII, and all rights conferred upon the stockholders herein are granted subject to this reservation.

B. Notwithstanding any other provisions of this Certificate of Incorporation or any provision of law which might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of the Voting Stock required by law, this Certificate of Incorporation or any Preferred Stock Designation, the affirmative vote of the holders of a least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the Voting Stock, voting together as a single class, shall be required to alter, amend or repeal Articles VI or VII.

IN WITNESS WHEREOF, said Advanced Energy Industries, Inc. has caused this Certificate to be signed by Douglas S. Schatz, its President, this 18th day of September, 1995.

ADVANCED ENERGY INDUSTRIES, INC.

By /s/ Douglas S. Schatz

Douglas S. Schatz.
President, Chief Executive Officer,
and Chairman of the Board

EXHIBIT 10.1

ADVANCED ENERGY INDUSTRIES, INC.
2003 STOCK OPTION PLAN
ADOPTED FEBRUARY 12, 2003

1. PURPOSE. The purpose of the Plan is to provide an incentive to attract, retain and reward individuals performing services for the Company, and to motivate such individuals to contribute to the growth and profitability of the Company.

2. DEFINITIONS. Whenever the following terms are used in the Plan, they shall have the meaning indicated below, unless a different meaning is required by the context.

(a) "Administrator" means either the Board or a committee of at least two Board members to which the Board allocates administration of the Plan.

(b) "Board" means the board of directors of the Corporation.

(c) "Code" means the Internal Revenue Code of 1986, as amended.

(d) "Company" means, collectively, the Corporation and any "parent corporation" or "subsidiary corporation" of the Corporation as defined in Code
Section 424(e) and Section 424(f), respectively.

(e) "Corporation" means Advanced Energy Industries, Inc., a Delaware corporation.

(f) "Fair Market Value" means, with respect to a Share as of any date, the closing sale price of a Share on such date (or previous business day if such date is not a business day) on the principal exchange or market on which Shares are then listed or admitted to trading. If, for any reason, the preceding rule cannot be applied to determine fair market value, then the Administrator shall make a good faith determination of fair market value.

(g) "ISO" means an incentive stock option within the meaning of Code Section 422.

(h) "NSO" means an option that is not an ISO.

(i) "Participant" means a person who has received a grant or award under the Plan. If a grant or award is assigned pursuant to Section 6(c), the term "Participant" shall mean the assignee when required by the context.

(j) "Plan" means this Advanced Energy Industries, Inc. 2003 Stock Option Plan.

(k) "Service" means the Participant's employment or service with the Company, whether in the capacity of an employee, a director, or a consultant.

(l) "Share" means one share of common stock of the Corporation.

3. ADMINISTRATION. The Plan shall be administered by the Administrator. Subject to the provisions of the Plan, the Administrator shall have the authority to select the persons to be granted options under this Plan, to fix the number of shares that each Participant may purchase, to determine the exercise price of options granted, to set the terms and conditions of each option (including the period over which the option becomes exercisable), and to determine all other matters relating to administration and operation of the Plan. All questions of interpretation, implementation, and application of the Plan shall be determined by the Administrator in its sole discretion. Such determinations shall be final and binding on all persons. No member of the Board or committee that acts as Administrator shall be liable for any act or omission on such member's own part, including but not limited to the exercise of any power or discretion given to such member under the Plan, except for those acts or omissions resulting from such member's own gross negligence or willful misconduct.

4. SHARES SUBJECT TO THE PLAN. The maximum number of Shares that may be issued pursuant to this Plan is three million two hundred and fifty thousand (3,250,000), subject to adjustment as provided in Section 6(e), and subject to limited re-issuance as indicated below. If an option expires, is surrendered, or becomes unexercisable without having been exercised in full, or if any unissued Shares are retained by the Corporation upon exercise of an option in order to satisfy any withholding taxes due with respect to such exercise, the unissued or retained Shares shall become available for future grant under the Plan (unless the Plan has terminated). If unvested Shares are forfeited, such Shares shall also become available for future grant under the Plan, but the total number of such forfeited Shares that become available may not exceed twice the maximum number set forth above (subject to adjustment as provided in Section 6(e)). Other Shares that actually have been issued under the Plan pursuant to an option shall not be returned to the Plan and shall not become available for future grant under the Plan.

5. ELIGIBILITY. The Administrator may grant an option or options to any employee or consultant of the Company, as selected in the sole discretion of the Administrator. No individual may receive aggregate grants or awards under this Plan that exceed 25% of the number of Shares reserved for issuance under
Section 4 (subject to adjustment as provided in Section 6(e)).

6. GENERAL TERMS AND CONDITIONS.

(a) Option Agreements. Each option granted under the Plan shall be authorized by action of the Administrator and shall be evidenced by a written agreement in such form as the Administrator shall from time to time approve, which agreement shall comply with and be subject to the terms and conditions of the Plan.

(b) ISOs or NSOs. Options granted under the Plan shall be designated by the Administrator as either ISOs or NSOs. The Company does not represent or warrant that an option intended to be an ISO qualifies as such. To the extent that the aggregate Fair Market Value (determined as of the date the option is granted) of the Shares with respect to which ISOs are exercisable for the first time by any individual during any calendar year (under all plans of the Company) exceeds one hundred thousand dollars ($100,000), the option shall be treated as an NSO. If an ISO is exercised more than three (3) months after the date on which the Participant ceases to be an employee (other than by reason of death or permanent and total disability as

defined in Code Section 22(e)(3)), the option will be treated as an NSO, and not an ISO, as required by Code Section 422.

(c) Transferability. Options granted under the Plan are not transferable by the Participant and shall be exercisable during the Participant's lifetime only by the Participant; provided, however, that an option may be transferred upon the approval of the Administrator (in its sole discretion) by appropriate instrument pursuant to a domestic relations order described in Rule 16a-12 of the 1934 Act or to an inter vivos or testamentary trust in which the option is to be passed to the Participant's beneficiaries upon the Participant's death or by gift to the Participant's immediate family (consisting of the Participant's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, and shall include adoptive relationships). No option or interest therein may be otherwise transferred, assigned, pledged, or hypothecated by the Participant, whether by operation of law or otherwise, or be made subject to execution, attachment, or similar process. Any such purported assignment, sale, transfer, delegation, or other disposition shall be null and void.

(d) Modification, Extension, and Renewal. The Administrator shall have the power to modify, extend, or renew outstanding options and authorize the grant of new options in substitution therefor, provided that any such action may not have the effect of significantly impairing any rights or obligations of any option previously granted without the consent of the affected Participant. However, the Company will not reduce the exercise price of any outstanding option or cancel outstanding options and grant replacement options with a lower exercise price without prior approval of the shareholders.

(e) Changes in Capitalization or Corporate Transaction. In the event of any merger, consolidation, reorganization, recapitalization, stock dividend, stock split, reverse stock split, separation, liquidation or other change in the corporate structure or capitalization affecting the Shares, appropriate adjustment shall be made by the Administrator in the kind, option price, and number of shares of stock (including, but not limited to, the maximum number of Shares reserved under the Plan) that are or may become subject to options and other awards granted or to be granted under the Plan. If in connection with the change the Corporation ceases to exist, the surviving or successor entity must either assume the Corporation's rights and obligations with respect to outstanding options or substitute for outstanding options substantially equivalent options for equity interests in the entity. If there is no surviving or successor entity, a Participant's outstanding option must be exercised before the change, or the option will terminate and cease to be outstanding.

7. EXERCISE.

(a) Exercise Price. The exercise price of an option shall be not less than the Fair Market Value of a Share on the date of the grant of the option.

(b) Time of Exercise. An option shall become exercisable as specified in the option agreement; provided, however, that (i) an option shall not be exercisable after the 10th anniversary of the date of grant and (ii) unless expressly provided otherwise in the option agreement, an option shall not be exercisable to the extent its exercise would result (determined

at the time of exercise) in compensation not deductible by the Corporation under Code Section 162(m) (unless a failure to exercise will result in the termination of the option).

(c) Special Rules for 10% Owners. The exercise price of an ISO granted to an individual who owns stock possessing more than ten percent (10%) of the combined voting power of all classes of stock of the Corporation shall not be less than one hundred ten percent (110%) of the Fair Market Value of a Share on the date of grant. No ISO granted to an individual who owns stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Corporation shall be exercisable after the expiration of five (5) years from the date of grant. For purposes of determining whether an individual owns stock possessing more than 10 percent (10%) of the total combined voting power of all classes of stock of the Corporation, the individual shall be considered as owning the stock owned, directly or indirectly, by or for his or her brothers and sisters (whether by the whole or half blood), spouse, ancestors, and lineal descendants. Stock owned, directly or indirectly, by or for a corporation, partnership, estate, or trust shall be considered as being owned proportionately by or for its shareholders, partners, or beneficiaries. Stock with respect to which the individual holds an option shall not be counted.

(d) Notice of Exercise. Participants may exercise only by providing written notice to the Corporation at the address specified in the option agreement, accompanied by full payment for the Shares to be purchased. After receiving proper notice of exercise and payment, the Corporation shall issue a certificate(s) for the Shares purchased, registered in Participant's name (or in Participant's name and the name of Participant's spouse as community property or as joint tenants with a right of survivorship).

(e) Taxes and Withholding. The Company shall have the right to deduct from the Shares issuable upon the exercise of an option, or to accept from the Participant the tender of, a number of whole Shares having a fair market value, as determined by the Administrator, equal to all or any part of the federal, state, local and foreign taxes, if any, required by law to be withheld by the Company with respect to such option or the Shares acquired upon the exercise thereof. Alternatively or in addition, in its sole discretion, the Company shall have the right to require Participant, through payroll withholding, cash payment or otherwise, including by means of a cashless exercise (as described in Section 8(b)), to make adequate provision for any such tax withholding obligations of the Company arising in connection with the option, or the Shares acquired upon the exercise thereof.

8. PAYMENT OF EXERCISE PRICE. Payment of any option's exercise price may be made in cash, by check or cash equivalent. At the sole discretion of the Administrator, the exercise price may be made as follows:

(a) By Tender of Stock. Payment may be made by tender (or by attestation) to the Corporation of Shares owned by Participant having a fair market value (as determined by the Administrator without regard to any restrictions on transferability applicable to such Shares by reason of federal or state securities laws or agreements with the Corporation's underwriter) not less than the exercise price; provided that, an option may not be exercised by tender to the Corporation of Shares to the extent such tender would constitute a violation of the provisions of any law, regulation or agreement restricting the redemption of the Shares. Unless otherwise

provided by the Administrator, an option may not be exercised by tender to the Corporation of Shares unless such Shares either have been owned by the Participant for more than six (6) months or were not acquired, directly or indirectly, from the Corporation.

(b) By Cashless Exercise. The Administrator reserves, at any and all times, the right, in the Administrator's sole and absolute discretion, to establish, decline to approve or terminate any program or procedures for the exercise of options by payment by the assignment of the proceeds of a sale or loan with respect to some or all of the Shares being acquired upon the exercise of the option, including, without limitation, through an exercise complying with the provisions of Regulation T as promulgated from time to time by the Board of Governors of the Federal Reserve System.

(c) By Promissory Note. Payment may be made by the Participant's promissory note in a form approved by the Administrator, except that no promissory note shall be permitted if the exercise of an option using a promissory note would be a violation of any law. Any permitted promissory note shall be on such terms as the Administrator shall determine; provided that (i) the note (including interest) shall be full recourse, (ii) interest shall be payable in at least annual installments at a current market interest rate, (iii) the note shall be secured by the Shares acquired, and (iv) the remaining balance of the note (including accrued interest) shall be due and payable within 90 days of termination of Participant's Service for any reason. Unless otherwise provided by the Administrator, if the Corporation at any time is subject to the regulations promulgated by the Board of Governors of the Federal Reserve System or any other governmental entity affecting the extension of credit in connection with the Corporation's securities, any promissory note shall comply with such applicable regulations, and Participant shall pay the unpaid principal and accrued interest, if any, to the extent necessary to comply with such applicable regulations.

(d) By Other Consideration. Payment may be made by such other consideration or by any combination of cash, stock, cashless exercise, promissory note or other consideration as may be approved by the Administrator from time to time to the extent permitted by applicable laws.

9. TERMINATION OF OPTIONS.

(a) Termination of Service. If a Participant's Service terminates, his or her rights to exercise an option then held shall be limited. Participant's Service shall not be deemed to have terminated merely because of a change in the capacity in which the Participant renders Service or a change in the Company, provided that there is no interruption or termination of Participant's employment or service. Participant's Service with the Company shall be treated as continuing intact while the Participant is on military, sick leave, or other bona fide leave of absence (such as temporary employment by the government) approved by the Company if the period of such leave does not exceed 90 days, or, if longer, so long as the Participant's right to reemployment with the Corporation is guaranteed either by statute or by contract. Where the period of leave exceeds 90 days and where the Participant's right to reemployment is not guaranteed either by statute or by contract, Service will be deemed to have terminated on the 91st day of such leave. Subject to the foregoing, the Administrator, in its sole discretion, shall determine whether Participant's Service has terminated and the effective date thereof.

(b) Involuntary Separation without Cause. Except as otherwise provided in paragraphs (c) through (f), if a Participant leaves the company involuntarily without cause, Participant shall have the right for a period of 180 calendar days after the date of separation to exercise the option to the extent Participant was entitled to exercise the option on that date; provided, however, that the date of exercise is in no event after the expiration of the term of the option. To the extent the option is not exercised within this period, the option will terminate.

(c) Termination by Disability. If a Participant becomes disabled (within the meaning of Code Section 22(e)(3)) while in Service, Participant or his or her qualified representative shall have the right for a period of twenty-four (24) months after the date on which Participant's Service ends to exercise the option to the extent Participant was entitled to exercise the option on that date, provided the date of exercise is in no event after the expiration of the term of the option. To the extent the option is not exercised within this period, the option will terminate.

(d) Termination by Retirement. If a Participant terminates Service without cause from the Company after reaching age 60 and with 5 or more years of continuous service with the Company, Participant shall have 3 years from date of retirement to exercise the option to the extent Participant was entitled to exercise the option on that date; provided, however, that the date of exercise is in no event after the expiration of the term of the option. To the extent the option is not exercised within this period, the option will terminate. Determination of retirement shall be at the sole discretion of the Committee.

(e) Termination after Death. If a Participant dies while in Service, the person who acquired the right to exercise the option by bequest or inheritance or by reason of the death of the Participant shall have the right for a period of twelve (12) months after the date of death to exercise the option to the extent Participant was entitled to exercise the option on that date, provided the date of exercise is in no event after the expiration of the term of the option. To the extent the option is not exercised within this period, the option will terminate.

(f) Termination for Cause or Voluntary Separation. If a Participant's Service is terminated by the Company for Cause or the Participant voluntarily leaves the Company, Participant shall have no right to exercise the option, and the option will terminate. "Cause" means that Participant is determined by the Administrator to have committed an act of embezzlement, fraud, dishonesty, or breach of fiduciary duty to the Company, or to have deliberately disregarded the rules of the Company, under circumstances that could normally be expected to result in loss, damage, or injury to the Company, or because Participant has made any unauthorized disclosure of any of the secrets or confidential information of the Company, has induced any client or customer of the Company to break any contract with the Company, has induced any principal for whom the Company acts as agent to terminate the agency relationship, or has engaged in any conduct that constitutes unfair competition with the Company.

(g) Option Agreement. The option agreement may provide rules different from those set forth in subsections. (a) through (e).

10. CHANGE IN CONTROL. An option's term may be affected by a Change in Control, as described in this section.

(a) Optional Assumption or Substitution. At the time of a Change in Control, the surviving, continuing, successor or purchasing corporation or parent corporation thereof, as the case may be (the "Acquiror"), may either assume the Corporation's rights and obligations with respect to outstanding options or substitute for outstanding options substantially equivalent options for the Acquiror's stock. If the Acquiror is the same corporate entity as the Corporation, or its successor by merger, a reaffirmation of the option shall be treated as an assumption, and a failure to reaffirm shall be treated as a failure to assume.

(b) No Assumption or Substitution - Termination. Options that are neither assumed nor substituted for by the Acquiror in connection with a Change in Control, nor exercised as of the time of the Change in Control, shall terminate and cease to be outstanding.

(c) Definition. For purposes of this Plan, a Change in Control means a single Ownership Change Event or combination of proximate (in time, purpose, cause and effect, and/or the identity of the parties involved) Ownership Change Events (collectively, a "Transaction") wherein the stockholders of the Corporation immediately before the Transaction do not retain immediately after the Transaction, in substantially the same proportions as their ownership of shares of the Corporation's voting stock immediately before the Transaction, direct or indirect beneficial ownership of more than 50% of the total combined voting power of the outstanding voting stock of the Corporation or the corporation or corporations to which the assets of the Corporation were transferred (the "Transferee Corporation(s)"), as the case may be. For purposes of the preceding sentence, indirect beneficial ownership shall include, without limitation, an interest resulting from ownership of the voting stock of one or more corporations which, as a result of the Transaction, own the Corporation or the Transferee Corporation(s), as the case may be, either directly or through one or more subsidiary corporations. An Ownership Change Event means (i) the direct or indirect sale, exchange or transfer of the voting stock of the Corporation, (ii) a merger or consolidation in which the Corporation is a party,
(iii) the sale, exchange or transfer of all or substantially all of the assets of the Corporation, or (iv) a liquidation or dissolution of the Corporation. The Board shall have sole discretion to determine whether any particular facts and circumstances constitute an Ownership Change Event or a Transaction, and its determination shall be final, binding and conclusive.

11. RESTRICTED STOCK AWARDS.

(a) General Rule. The Administrator may award Shares to a person eligible under Section 5, subject to such terms and conditions consistent with this Plan that the Administrator shall impose as set forth in a separate award agreement.

(b) Vesting. An award under this section may condition the vesting of Shares on the performance of future services by the eligible person, and may alternatively or additionally condition the vesting of Shares on such other performance-related conditions that the Administrator shall impose in its sole discretion.

(c) Transferability. An unvested Share will not be transferable by the Participant until it becomes vested. The Company shall receive a stock power duly endorsed in blank with respect to restricted Shares, and the related stock certificate shall bear the following legend:

The transferability of this certificate and the shares of stock represented hereby are subject to the restrictions, terms and conditions (including forfeiture provisions and restrictions against transfer) contained in the Advanced Energy Industries, Inc. 2003 Stock Option Plan and an award agreement entered into between the registered owner of such shares and Advanced Energy Industries, Inc. A copy of the plan and agreement is on file in the office of the Secretary of Advanced Energy Industries, Inc.

Such legend shall be removed from the certificate only after the Shares vest. Each certificate issued with respect to Shares subject to this section, together with the stock powers related to the Shares, shall be deposited by the Company with a custodian designated by the Company (and which may be the Company or an affiliate).

(d) Voting Rights and Dividends. Unvested Shares may be voted by the holder of such Shares. Dividends payable with respect to unvested Shares will be paid to the holder of the Shares without regard to restrictions.

(e) Change in Control. An Acquiror described in Section 10(a) shall have no obligation to assume or substitute an award of unvested Shares, and any such Shares not assumed or substituted in connection with a Change in Control shall be forfeited generally in the manner described in Section 10(b).

12. STOCK APPRECIATION RIGHTS. The Administrator may award a right to receive in cash the amount that the Fair Market Value of a Share exceeds a stated exercise price (a "stock appreciation right" or "SAR") to a person eligible under Section 5 on such terms that the Administrator shall determine, consistent with the terms of this Plan. An SAR shall be subject to the same general terms that apply to an option granted hereunder, including (but not limited to) the terms set forth in Sections 6, 7, 9 and 10 as appropriately modified. An exercised SAR will reduce the Shares reserved for issuance under the Plan under Section 4.

13. SECURITIES LAW COMPLIANCE.

(a) General Rules. All awards under this Plan shall be subject to compliance with all applicable requirements of federal, state or foreign law with respect to such securities. Options may not be exercised if the issuance of Shares upon exercise would constitute a violation of any applicable federal, state or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which the Shares may then be listed. In addition, no option may be exercised unless (i) a registration statement under the Securities Act shall at the time of exercise of the option be in effect with respect to the Shares issuable upon exercise of the option, or (ii) in the opinion of legal counsel to the Corporation, the Shares issuable upon exercise of the option may be issued in accordance with the terms of an applicable exemption from the registration requirements of the Securities Act. The inability of the Corporation to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Corporation's legal counsel to be necessary to the lawful issuance and sale of any shares hereunder shall relieve the Corporation of any liability in respect of the failure to issue or sell such shares as to which such requisite authority shall not have been obtained.

(b) Conditions of Exercise. As a condition to the exercise of any option, the Corporation may require Participant to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect thereto as may be requested by the Corporation.

14. MISCELLANEOUS.

(a) No Right to an Option. Nothing in the Plan shall be construed to give any person any right to benefit under the Plan.

(b) No Employment Rights. Neither the Plan nor the granting of an option nor any other action taken pursuant to the Plan shall constitute or be evidence of any agreement or understanding, express or implied, that the Company will utilize Participant's services for any period of time, or in any position, or at any particular rate of compensation.

(c) No Stockholders' Rights. Participant shall have no rights as a shareholder with respect to the Shares covered by his or her options until the date of the issuance to him or her of a share certificate for the Shares, and no adjustment will be made for dividends or other rights for which the record date is prior to the date the certificate is issued.

(d) Claims. Any person who makes a claim for benefits under the Plan or under any option agreement entered into pursuant to the Plan shall file the claim in writing with the Administrator. Written notice of the disposition of the claim shall be delivered to the claimant within 60 days after filing. If the claim is denied, the Administrator's written decision shall set forth (i) the specific reason or reasons for the denial, (ii) a specific reference to the pertinent provisions of the Plan or option agreement on which the denial is based, and (iii) a description of any additional material or information necessary for the claimant to perfect his or her claim and an explanation of why such material or information is necessary. No lawsuit may be filed by the claimant until a claim is made and denied pursuant to this subsection.

(e) Attorneys' Fees. In any legal action or other proceeding brought by either party to enforce or interpret the terms of the option agreement, the prevailing party shall be entitled to recover reasonable attorneys' fees and costs.

(f) Confidentiality. The terms and conditions of the option agreement, including without limitation the number of Shares for which the option is granted, are confidential. The Participant shall not disclose the terms of the option to any third party, except to Participant's financial or legal advisors, tax preparer or family members, unless disclosure is required by law.

(g) Corporation Free to Act. An option grant shall not affect in any way the right or power of the Corporation or its stockholders to make or authorize any or all adjustments, recapitalizations, reorganizations, or other changes in the Corporation's capital structure or its business, or any merger or consolidation of any member of the Company or any issue of bonds, debentures, or preferred or preference stocks affecting the Shares or the rights thereof, or of any rights, options, or warrants to purchase any capital stock of the Corporation, or the dissolution or liquidation of the Corporation, any sale or transfer of all or any part of its assets or business, or any other corporate act or proceedings of the Corporation, whether of a similar character or otherwise.

(h) Severability. If any provision of the Plan or option agreement, or its application to any person, place, or circumstance, is held by an arbitrator or a court of competent jurisdiction to be invalid, unenforceable, or void, that provision shall be enforced to the greatest extent permitted by law, and the remainder of this Plan and option agreement and of that provision shall remain in full force and effect as applied to other persons, places, and circumstances.

(i) Substitution/Assumption. The Company may substitute or assume outstanding options granted by another company by either (i) granting an option under this Plan in substitution of such other company's option or (ii) assuming such option as if it had been granted under this Plan if the terms of such assumed option are consistent this Plan. Such substitution or assumption will be permissible if the holder of the substituted or assumed option would have been eligible to be granted an option under this Plan if the other company had applied the rules of this Plan to such grant. In the event of an assumption hereunder, the terms and conditions of the option will remain unchanged, except that the exercise price and the number and nature of shares issuable upon exercise of any such option will be adjusted appropriately in the manner described in Code Section 424(a). If the Company substitutes a new option for the old option, such new option may be granted with a similarly adjusted exercise price.

(j) Exchange Requirements. The requirements of any stock exchange or other established market (such as the NASDAQ), on which the Corporation's common stock is traded, are hereby incorporated into this Plan by reference.

(k) Governing Law. This Plan and the option agreement shall be governed by and construed in accordance with the laws of the State of Colorado applicable to contracts wholly made and performed in the State of Colorado.

15. EFFECTIVE DATE OF THE PLAN. The Plan will become effective upon adoption by the Board, subject to approval by the Corporation's stockholders within one year. Options may be granted under the Plan at any time after the Plan's adoption and before the Plan's termination. The Plan shall terminate on the 10th anniversary of its adoption.

16. AMENDMENT OF THE PLAN. The Board may suspend or discontinue the Plan or revise or amend it in any respect whatsoever; provided, however, that without approval of the Corporation's stockholders no revision or amendment shall change the number of Shares issuable under the Plan (except as provided in
Section 6(e)), change the designation of the class of individuals eligible to benefit under the Plan, or materially increase the benefits accruing to Participants.

IN WITNESS WHEREOF, the undersigned Secretary of the Corporation certifies that this Plan was adopted by the Board on February 12, 2003, and effective as of the same date.

EXHIBIT 10.2

ADVANCED ENERGY INDUSTRIES, INC.

2003 NON-EMPLOYEE DIRECTORS' STOCK OPTION PLAN

ADOPTED FEBRUARY 12, 2003

1. PURPOSE. The purpose of the Plan is to attract and retain the services of experienced and knowledgeable non-employee directors of Advanced Energy Industries, Inc., and to provide an incentive for such directors to increase their proprietary interests in the Company's long-term success and progress.

2. DEFINITIONS. Whenever the following terms are used in the Plan, they shall have the meaning indicated below, unless a different meaning is required by the context.

(a) "Administrator" means the administrative committee described in Section 3.

(b) "Board" means the board of directors of the Company.

(c) "Company" means Advanced Energy Industries, Inc., a Delaware corporation.

(d) "Non-Employee Director" means any member of the Board who is a "non-employee director" within the meaning of Rule 16b-3(b)(3)(i) under Section 16 of the Securities Exchange Act of 1934 ("1934 Act").

(e) "Plan" means this Advanced Energy Industries, Inc. 2003 Non-Employee Directors' Stock Option Plan.

(f) "Share" means one share of common stock of the Company.

3. ADMINISTRATION. The Plan shall be administered by a committee selected by the Board consisting of at least 2 individuals each of whom is either (i) a member of the Board and not a Non-Employee Director or (ii) a senior officer of the Company who is not a member of the Board. Subject to the provisions of the Plan, the Administrator shall have the authority to determine all other matters relating to administration and operation of the Plan. All questions of interpretation, implementation, and application of the Plan shall be determined by the Administrator in its sole discretion. Such determinations shall be final and binding on all persons.

4. SHARES SUBJECT TO THE PLAN. The maximum number of Shares that may be issued pursuant to options granted under the Plan is one hundred fifty thousand (150,000), subject to adjustment as provided in Section 6(e) and subject to limited re-issuance as indicated below. If an option expires, is surrendered, or becomes unexercisable without having been exercised in full, the unissued or retained Shares shall become available for future grant under the Plan. Other Shares that actually have been issued under the Plan pursuant to an option shall not be returned to the Plan and shall not become available for future grant under the Plan.

5. ELIGIBILITY. A Non-Employee Director will receive option grants under this Plan on the terms and conditions set forth in Section 6. No other person may benefit under this Plan.

6. GENERAL TERMS AND CONDITIONS.

(a) Automatic Grants. On and after the date of the annual meeting of the Company's stockholders to be held in 2003, and subject to adjustment under subsection (e), a Non-Employee Director will automatically receive an option to purchase (i) fifteen thousand (15,000) Shares on the date first elected or appointed as a member of the Board and (ii) five thousand (5,000) Shares on any date re-elected (or first elected after an appointment) as a member of the Board by the Company's stockholders. Any such option will be subject to the terms and conditions set forth in this Plan, and will be evidenced by written notice in such form as the Administrator shall determine.

(b) Options Are Not Qualified. Options granted under the Plan are not incentive stock options described in Internal Revenue Code Section 422.

(c) Transferability. Options granted under the Plan are not transferable by the Non-Employee Director and shall be exercisable during the Non-Employee Director's lifetime only by the Non-Employee Director; provided, however, that an option may be transferred upon the approval of the Administrator (in its sole discretion) by appropriate instrument pursuant to a domestic relations order described in Rule 16a-12 of the 1934 Act or to an inter vivos or testamentary trust in which the option is to be passed to the Non-Employee Director's beneficiaries upon the Non-Employee Director's death or by gift to his or her immediate family (consisting of the Non-Employee Director's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive relationships). Except as provided in Section 7(d), no option or interest therein may be otherwise transferred, assigned, pledged, or hypothecated by a Non-Employee Director, whether by operation of law or otherwise, or be made subject to execution, attachment, or similar process. Any such purported assignment, sale, transfer, delegation, or other disposition shall be null and void.

(d) Modification, Extension, and Renewal. The Administrator shall have the power to modify, extend, or renew an outstanding option granted under this Plan, in a manner consistent with the terms of the Plan, provided that any such action may not significantly impair the optionholder's rights without his or her consent. However, the Company will not reduce the exercise price of any outstanding option or cancel outstanding options and grant replacement options with a lower exercise price without the prior approval of the shareholders.

(e) Changes in Capitalization or Corporate Transaction. In the event of any merger, consolidation, reorganization, recapitalization, stock dividend, stock split, reverse stock split, separation, liquidation or other change in the corporate structure or capitalization affecting the Shares, appropriate adjustment shall be made by the Administrator in the kind, option price, and number of shares of stock (including, but not limited to, the maximum number of Shares reserved under the Plan) that are or may become subject to options granted or to be granted under the Plan. If in connection with the change the Company ceases to exist, the surviving or successor entity must either assume the Company's rights and obligations with respect to outstanding options or substitute for outstanding options substantially equivalent options for equity interests in the entity. If there is no surviving or successor entity, a Non-Employee Director's outstanding option shall become fully vested and exercisable as of the date seven (7) calendar days before the change. The exercise of any option that was permissible solely by reason of the change shall be conditioned upon consummation of the change. Options that are neither assumed, substituted nor exercised as of the time of the change shall terminate and cease to be outstanding.

7. EXERCISE.

(a) Exercise Price. The exercise price of an option shall be not less than one hundred percent (100%) of the fair market value of a Share on the date of grant. The fair market value of a Share as of any date means the closing sale price of a Share on such date (or previous business day if such date is not a business day) on the principal exchange or market on which Shares are then listed or admitted to trading. If, for any reason, the preceding rule cannot be applied to determine fair market value, then the Administrator shall make a good faith determination of fair market value.

(b) Vesting. An option shall be immediately and fully exercisable (i.e., vested) on the date granted; provided, however, that the option awarded on the date first elected or appointed as a member of the Board shall instead
(i) be immediately exercisable to the extent of one-third of the Shares subject to the option upon grant, then another one-third of such Shares on each of the next two anniversaries of the date granted, and (ii) become fully exercisable upon a Change in Control while the optionee is a member of the Board, as provided in Section 9. Notwithstanding clauses (i) and (ii) of the preceding sentence, no additional vesting will occur after the date the Non-Employee Director ceases to be a member of the Board.

(c) Payment of Exercise Price. An option may be exercised in whole or in part (to the extent exercisable) at any time and from time to time. The purchase price of Shares purchased under an option will be paid in full to the Company incident to the exercise of the option by delivery of consideration equal to the product of the option price and the number of Shares purchased. Such consideration may be paid (i) in cash, (ii) at the discretion of the Administrator, in shares of Company common stock either already owned by the Non-Employee Director for at least six (6) months or not acquired, directly or indirectly, from the Company, or (iii) any combination thereof. The fair market value of such common stock as delivered shall be valued as of the day prior to delivery. The Administrator can determine that additional forms of payment will be permitted. To the extent permitted by the Administrator and applicable laws and regulations (including, but not limited to, federal tax and securities laws, regulations and state corporate law), an option may also be exercised in a "cashless" exercise by delivery of a properly executed exercise notice together with irrevocable instructions to a broker designated by the Administrator to deliver promptly to the Company the amount of sale or loan proceeds to pay the purchase price. A Non-Employee Director shall have none of the rights of a stockholder until the Shares are issued.

(d) Exercise After Death. In the event of the death of a Non-Employee Director who holds an exercisable option under the Plan, the Non-Employee Director's option shall (subject to Section 8) be exercisable by the legal representative or the estate of such decedent, by any person or persons whom the decedent shall have designated in writing on forms prescribed by and filed with the Company or, if no such designation has been made, by the person or persons to whom the decedent's rights have passed by will or the laws of descent and distribution. To the extent permitted by applicable law and the rules promulgated under Section 16(b) of the 1934 Act, the Administrator may permit a Non-Employee Director to designate in writing during the Non-Employee Director's lifetime a beneficiary to receive and exercise stock options in the event of the Non-Employee Director's death.

8. TERMINATION OF OPTIONS. An option shall cease to be exercisable after the earlier of (i) six (6) months after the date the Non-Employee Director ceases to be a member of the Board (including by reason of death), (ii) the occurrence of a Change in Control and (iii) the 10th anniversary of the date of grant; provided, however, that in the case of a Non-Employee Director

who has served continuously as a member of the Board for at least five (5) years, the period described in clause (i) shall be eighteen (18) months.

9. CHANGE IN CONTROL. A Non-Employee Director's outstanding option shall become fully exercisable as of the date seven (7) calendar days before a Change in Control. The exercise of any option that was permissible solely by reason of a Change in Control shall be conditioned upon consummation of the Change in Control. Options that are not exercised as of the Change in Control shall terminate and cease to be outstanding. A Change in Control means a single Ownership Change Event or combination of proximate (in time, purpose, cause and effect, and/or the identity of the parties involved) Ownership Change Events (collectively, a "Transaction") wherein the stockholders of the Company immediately before the Transaction do not retain immediately after the Transaction, in substantially the same proportions as their ownership of shares of the Company's voting stock immediately before the Transaction, direct or indirect beneficial ownership of more than 50% of the total combined voting power of the outstanding voting stock of the Company or the company or companies to which the assets of the Company were transferred (the "Transferee Company(s)"), as the case may be. For purposes of the preceding sentence, indirect beneficial ownership shall include, without limitation, an interest resulting from ownership of the voting stock of one or more companies which, as a result of the Transaction, own the Company or the Transferee Company(ies), as the case may be, either directly or through one or more subsidiary companies. An Ownership Change Event means (i) the direct or indirect sale, exchange or transfer of the voting stock of the Company, (ii) a merger or consolidation in which the Company is a party, (iii) the sale, exchange or transfer of all or substantially all of the assets of the Company, or (iv) a liquidation or dissolution of the Company. The Administrator shall have sole discretion to determine whether any particular facts and circumstances constitute an Ownership Change Event or a Transaction, and its determination shall be final, binding and conclusive.

10. SECURITIES LAW COMPLIANCE. The grant of options and the issuance of Shares upon exercise of options shall be subject to compliance with all applicable requirements of federal, state or foreign law with respect to such securities. Options may not be exercised if the issuance of Shares upon exercise would constitute a violation of any applicable federal, state or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which the Shares may then be listed. In addition, no option may be exercised unless (i) a registration statement under the Securities Act of 1933 ("1933 Act") shall at the time of exercise of the option be in effect with respect to the Shares issuable upon exercise of the option, or (ii) in the opinion of legal counsel to the Company, the Shares issuable upon exercise of the option may be issued in accordance with the terms of an applicable exemption from the registration requirements of the 1933 Act. The inability of the Company to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Company's legal counsel to be necessary to the lawful issuance and sale of any shares hereunder shall relieve the Company of any liability in respect of the failure to issue or sell such shares as to which such requisite authority shall not have been obtained. As a condition to the exercise of any option, the Company may require a Non-Employee Director to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect thereto as may be requested by the Company.

11. MISCELLANEOUS.

(a) No Stockholders' Rights. A Non-Employee Director shall have no rights as a stockholder with respect to the Shares covered by his or her options until the date of the issuance to him or her of a stock certificate for the Shares.

(b) No Right to Serve. Neither the Plan, nor the granting of an option, nor any other action taken under the Plan, shall be evidence of any agreement or understanding, express or implied, that a Non-Employee Director has a right to continue as a member of the Board for any period of time or rate of compensation.

(c) Claims. Any person who makes a claim for benefits under the Plan or under any option agreement entered into pursuant to the Plan shall file the claim in writing with the Administrator. Written notice of the disposition of the claim shall be delivered to the claimant within 60 days after filing. If the claim is denied, the Administrator's written decision shall set forth (i) the specific reason or reasons for the denial, (ii) a specific reference to the pertinent provisions of the Plan or option agreement on which the denial is based, and (iii) a description of any additional material or information necessary for the claimant to perfect his or her claim and an explanation of why such material or information is necessary. No lawsuit may be filed by the claimant until a claim is made and denied pursuant to this subsection.

(d) Attorneys' Fees. In any legal action or other proceeding brought by either party to enforce or interpret the terms of the option agreement, the prevailing party shall be entitled to recover reasonable attorneys' fees and costs.

(e) Company Free to Act. An option grant shall not affect in any way the right or power of the Company or its stockholders to make or authorize any or all adjustments, recapitalizations, reorganizations, or other changes in the Company's capital structure or its business, or any merger or consolidation of any member of the Company or any issue of bonds, debentures, or preferred or preference stocks affecting the Shares or the rights thereof, or of any rights, options, or warrants to purchase any capital stock of the Company, or the dissolution or liquidation of the Company, any sale or transfer of all or any part of its assets or business, or any other corporate act or proceedings of the Company, whether of a similar character or otherwise.

(f) Severability. If any provision of the Plan or option agreement, or its application to any person, place, or circumstance, is held by an arbitrator or a court of competent jurisdiction to be invalid, unenforceable, or void, that provision shall be enforced to the greatest extent permitted by law, and the remainder of this Plan and option agreement and of that provision shall remain in full force and effect as applied to other persons, places, and circumstances.

(g) Governing Law. This Plan and the option agreement shall be governed by and construed in accordance with the laws of the State of Colorado applicable to contracts wholly made and performed in the State of Colorado.

(h) Exchange Requirements. So long as Shares are listed on any established stock exchange or traded on the NASDAQ National Market or the NASDAQ SmallCap Market, the applicable requirements of any such exchange or market shall be hereby incorporated by reference.

(i) Compliance with Section 16. So long as any of the Company's equity securities are registered pursuant to Section 12(b) or 12(g) of the 1934 Act, with respect to awards granted to or

held by Section 16 insiders, the Plan will comply in all respects with Rule 16b-3 or any successor rule or rule of similar application under Section 16 of the 1934 Act or rules thereunder, and, if any Plan provision is later found not to be in compliance with such exemption under Section 16, that provision shall be deemed modified as necessary to meet the requirements of such applicable exemption.

12. EFFECTIVE DATE OF THE PLAN. The Plan will become effective upon adoption by the Board, subject to approval by the Company's stockholders. The Plan shall terminate on the 10th anniversary of its adoption.

13. AMENDMENT OF THE PLAN. With the approval of the Board, the Administrator may suspend or discontinue the Plan or revise or amend it in any respect whatsoever; provided, however, that without approval of the Company's stockholders no revision or amendment shall change the number of Shares issuable under the Plan (except as provided in Section 6(e)), change the designation of the class of individuals eligible to receive options, or materially increase the benefits accruing to Non-Employee Directors under the Plan.

IN WITNESS WHEREOF, the undersigned Secretary of the Company certifies that this Plan was adopted by the Board on February 12, 2003, effective as of the same date.

Exhibit 10.3

ADVANCED ENERGY INDUSTRIES, INC.
2001 STOCK OPTION PLAN
ADOPTED JANUARY 22, 2001
AS AMENDED AND RESTATED JUNE 24, 2002

1. PURPOSE. The purpose of the Plan is to provide an incentive to attract, retain and reward individuals performing services for the Company, and to motivate such individuals to contribute to the growth and profitability of the Company.

2. DEFINITIONS. Whenever the following terms are used in the Plan, they shall have the meaning indicated below, unless a different meaning is required by the context.

(a) "Administrator" means either the Board or a committee of at least two Board members to which the Board allocates administration of the Plan.

(b) "Board" means the board of directors of the Corporation.

(c) "Code" means the Internal Revenue Code of 1986, as amended.

(d) "Company" means, collectively, the Corporation and any "parent corporation" or "subsidiary corporation" of the Corporation as defined in Code
Section 424(e) and Section 424(f), respectively.

(e) "Corporation" means Advanced Energy Industries, Inc., a Delaware corporation.

(f) "Fair Market Value" means, with respect to a Share as of any date, the closing sale price of a Share on such date (or previous business day if such date is not a business day) on the principal exchange or market on which Shares are then listed or admitted to trading. If, for any reason, the preceding rule cannot be applied to determine fair market value, then the Committee shall make a good faith determination of fair market value.

(g) "Optionee" means a person to whom an option has been granted under the Plan. If an option is assigned pursuant to Section 6(b), the term "Optionee" shall mean the assignee when required by the context.

(h) "Plan" means this Advanced Energy Industries, Inc. 2001 Stock Option Plan.

(i) "Service" means the Optionee's employment or service with the Company, whether in the capacity of an employee, a director, or a consultant.

(j) "Share" means one share of common stock of the Corporation.

3. ADMINISTRATION. The Plan shall be administered by the Administrator. Subject to the provisions of the Plan, the Administrator shall have the authority to select the persons to be granted options under this Plan, to fix the number of shares that each Optionee may purchase, to determine the exercise price of options granted, to set the terms and conditions of each option (including the period over which the option becomes exercisable), and to determine all other matters relating to administration and operation of the Plan. All questions of interpretation,

implementation, and application of the Plan shall be determined by the Administrator in its sole discretion. Such determinations shall be final and binding on all persons. No member of the Board or committee that acts as Administrator shall be liable for any act or omission on such member's own part, including but not limited to the exercise of any power or discretion given to such member under the Plan, except for those acts or omissions resulting from such member's own gross negligence or willful misconduct.

4. SHARES SUBJECT TO THE PLAN. The maximum number of Shares that may be issued pursuant to options granted under the Plan is 600,000 (Six Hundred Thousand), subject to adjustment as provided in section 6(d). If an option expires, is surrendered, or becomes unexercisable without having been exercised in full, or if any unissued Shares are retained by the Corporation upon exercise of an option in order to satisfy the exercise price for such option or any withholding taxes due with respect to such exercise, the unissued or retained Shares shall become available for future grant under the Plan (unless the Plan has terminated). If unvested Shares are forfeited (repurchased by the Corporation at their original purchase price), such Shares shall also become available for future grant under the Plan, but the total number of such forfeited Shares that become available may not exceed twice the maximum number set forth above (subject to adjustment as provided in section 6(d)). Other Shares that actually have been issued under the Plan pursuant to an option shall not be returned to the Plan and shall not become available for future grant under the Plan.

5. ELIGIBILITY. The Administrator may grant an option or options to any employee or consultant of the Company, as selected in the sole discretion of the Administrator; provided, however, that no option may be granted to an individual who, with respect to the Corporation at the date of grant, is a director or officer (within the meaning of Section 16 of the Securities Exchange Act of 1934).

6. GENERAL TERMS AND CONDITIONS.

(a) Option Agreements. Each option granted under the Plan shall be authorized by action of the Administrator and shall be evidenced by a written agreement in such form as the Administrator shall from time to time approve, which agreement shall comply with and be subject to the terms and conditions of the Plan. All options granted under the Plan are nonqualified options, and are not subject to the provisions of Code Section 422.

(b) Transferability. Options granted under the Plan are not transferable by the Optionee and shall be exercisable during the Optionee's lifetime only by the Optionee; provided, however, that an option may be transferred upon the approval of the Administrator (in its sole discretion) by appropriate instrument to an inter vivos or testamentary trust in which the option is to be passed to the Optionee's beneficiaries upon the Optionee's death or by gift to the Optionee's immediate family (consisting of the Optionee's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, and shall include adoptive relationships). No option or interest therein may be otherwise transferred, assigned, pledged, or hypothecated by Optionee, whether by operation of law or otherwise, or be made subject to execution, attachment, or similar process. Any such purported assignment, sale, transfer, delegation, or other disposition shall be null and void.

(c) Modification, Extension, and Renewal. The Administrator shall have the power to modify, extend, or renew outstanding options and authorize the grant of new options in substitution therefor, provided that any such action may not have the effect of significantly impairing any rights or obligations of any option previously granted without the consent of Optionee.

(d) Changes in Capitalization or Corporate Transaction. In the event of any merger, consolidation, reorganization, recapitalization, stock dividend, stock split, reverse stock split, separation, liquidation or other change in the corporate structure or capitalization affecting the Shares, appropriate adjustment shall be made by the Administrator in the kind, option price, and number of shares of stock (including, but not limited to, the maximum number of Shares reserved under the Plan) that are or may become subject to options granted or to be granted under the Plan.

7. EXERCISE.

(a) Exercise Price. The exercise price of an option shall be not less than the Fair Market Value of a Share on the date of the grant of the option.

(b) Time of Exercise. An option shall become exercisable as specified in the option agreement; provided, however, that (i) an option shall not be exercisable after the 10th anniversary of the date of grant and (ii) unless expressly provided otherwise in the option agreement, an option shall not be exercisable to the extent its exercise would result (determined at the time of exercise) in compensation not deductible by the Company under Code Section 162(m).

(c) Notice of Exercise. Optionees may exercise only by providing written notice to the Corporation at the address specified in the option agreement, accompanied by full payment for the Shares to be purchased. After receiving proper notice of exercise and payment, the Corporation shall issue a certificate(s) for the Shares purchased, registered in Optionee's name (or in Optionee's name and the name of Optionee's spouse as community property or as joint tenants with a right of survivorship). Such certificate(s) shall bear a legend similar to the following, if applicable:

This Stock is Subject to Restrictions on Negotiability

This stock is held pursuant to a certain Agreement effective as of _____, a copy of which is filed with the Secretary of the Corporation, and this stock cannot be sold, transferred, bequeathed, hypothecated, encumbered, or otherwise disposed of, except as provided in the Agreement and subject to the terms thereof.

(d) Taxes and Withholding. The Company shall have the right to deduct from the Shares issuable upon the exercise of an option, or to accept from Optionee the tender of, a number of whole Shares having a fair market value, as determined by the Administrator, equal to all or any part of the federal, state, local and foreign taxes, if any, required by law to be withheld by the Company with respect to such option or the Shares acquired upon the exercise thereof. Alternatively or in addition, in its sole discretion, the Company shall have the right to require Optionee, through payroll withholding, cash payment or otherwise, including by means of a

cashless exercise (as described in Section 8(b)), to make adequate provision for any such tax withholding obligations of the Company arising in connection with the option, or the Shares acquired upon the exercise thereof.

8. PAYMENT OF EXERCISE PRICE. Payment of any option's exercise price may be made in cash, by check or cash equivalent. At the sole discretion of the Administrator, the exercise price may be made as follows:

(a) By Tender of Stock. Payment may be made by tender (or by attestation) to the Corporation of Shares owned by Optionee having a Fair Market Value (as determined by the Administrator without regard to any restrictions on transferability applicable to such Shares by reason of federal or state securities laws or agreements with the Corporation's underwriter) not less than the exercise price; provided that, an option may not be exercised by tender to the Corporation of Shares to the extent such tender would constitute a violation of the provisions of any law, regulation or agreement restricting the redemption of the Shares. Unless otherwise provided by the Administrator, an option may not be exercised by tender to the Corporation of Shares unless such Shares either have been owned by Optionee for more than six (6) months or were not acquired, directly or indirectly, from the Corporation.

(b) By Cashless Exercise. The Administrator reserves, at any and all times, the right, in the Administrator's sole and absolute discretion, to establish, decline to approve or terminate any program or procedures for the exercise of options by payment by the assignment of the proceeds of a sale or loan with respect to some or all of the Shares being acquired upon the exercise of the option, including, without limitation, through an exercise complying with the provisions of Regulation T as promulgated from time to time by the Board of Governors of the Federal Reserve System.

(c) By Promissory Note. Payment may be made by Optionee's promissory note in a form approved by the Administrator, except that no promissory note shall be permitted if the exercise of an option using a promissory note would be a violation of any law. Any permitted promissory note shall be on such terms as the Administrator shall determine; provided that (i) the note (including interest) shall be full recourse, (ii) interest shall be payable in at least annual installments at a current market interest rate, (iii) the note shall be secured by the Shares acquired, and (iv) the remaining balance of the note (including accrued interest) shall be due and payable within 90 days of termination of Optionee's Service for any reason. Unless otherwise provided by the Administrator, if the Corporation at any time is subject to the regulations promulgated by the Board of Governors of the Federal Reserve System or any other governmental entity affecting the extension of credit in connection with the Corporation's securities, any promissory note shall comply with such applicable regulations, and Optionee shall pay the unpaid principal and accrued interest, if any, to the extent necessary to comply with such applicable regulations.

(d) By Other Consideration. Payment may be made by such other consideration or by any combination of cash, stock, cashless exercise, promissory note or other consideration as may be approved by the Administrator from time to time to the extent permitted by applicable laws.

9. TERMINATION OF OPTIONS.

(a) Termination of Service. If an Optionee's Service terminates, his or her rights to exercise an option then held shall be limited. Optionee's Service shall not be deemed to have terminated merely because of a change in the capacity in which Optionee renders Service or a change in the Company, provided that there is no interruption or termination of Optionee's employment or service. Optionee's Service with the Company shall be treated as continuing intact while the Optionee is on military, sick leave, or other bona fide leave of absence (such as temporary employment by the government) approved by the Company if the period of such leave does not exceed 90 days, or, if longer, so long as the Optionee's right to reemployment with the Corporation is guaranteed either by statute or by contract. Where the period of leave exceeds 90 days and where the Optionee's right to reemployment is not guaranteed either by statute or by contract, Service will be deemed to have terminated on the 91st day of such leave. Subject to the foregoing, the Administrator, in its sole discretion, shall determine whether Optionee's Service has terminated and the effective date thereof.

(b) Regular Termination. Except as otherwise provided in paragraphs (c) through (e), if an Optionee's Service terminates, Optionee shall have the right for a period of 3 months after the date of termination to exercise the option to the extent Optionee was entitled to exercise the option on that date; provided, however, that the date of exercise is in no event after the expiration of the term of the option. To the extent the option is not exercised within this period, the option will terminate.

(c) Termination by Disability. If an Optionee becomes disabled (within the meaning of Code Section 22(e)(3)) while in Service, Optionee or his or her qualified representative shall have the right for a period of twelve (12) months after the date on which Optionee's Service ends to exercise the option to the extent Optionee was entitled to exercise the option on that date, provided the date of exercise is in no event after the expiration of the term of the option. To the extent the option is not exercised within this period, the option will terminate.

(d) Termination Upon Death. If an Optionee dies while in Service, the person who acquired the right to exercise the option by bequest or inheritance or by reason of the death of the Optionee shall have the right for a period of twelve (12) months after the date of death to exercise the option to the extent Optionee was entitled to exercise the option on that date, provided the date of exercise is in no event after the expiration of the term of the option. To the extent the option is not exercised within this period, the option will terminate.

(e) Termination for Cause. If an Optionee's Service is terminated by the Company for Cause, Optionee shall have no right to exercise the option, and the option will terminate. "Cause" means that Optionee is determined by the Administrator to have committed an act of embezzlement, fraud, dishonesty, or breach of fiduciary duty to the Company, or to have deliberately disregarded the rules of the Company which resulted in loss, damage, or injury to the Company, or because Optionee has made any unauthorized disclosure of any of the secrets or confidential information of the Company, has induced any client or customer of the Company to breach any contract with the Company, has induced any principal for whom the Company acts as agent to terminate the agency relationship, or has engaged in any conduct that constitutes unfair competition with the Company. Any action on the part of the Optionee that is described in this

paragraph will constitute Cause, for purposes of this Plan, only if the action results in a material or significant loss to the Company, as determined in the sole discretion of the Administrator.

(f) Option Agreement. The option agreement may provide rules different from those set forth in subsections (a) through (e), provided that, in the absence of Cause, the option must be exercisable for at least 30 days after termination of Service (6 months in the case of termination caused by death or disability), but not after the expiration of the term of the option.

10. CHANGE IN CONTROL. In the event of (i) a merger or consolidation in which the Corporation is not the surviving corporation or (ii) a reverse merger in which the Corporation is the surviving corporation but the shares of the Corporation's common stock outstanding immediately preceding the merger are converted by virtue of the merger into other property, whether in the form of securities, cash or otherwise then to the extent permitted by applicable law (collectively, a "Change in Control"), then (i) any surviving corporation shall assume any options outstanding under the Plan or shall substitute similar options for those outstanding under the Plan, or (ii) such options shall continue in full force and effect. In the event any surviving corporation refuses to assume or continue such options, or to substitute similar options for those outstanding under the Plan, then such options shall be terminated if not exercised prior to such event. In the event of a dissolution or liquidation of the Corporation, any option outstanding under the Plan shall terminate if not exercised prior to such event.

11. VESTING OF SHARES.

(a) Vesting. Shares shall become vested as specified in the option agreement. Shares acquired on exercise of an option shall first be attributable to vested Shares, then unvested Shares. Shares shall cease to vest at the time of termination of Service.

(b) Unvested Share Repurchase Right. Shares acquired under the Plan that have not vested may be repurchased by the Corporation at the original exercise price if the Optionee's Service with the Company is terminated for any reason or no reason, with or without Cause (as defined in Section 9(e)). The Corporation may assign any unvested Share repurchase right it may have, whether or not then exercisable, to such person or persons as may be selected by the Corporation. The Corporation may require the Optionee to place certificates for any unvested Shares in escrow under reasonable terms established by the Administrator.

(c) Exercise of Unvested Share Repurchase Right. The unvested Share repurchase right may be exercised by written notice to Optionee within 60 days after termination of Optionee's Service (or exercise of the option, if later). If notice is not given within such 60-day period, the repurchase option shall terminate unless the parties have extended the time for its exercise. The repurchase right must be exercised for all unvested Shares, unless the parties agree otherwise. Cash payment (or cancellation of purchase money indebtedness) must be made by the thirtieth (30th) day after the date of the written notice to Optionee of the exercise of the repurchase right.

12. SECURITIES LAW COMPLIANCE.

(a) General Rules. The grant of options and the issuance of Shares upon exercise of options shall be subject to compliance with all applicable requirements of federal, state or foreign law with respect to such securities. Options may not be exercised if the issuance of Shares upon exercise would constitute a violation of any applicable federal, state or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which the Shares may then be listed. In addition, no option may be exercised unless (i) a registration statement under the Securities Act shall at the time of exercise of the option be in effect with respect to the Shares issuable upon exercise of the option, or (ii) in the opinion of legal counsel to the Corporation, the Shares issuable upon exercise of the option may be issued in accordance with the terms of an applicable exemption from the registration requirements of the Securities Act. The inability of the Corporation to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Corporation's legal counsel to be necessary to the lawful issuance and sale of any shares hereunder shall relieve the Corporation of any liability in respect of the failure to issue or sell such shares as to which such requisite authority shall not have been obtained.

(b) Conditions of Exercise. As a condition to the exercise of any option, the Corporation may require Optionee to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect thereto as may be requested by the Corporation.

13. MISCELLANEOUS.

(a) No Right to an Option. Nothing in the Plan shall be construed to give any person any right to be granted an option.

(b) No Employment Rights. Neither the Plan nor the granting of an option nor any other action taken pursuant to the Plan shall constitute or be evidence of any agreement or understanding, express or implied, that the Company will utilize Optionee's services for any period of time, or in any position, or at any particular rate of compensation.

(c) No Shareholders' Rights. Optionee shall have no rights as a shareholder with respect to the Shares covered by his or her options until the date of the issuance to him or her of a share certificate for the Shares, and no adjustment will be made for dividends or other rights for which the record date is prior to the date the certificate is issued.

(d) Claims. Any person who makes a claim for benefits under the Plan or under any option agreement entered into pursuant to the Plan shall file the claim in writing with the Administrator. Written notice of the disposition of the claim shall be delivered to the claimant within 60 days after filing. If the claim is denied, the Administrator's written decision shall set forth (i) the specific reason or reasons for the denial, (ii) a specific reference to the pertinent provisions of the Plan or option agreement on which the denial is based, and (iii) a description of any additional material or information necessary for the claimant to perfect his or her claim and an explanation of why such material or information is necessary. No lawsuit may be filed by the claimant until a claim is made and denied pursuant to this subsection.

(e) Attorneys' Fees. In any legal action or other proceeding brought by either party to enforce or interpret the terms of the option agreement, the prevailing party shall be entitled to recover reasonable attorneys' fees and costs.

(f) Confidentiality. The terms and conditions of the option agreement, including without limitation the number of Shares for which the option is granted, are confidential. Optionee shall not disclose the terms of the option to any third party, except to Optionee's financial or legal advisors, tax preparer or family members, unless disclosure is required by law.

(g) Corporation Free to Act. An option grant shall not affect in any way the right or power of the Corporation or its shareholders to make or authorize any or all adjustments, recapitalizations, reorganizations, or other changes in the Corporation's capital structure or its business, or any merger or consolidation of any member of the Company or any issue of bonds, debentures, or preferred or preference stocks affecting the Shares or the rights thereof, or of any rights, options, or warrants to purchase any capital stock of the Corporation, or the dissolution or liquidation of the Corporation, any sale or transfer of all or any part of its assets or business, or any other corporate act or proceedings of the Corporation, whether of a similar character or otherwise.

(h) Severability. If any provision of the Plan or option agreement, or its application to any person, place, or circumstance, is held by an arbitrator or a court of competent jurisdiction to be invalid, unenforceable, or void, that provision shall be enforced to the greatest extent permitted by law, and the remainder of this Plan and option agreement and of that provision shall remain in full force and effect as applied to other persons, places, and circumstances.

(i) Substitution/Assumption. The Company may substitute or assume outstanding options granted by another company by either (i) granting an option under this Plan in substitution of such other company's option or (ii) assuming such option as if it had been granted under this Plan if the terms of such assumed option are consistent this Plan. Such substitution or assumption will be permissible if the holder of the substituted or assumed option would have been eligible to be granted an option under this Plan if the other company had applied the rules of this Plan to such grant. In the event of an assumption hereunder, the terms and conditions of the option will remain unchanged, except that the exercise price and the number and nature of shares issuable upon exercise of any such option will be adjusted appropriately in the manner described in Code Section 424(a). If the Company substitutes a new option for the old option, such new option may be granted with a similarly adjusted exercise price.

(j) Exchange Requirements. The requirements of any stock exchange or other established market (such as the NASDAQ), on which the Corporation's common stock is traded, are hereby incorporated into this Plan by reference.

(k) Governing Law. This Plan and the option agreement shall be governed by and construed in accordance with the laws of the State of Colorado applicable to contracts wholly made and performed in the State of Colorado.

14. EFFECTIVE DATE OF THE PLAN. The Plan will become effective upon adoption of the Board. Options may be granted under the Plan at any time after the Plan's adoption and before the termination of the Plan. The Plan shall terminate on the 10th anniversary of its adoption.

15. AMENDMENT OF THE PLAN. The Board may suspend or discontinue the Plan or revise or amend it in any respect whatsoever.

IN WITNESS WHEREOF, the undersigned Secretary of the Corporation certifies that this Plan was adopted by the Board on January 22, 2001, and effective as of the same date.

Exhibit 10.4

ADVANCED ENERGY INDUSTRIES, INC.
2002 STOCK OPTION PLAN
AS ADOPTED FEBRUARY 12, 2002
AS AMENDED AND RESTATED JUNE 24, 2002

1. PURPOSE. The purpose of the Plan is to provide an incentive to attract, retain and reward individuals performing services for the Company, and to motivate such individuals to contribute to the growth and profitability of the Company.

2. DEFINITIONS. Whenever the following terms are used in the Plan, they shall have the meaning indicated below, unless a different meaning is required by the context.

(a) "Administrator" means either the Board or a committee of at least two Board members to which the Board allocates administration of the Plan.

(b) "Board" means the board of directors of the Corporation.

(c) "Code" means the Internal Revenue Code of 1986, as amended.

(d) "Company" means, collectively, the Corporation and any "parent corporation" or "subsidiary corporation" of the Corporation as defined in Code
Section 424(e) and Section 424(f), respectively.

(e) "Corporation" means Advanced Energy Industries, Inc., a Delaware corporation.

(f) "Fair Market Value" means, with respect to a Share as of any date, the closing sale price of a Share on such date (or previous business day if such date is not a business day) on the principal exchange or market on which Shares are then listed or admitted to trading. If, for any reason, the preceding rule cannot be applied to determine fair market value, then the Committee shall make a good faith determination of fair market value.

(g) "Optionee" means a person to whom an option has been granted under the Plan. If an option is assigned pursuant to Section 6(b), the term "Optionee" shall mean the assignee when required by the context.

(h) "Plan" means this Advanced Energy Industries, Inc. 2002 Stock Option Plan.

(i) "Service" means the Optionee's employment or service with the Company, whether in the capacity of an employee, a director, or a consultant.

(j) "Share" means one share of common stock of the Corporation.

3. ADMINISTRATION. The Plan shall be administered by the Administrator. Subject to the provisions of the Plan, the Administrator shall have the authority to select the persons to be granted options under this Plan, to fix the number of shares that each Optionee may purchase, to determine the exercise price of options granted, to set the terms and conditions of each option (including the period over which the option becomes exercisable), and to determine all other matters relating to administration and operation of the Plan. All questions of interpretation,

implementation, and application of the Plan shall be determined by the Administrator in its sole discretion. Such determinations shall be final and binding on all persons. No member of the Board or committee that acts as Administrator shall be liable for any act or omission on such member's own part, including but not limited to the exercise of any power or discretion given to such member under the Plan, except for those acts or omissions resulting from such member's own gross negligence or willful misconduct.

4. SHARES SUBJECT TO THE PLAN. The maximum number of Shares that may be issued pursuant to options granted under the Plan is 600,000 (Six Hundred Thousand), subject to adjustment as provided in section 6(d). If an option expires, is surrendered, or becomes unexercisable without having been exercised in full, or if any unissued Shares are retained by the Corporation upon exercise of an option in order to satisfy the exercise price for such option or any withholding taxes due with respect to such exercise, the unissued or retained Shares shall become available for future grant under the Plan (unless the Plan has terminated). If unvested Shares are forfeited (repurchased by the Corporation at their original purchase price), such Shares shall also become available for future grant under the Plan, but the total number of such forfeited Shares that become available may not exceed twice the maximum number set forth above (subject to adjustment as provided in section 6(d)). Other Shares that actually have been issued under the Plan pursuant to an option shall not be returned to the Plan and shall not become available for future grant under the Plan.

5. ELIGIBILITY. The Administrator may grant an option or options to any employee or consultant of the Company, as selected in the sole discretion of the Administrator; provided, however, that no option may be granted to an individual who, with respect to the Corporation at the date of grant, is a director or officer (within the meaning of Section 16 of the Securities Exchange Act of 1934).

6. GENERAL TERMS AND CONDITIONS.

(a) Option Agreements. Each option granted under the Plan shall be authorized by action of the Administrator and shall be evidenced by a written agreement in such form as the Administrator shall from time to time approve, which agreement shall comply with and be subject to the terms and conditions of the Plan. All options granted under the Plan are nonqualified options, and are not subject to the provisions of Code Section 422.

(b) Transferability. Options granted under the Plan are not transferable by the Optionee and shall be exercisable during the Optionee's lifetime only by the Optionee; provided, however, that an option may be transferred upon the approval of the Administrator (in its sole discretion) by appropriate instrument to an inter vivos or testamentary trust in which the option is to be passed to the Optionee's beneficiaries upon the Optionee's death or by gift to the Optionee's immediate family (consisting of the Optionee's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, and shall include adoptive relationships). No option or interest therein may be otherwise transferred, assigned, pledged, or hypothecated by Optionee, whether by operation of law or otherwise, or be made subject to execution, attachment, or similar process. Any such purported assignment, sale, transfer, delegation, or other disposition shall be null and void.

(c) Modification, Extension, and Renewal. The Administrator shall have the power to modify, extend, or renew outstanding options and authorize the grant of new options in substitution therefor, provided that any such action may not have the effect of significantly impairing any rights or obligations of any option previously granted without the consent of Optionee.

(d) Changes in Capitalization or Corporate Transaction. In the event of any merger, consolidation, reorganization, recapitalization, stock dividend, stock split, reverse stock split, separation, liquidation or other change in the corporate structure or capitalization affecting the Shares, appropriate adjustment shall be made by the Administrator in the kind, option price, and number of shares of stock (including, but not limited to, the maximum number of Shares reserved under the Plan) that are or may become subject to options granted or to be granted under the Plan.

7. EXERCISE.

(a) Exercise Price. The exercise price of an option shall be not less than the Fair Market Value of a Share on the date of the grant of the option.

(b) Time of Exercise. An option shall become exercisable as specified in the option agreement; provided, however, that (i) an option shall not be exercisable after the 10th anniversary of the date of grant and (ii) unless expressly provided otherwise in the option agreement, an option shall not be exercisable to the extent its exercise would result (determined at the time of exercise) in compensation not deductible by the Company under Code Section 162(m).

(c) Notice of Exercise. Optionees may exercise only by providing written notice to the Corporation at the address specified in the option agreement, accompanied by full payment for the Shares to be purchased. After receiving proper notice of exercise and payment, the Corporation shall issue a certificate(s) for the Shares purchased, registered in Optionee's name (or in Optionee's name and the name of Optionee's spouse as community property or as joint tenants with a right of survivorship). Such certificate(s) shall bear a legend similar to the following, if applicable:

This Stock is Subject to Restrictions on Negotiability

This stock is held pursuant to a certain Agreement effective as of _____, a copy of which is filed with the Secretary of the Corporation, and this stock cannot be sold, transferred, bequeathed, hypothecated, encumbered, or otherwise disposed of, except as provided in the Agreement and subject to the terms thereof.

(d) Taxes and Withholding. The Company shall have the right to deduct from the Shares issuable upon the exercise of an option, or to accept from Optionee the tender of, a number of whole Shares having a fair market value, as determined by the Administrator, equal to all or any part of the federal, state, local and foreign taxes, if any, required by law to be withheld by the Company with respect to such option or the Shares acquired upon the exercise thereof. Alternatively or in addition, in its sole discretion, the Company shall have the right to require Optionee, through payroll withholding, cash payment or otherwise, including by means of a

cashless exercise (as described in Section 8(b)), to make adequate provision for any such tax withholding obligations of the Company arising in connection with the option, or the Shares acquired upon the exercise thereof.

8. PAYMENT OF EXERCISE PRICE. Payment of any option's exercise price may be made in cash, by check or cash equivalent. At the sole discretion of the Administrator, the exercise price may be made as follows:

(a) By Tender of Stock. Payment may be made by tender (or by attestation) to the Corporation of Shares owned by Optionee having a Fair Market Value (as determined by the Administrator without regard to any restrictions on transferability applicable to such Shares by reason of federal or state securities laws or agreements with the Corporation's underwriter) not less than the exercise price; provided that, an option may not be exercised by tender to the Corporation of Shares to the extent such tender would constitute a violation of the provisions of any law, regulation or agreement restricting the redemption of the Shares. Unless otherwise provided by the Administrator, an option may not be exercised by tender to the Corporation of Shares unless such Shares either have been owned by Optionee for more than six (6) months or were not acquired, directly or indirectly, from the Corporation.

(b) By Cashless Exercise. The Administrator reserves, at any and all times, the right, in the Administrator's sole and absolute discretion, to establish, decline to approve or terminate any program or procedures for the exercise of options by payment by the assignment of the proceeds of a sale or loan with respect to some or all of the Shares being acquired upon the exercise of the option, including, without limitation, through an exercise complying with the provisions of Regulation T as promulgated from time to time by the Board of Governors of the Federal Reserve System.

(c) By Promissory Note. Payment may be made by Optionee's promissory note in a form approved by the Administrator, except that no promissory note shall be permitted if the exercise of an option using a promissory note would be a violation of any law. Any permitted promissory note shall be on such terms as the Administrator shall determine; provided that (i) the note (including interest) shall be full recourse, (ii) interest shall be payable in at least annual installments at a current market interest rate, (iii) the note shall be secured by the Shares acquired, and (iv) the remaining balance of the note (including accrued interest) shall be due and payable within 90 days of termination of Optionee's Service for any reason. Unless otherwise provided by the Administrator, if the Corporation at any time is subject to the regulations promulgated by the Board of Governors of the Federal Reserve System or any other governmental entity affecting the extension of credit in connection with the Corporation's securities, any promissory note shall comply with such applicable regulations, and Optionee shall pay the unpaid principal and accrued interest, if any, to the extent necessary to comply with such applicable regulations.

(d) By Other Consideration. Payment may be made by such other consideration or by any combination of cash, stock, cashless exercise, promissory note or other consideration as may be approved by the Administrator from time to time to the extent permitted by applicable laws.

9. TERMINATION OF OPTIONS.

(a) Termination of Service. If an Optionee's Service terminates, his or her rights to exercise an option then held shall be limited. Optionee's Service shall not be deemed to have terminated merely because of a change in the capacity in which Optionee renders Service or a change in the Company, provided that there is no interruption or termination of Optionee's employment or service. Optionee's Service with the Company shall be treated as continuing intact while the Optionee is on military, sick leave, or other bona fide leave of absence (such as temporary employment by the government) approved by the Company if the period of such leave does not exceed 90 days, or, if longer, so long as the Optionee's right to reemployment with the Corporation is guaranteed either by statute or by contract. Where the period of leave exceeds 90 days and where the Optionee's right to reemployment is not guaranteed either by statute or by contract, Service will be deemed to have terminated on the 91st day of such leave. Subject to the foregoing, the Administrator, in its sole discretion, shall determine whether Optionee's Service has terminated and the effective date thereof.

(b) Regular Termination. Except as otherwise provided in paragraphs (c) through (e), if an Optionee's Service terminates, Optionee shall have the right for a period of 3 months after the date of termination to exercise the option to the extent Optionee was entitled to exercise the option on that date; provided, however, that the date of exercise is in no event after the expiration of the term of the option. To the extent the option is not exercised within this period, the option will terminate.

(c) Termination by Disability. If an Optionee becomes disabled (within the meaning of Code Section 22(e)(3)) while in Service, Optionee or his or her qualified representative shall have the right for a period of twelve (12) months after the date on which Optionee's Service ends to exercise the option to the extent Optionee was entitled to exercise the option on that date, provided the date of exercise is in no event after the expiration of the term of the option. To the extent the option is not exercised within this period, the option will terminate.

(d) Termination Upon Death. If an Optionee dies while in Service, the person who acquired the right to exercise the option by bequest or inheritance or by reason of the death of the Optionee shall have the right for a period of twelve (12) months after the date of death to exercise the option to the extent Optionee was entitled to exercise the option on that date, provided the date of exercise is in no event after the expiration of the term of the option. To the extent the option is not exercised within this period, the option will terminate.

(e) Termination for Cause. If an Optionee's Service is terminated by the Company for Cause, Optionee shall have no right to exercise the option, and the option will terminate. "Cause" means that Optionee is determined by the Administrator to have committed an act of embezzlement, fraud, dishonesty, or breach of fiduciary duty to the Company, or to have deliberately disregarded the rules of the Company which resulted in loss, damage, or injury to the Company, or because Optionee has made any unauthorized disclosure of any of the secrets or confidential information of the Company, has induced any client or customer of the Company to breach any contract with the Company, has induced any principal for whom the Company acts as agent to terminate the agency relationship, or has engaged in any conduct that constitutes unfair competition with the Company. Any action on the part of the Optionee that is described in this

paragraph will constitute Cause, for purposes of this Plan, only if the action results in a material or significant loss to the Company, as determined in the sole discretion of the Administrator.

(f) Option Agreement. The option agreement may provide rules different from those set forth in subsections (a) through (e), provided that, in the absence of Cause, the option must be exercisable for at least 30 days after termination of Service (6 months in the case of termination caused by death or disability), but not after the expiration of the term of the option.

10. CHANGE IN CONTROL. In the event of (i) a merger or consolidation in which the Corporation is not the surviving corporation or (ii) a reverse merger in which the Corporation is the surviving corporation but the shares of the Corporation's common stock outstanding immediately preceding the merger are converted by virtue of the merger into other property, whether in the form of securities, cash or otherwise then to the extent permitted by applicable law (collectively, a "Change in Control"), then (i) any surviving corporation shall assume any options outstanding under the Plan or shall substitute similar options for those outstanding under the Plan, or (ii) such options shall continue in full force and effect. In the event any surviving corporation refuses to assume or continue such options, or to substitute similar options for those outstanding under the Plan, then such options shall be terminated if not exercised prior to such event. In the event of a dissolution or liquidation of the Corporation, any option outstanding under the Plan shall terminate if not exercised prior to such event.

11. VESTING OF SHARES.

(a) Vesting. Shares shall become vested as specified in the option agreement. Shares acquired on exercise of an option shall first be attributable to vested Shares, then unvested Shares. Shares shall cease to vest at the time of termination of Service.

(b) Unvested Share Repurchase Right. Shares acquired under the Plan that have not vested may be repurchased by the Corporation at the original exercise price if the Optionee's Service with the Company is terminated for any reason or no reason, with or without Cause (as defined in Section 9(e)). The Corporation may assign any unvested Share repurchase right it may have, whether or not then exercisable, to such person or persons as may be selected by the Corporation. The Corporation may require the Optionee to place certificates for any unvested Shares in escrow under reasonable terms established by the Administrator.

(c) Exercise of Unvested Share Repurchase Right. The unvested Share repurchase right may be exercised by written notice to Optionee within 60 days after termination of Optionee's Service (or exercise of the option, if later). If notice is not given within such 60-day period, the repurchase option shall terminate unless the parties have extended the time for its exercise. The repurchase right must be exercised for all unvested Shares, unless the parties agree otherwise. Cash payment (or cancellation of purchase money indebtedness) must be made by the thirtieth (30th) day after the date of the written notice to Optionee of the exercise of the repurchase right.

12. SECURITIES LAW COMPLIANCE.

(a) General Rules. The grant of options and the issuance of Shares upon exercise of options shall be subject to compliance with all applicable requirements of federal, state or foreign law with respect to such securities. Options may not be exercised if the issuance of Shares upon exercise would constitute a violation of any applicable federal, state or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which the Shares may then be listed. In addition, no option may be exercised unless (i) a registration statement under the Securities Act shall at the time of exercise of the option be in effect with respect to the Shares issuable upon exercise of the option, or (ii) in the opinion of legal counsel to the Corporation, the Shares issuable upon exercise of the option may be issued in accordance with the terms of an applicable exemption from the registration requirements of the Securities Act. The inability of the Corporation to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Corporation's legal counsel to be necessary to the lawful issuance and sale of any shares hereunder shall relieve the Corporation of any liability in respect of the failure to issue or sell such shares as to which such requisite authority shall not have been obtained.

(b) Conditions of Exercise. As a condition to the exercise of any option, the Corporation may require Optionee to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect thereto as may be requested by the Corporation.

13. MISCELLANEOUS.

(a) No Right to an Option. Nothing in the Plan shall be construed to give any person any right to be granted an option.

(b) No Employment Rights. Neither the Plan nor the granting of an option nor any other action taken pursuant to the Plan shall constitute or be evidence of any agreement or understanding, express or implied, that the Company will utilize Optionee's services for any period of time, or in any position, or at any particular rate of compensation.

(c) No Shareholders' Rights. Optionee shall have no rights as a shareholder with respect to the Shares covered by his or her options until the date of the issuance to him or her of a share certificate for the Shares, and no adjustment will be made for dividends or other rights for which the record date is prior to the date the certificate is issued.

(d) Claims. Any person who makes a claim for benefits under the Plan or under any option agreement entered into pursuant to the Plan shall file the claim in writing with the Administrator. Written notice of the disposition of the claim shall be delivered to the claimant within 60 days after filing. If the claim is denied, the Administrator's written decision shall set forth (i) the specific reason or reasons for the denial, (ii) a specific reference to the pertinent provisions of the Plan or option agreement on which the denial is based, and (iii) a description of any additional material or information necessary for the claimant to perfect his or her claim and an explanation of why such material or information is necessary. No lawsuit may be filed by the claimant until a claim is made and denied pursuant to this subsection.

(e) Attorneys' Fees. In any legal action or other proceeding brought by either party to enforce or interpret the terms of the option agreement, the prevailing party shall be entitled to recover reasonable attorneys' fees and costs.

(f) Confidentiality. The terms and conditions of the option agreement, including without limitation the number of Shares for which the option is granted, are confidential. Optionee shall not disclose the terms of the option to any third party, except to Optionee's financial or legal advisors, tax preparer or family members, unless disclosure is required by law.

(g) Corporation Free to Act. An option grant shall not affect in any way the right or power of the Corporation or its shareholders to make or authorize any or all adjustments, recapitalizations, reorganizations, or other changes in the Corporation's capital structure or its business, or any merger or consolidation of any member of the Company or any issue of bonds, debentures, or preferred or preference stocks affecting the Shares or the rights thereof, or of any rights, options, or warrants to purchase any capital stock of the Corporation, or the dissolution or liquidation of the Corporation, any sale or transfer of all or any part of its assets or business, or any other corporate act or proceedings of the Corporation, whether of a similar character or otherwise.

(h) Severability. If any provision of the Plan or option agreement, or its application to any person, place, or circumstance, is held by an arbitrator or a court of competent jurisdiction to be invalid, unenforceable, or void, that provision shall be enforced to the greatest extent permitted by law, and the remainder of this Plan and option agreement and of that provision shall remain in full force and effect as applied to other persons, places, and circumstances.

(i) Substitution/Assumption. The Company may substitute or assume outstanding options granted by another company by either (i) granting an option under this Plan in substitution of such other company's option or (ii) assuming such option as if it had been granted under this Plan if the terms of such assumed option are consistent this Plan. Such substitution or assumption will be permissible if the holder of the substituted or assumed option would have been eligible to be granted an option under this Plan if the other company had applied the rules of this Plan to such grant. In the event of an assumption hereunder, the terms and conditions of the option will remain unchanged, except that the exercise price and the number and nature of shares issuable upon exercise of any such option will be adjusted appropriately in the manner described in Code Section 424(a). If the Company substitutes a new option for the old option, such new option may be granted with a similarly adjusted exercise price.

(j) Exchange Requirements. The requirements of any stock exchange or other established market (such as the NASDAQ), on which the Corporation's common stock is traded, are hereby incorporated into this Plan by reference.

(k) Governing Law. This Plan and the option agreement shall be governed by and construed in accordance with the laws of the State of Colorado applicable to contracts wholly made and performed in the State of Colorado.

14. EFFECTIVE DATE OF THE PLAN. The Plan will become effective upon adoption of the Board. Options may be granted under the Plan at any time after the Plan's adoption and before the termination of the Plan. The Plan shall terminate on the 10th anniversary of its adoption.

15. AMENDMENT OF THE PLAN. The Board may suspend or discontinue the Plan or revise or amend it in any respect whatsoever.

IN WITNESS WHEREOF, the undersigned Secretary of the Corporation certifies that this Plan was adopted by the Board on February 12, 2002, and effective as of the same date.

Exhibit 31.1

I, Douglas S. Schatz, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Advanced Energy Industries, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

c. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:

a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 3, 2003

/s/ Douglas S. Schatz

Douglas S. Schatz
Chief Executive Officer, President
and Chairman of the Board

Exhibit 31.2

I, Michael El-Hillow, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Advanced Energy Industries, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

c. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:

a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 3, 2003

/s/ Michael El-Hillow

Michael El-Hillow
Executive Vice President, Chief Financial Officer (Principal Financial Officer)

Exhibit 32.1

Certification of the Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the accompanying Form 10-Q of Advanced Energy Industries, Inc. (the "Company") for the quarter ended September 30, 2003 (the "Report"), I, Douglas S. Schatz, Chief Executive Officer and President of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 3, 2003

/s/ Douglas S. Schatz

Douglas S. Schatz
Chief Executive Officer and President

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

Certification of the Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the accompanying Form 10-Q of Advanced Energy Industries, Inc. (the "Company") for the quarter ended September 30, 2003 (the "Report"), I, Michael El-Hillow, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 3, 2003

/s/ Michael El-Hillow

Michael El-Hillow
Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

End of Filing

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