

ADVANCED ENERGY INDUSTRIES INC

FORM 10-K (Annual Report)

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

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

(MARK ONE)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (FEE REQUIRED).

For the fiscal year ended December 31, 2000.

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (NO FEE REQUIRED).

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

(State or other jurisdiction of incorporation
or organization)

84-0846841

(I.R.S. Employer Identification No.)

1625 SHARP POINT DRIVE, FORT COLLINS, CO
(Address of principal executive offices)

80525
(Zip Code)

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

Securities registered pursuant to
Section 12(b) of the Act:

NONE

Securities registered pursuant to
section 12(g) of the Act:

COMMON STOCK, \$0.001 PAR VALUE

(Title of Class)

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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (Section 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's

knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K [].

As of March 12, 2001, there were 31,555,604 shares of the Registrant's Common Stock outstanding and the aggregate market value of such stock held by non-affiliates of the Registrant was \$409,060,275.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's definitive proxy statement for the annual meeting of stockholders to be held on May 9, 2001 are incorporated by reference into Part III of this Form 10-K.

ADVANCED ENERGY INDUSTRIES, INC.
FORM 10-K
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PART I

ITEM 1. BUSINESS

GENERAL

We design, manufacture and support products and systems critical to plasma-based manufacturing processes. These systems are important components in industrial manufacturing equipment that modifies surfaces or deposits or etches thin film layers on computer chips, CDs, flat panel displays such as computer screens, DVDs, windows, eyeglasses, solar panels and other products. Our systems refine, modify and control the raw electrical power from a utility and convert it into power that is uniform and predictable. This allows manufacturing equipment to produce and deposit very thin films at an even thickness on a mass scale.

We market and sell our systems primarily to large, original equipment manufacturers of semiconductor, flat panel display, data storage and other industrial thin film manufacturing equipment. We have sold our systems worldwide to more than 100 OEMs and directly to more than 500 end-users. Our principal customers include Applied Materials, Axcelis, Lam Research, Novellus, Singulus, ULVAC and Unaxis.

We seek to expand our product offerings and customer base. In September 1998 we acquired the assets of Fourth State Technology, Inc. This acquisition provided us with the capability to design and manufacture power-related process control systems used to monitor and analyze data in thin film processes.

In October 1998 we acquired RF Power Products, Inc., which designs, manufactures and markets radio frequency (RF) power conversion and control systems consisting of generators and matching networks. This acquisition expanded our existing product line of RF generators and matching networks. Generators provide radio frequency power and matching networks provide the power flow control to our customers' equipment. We sell these products principally to semiconductor capital equipment manufacturers. We also sell similar systems to capital equipment manufacturers in the flat panel display and thin film disk media industries. We continue to explore applications for these products in other industries.

In October 1999 we further expanded our range of product offerings when we acquired a majority ownership in LITMAS, in which we had previously held a minority interest. LITMAS is a manufacturer of plasma gas abatement systems and high-density plasma sources for the semiconductor capital equipment industry.

In April 2000 we acquired Noah Holdings, Inc. ("Noah"), a privately held manufacturer of solid state temperature control systems used to control process temperatures during semiconductor manufacturing.

In August 2000 we acquired Sekidenko, Inc. ("Sekidenko"), a privately held manufacturer of optical fiber temperature measurement and control systems for the semiconductor and related industries.

In January 2001 we acquired Engineering Measurements Company ("EMCO"), a publicly held manufacturer of flowmeters for use in semiconductor manufacturing and advanced product applications.

Since inception we have sold over 200,000 power conversion and control systems. Sales to customers in the semiconductor capital equipment industry constituted 65% of our sales in 1999 and 70% in 2000. We sell our systems primarily through direct sales personnel to customers in the United States, Europe and Asia, and through distributors in Australia, China, France, India, Israel, Italy, Mexico, Singapore and Sweden. International sales represented 27% of our sales in 1999 and 28% in 2000.

DEVELOPMENT OF COMPANY BUSINESS

We incorporated in Colorado in 1981 and reincorporated in Delaware in 1995. In 1995 we effected the initial public offering of our Common Stock. As used in this Form 10-K, references to "Advanced Energy" refer to Advanced Energy Industries, Inc. and references to "we", "us", or "our" refer to Advanced Energy and its consolidated subsidiaries. Our principal executive offices are located at 1625 Sharp Point Drive, Fort Collins, Colorado 80525, and our telephone number is 970-221-4670.

PRODUCTS

Our switchmode power conversion and control systems have advanced features, which have enabled our customers to develop new plasma-based processing applications. In 1982 we introduced our first low-frequency switchmode power conversion and control system specifically designed for use in plasma processes. In 1983 we introduced our first direct current (DC) system designed for use in physical vapor deposition (PVD) applications. This DC system is a compact, cost-effective power solution, which greatly reduces stored energy, a major limitation in PVD systems. In 1989 we introduced tuners used to match the characteristics of the plasma with the RF generators. We carried the state of the art further in 1995 when we introduced the Pinnacle series of DC systems, which we updated in 1997 with the Pinnacle-II. In 1990 we introduced the first switchmode RF power conversion and control systems for use in semiconductor etch applications. This product line achieved significant design wins because of its smaller size and its ability to provide more precise control. In 1998 we developed the APEX series of RF systems, which use new technology to further reduce size and extend the frequency and power range of our RF product line. We introduced a family of accessories for the DC product line in 1993. These pulsed DC products provided major improvements in arc prevention and suppression. We are currently extending the power

range of our systems to much higher power levels to enable them to supply products for advanced product applications. The products in these product families range in price from \$3,100 to \$175,000, with an average price of approximately \$9,500.

The acquisition of RF Power Products in 1998 expanded our product line of RF generators and matching networks. Solid-state generators are presently available for power requirements of up to 10 kW and are sold primarily to capital equipment manufacturers in the semiconductor equipment, flat panel display, thin film and analytical equipment markets. RF matching networks are systems composed primarily of variable inductors and capacitors with application-specific circuits that can be designed to a customer's specific power requirements. Our RF generators and matching networks have average selling prices similar to our DC products.

In 1998 we acquired an ion source technology which can produce a beam of ions for surface modification and other ion beam processes. In that same year we also sold our first products having this technology. We also developed and introduced products using inductively coupled sources of both the solenoidal and toroidal forms.

In 1998 we also developed sophisticated pulsing power supply specifically for electroplating processes on semiconductor wafers, which led to the introduction of the E'Wave product in 1999.

The acquisition of Fourth State Technology in 1998 enhanced our capability to design and manufacture RF power-related process control systems used to monitor and analyze data in thin film processes. This technology also is enabling us to develop power conversion and control systems that incorporate advanced measurement and control systems.

The acquisition of a majority interest in LITMAS in 1999 expanded our product line to include plasma abatement systems and high-density plasma sources. We market these products to semiconductor capital equipment manufacturers.

The acquisition of Noah in 2000 expanded our product offerings to include solid state temperature control systems for use in controlling temperatures during semiconductor manufacturing.

The acquisition of Sekidenko in 2000 expanded our product offerings to include optical fiber temperature measurement and control systems. We market these products to semiconductor capital equipment manufacturers.

The acquisition of EMCO in 2001 expanded our product offerings to include electronic and electromechanical precision instruments for measuring and controlling the flow of liquids, steam and gases.

The following chart sets forth our principal product lines and related basic information:

	PRODUCT PLATFORM	DESCRIPTION	POWER/CURRENT LEVEL	MAJOR PROCESS APPLICATIONS
DIRECT CURRENT PRODUCTS	MDX	Power control and conversion system	500W-80kW	PVD o Metal sputtering o Reactive sputtering
	MDX II	Power control and conversion system	15kW-120kW	PVD o Metal sputtering o Reactive sputtering
	Pinnacle(TM) Pinnacle(TM)- II	Power control and conversion system	6kW-120kW	PVD o Metal sputtering o Reactive sputtering
	Pinnacle(TM)Plus	Pulsed power control and conversion system	5kW - 10kW	PVD o Metal sputtering o Reactive sputtering
	Sparc-le(R)	Arc management accessory	1kW-60kW	For use with MDX systems - permits precise control of reactive sputtering of insulating films
	E-Chuck	Electrostatic chuck power system	<100W	General wafer handling in semiconductor PVD, CVD, and etch applications
HIGH-POWER PRODUCTS	Astral(TM)	Pulsed DC power system	20kW, 120kW, 200kW	PVD o Reactive sputtering
	Crystal(TM)	Mid-frequency power control and conversion system	180kW	PVD CVD Reactive sputtering Dual magnetron sputtering
LOW AND MID-FREQUENCY PRODUCTS	PE and PE-II	Low frequency power control and conversion system	1.25kW-30kW	CVD PVD o Reactive sputtering Surface modification
	PD	Mid-frequency power control and conversion system	1.25kW-8kW	CVD PVD o Reactive sputtering Surface modification
	LF	Low frequency power control and conversion system	500W-1kW	Etch PVD
RADIO FREQUENCY PRODUCTS	HFV	Power control and conversion system	3kW-8kW	PVD Etch
	RFX	Power control and conversion system	600W	General R&D
	RFG	Power control and conversion system	600W-5.5kW	Etch CVD
	RFXII	Power control and conversion system	600W-5.5kW	Etch CVD
	APEX(TM)	Power control and conversion system	1kW-10kW	Etch CVD
	AZX, VZX, SwitchMatch(TM)	Tuner	100W-5kW	Impedance matching network
	RF	Power control and conversion system	500W-5kW	Etch CVD

	Atlas(TM)	Power control and conversion system	1.5kW-5kW	Etch
	----- Mercury(TM)	----- Tuner	----- 500W-10kW	----- Impedance matching network
	----- FTMS(TM)	----- Tuner	----- 2kW-5kW	----- Impedance matching network
ION BEAM SOURCES	12cm multi-cell ion beam source	Round ion beam source	1.5kW-2.0kW	Magnetic media DLC deposition Optical ion assist
PRODUCTS	----- Linear ion beam sources	----- 38cm, 65cm, 94cm	----- 1.0kW-3.0kW	----- Architectural glass Flat panel displays - pre-cleaning Ion assist deposition
	----- Inductively coupled plasma source (ICP - 3)	----- 3kW linear ICP	----- 3kW	----- Enhanced reactive deposition Low energy CVD Low energy cleaning
	----- RAPID-F RAPID-O	----- Toroidal fluorine ion source Torodal oxygen ion source	----- 8 kW 8 kW	----- Chamber cleaning Reactive gas sputtering

	PRODUCT PLATFORM	DESCRIPTION	POWER/CURRENT LEVEL	MAJOR PROCESS APPLICATIONS
	Gen-Cal(TM)	RF power measurement	50W-3kW	Generator diagnostic tool
OTHER	RF-EP	RF probe	50W-5kW	End-point detection system
	Z-Scan(TM)	RF probe	50W-5kW	Impedance measurement tool
PRODUCTS	RF-MS	RF metrology system	5W-5kW	Plasma diagnostic tool
	ID	Ion-beam conversion and control system	500W-5kW	Ion-beam deposition Ion implantation Ion-beam etching/milling
	E-Wave(TM)	Bipolar electroplating	400W-8kW	Electroplating copper onto a wafer
	Virtual Front Panel	Power system control	N/A	Computer control of power systems
	NPSA Products	Low voltage, high current power regulators	<1 kW	Powering of next generation microprocessors and ASICs

DIRECT CURRENT PRODUCTS

The MDX Series. We introduced our MDX series of products in 1983. These products are most commonly used as DC power supplies for PVD sputtering where precise control, superior arc prevention and suppression and low stored energy characteristics are required. They are also used as bias supplies for RF sputtering, tool coating and some etching systems. The MDX series consists of six different product lines that provide a range of power levels from 500W to 120kW. Our second generation product, the MDX II, was introduced in 1991 to support higher power levels, to provide wider output range, and to meet strict European regulatory requirements. A model in the MDX series, the MDX-L, was designed for especially high reliability and was introduced in 1992.

The Pinnacle(TM) Platform. The Pinnacle platform, which we introduced in 1995, including its updated version, the Pinnacle(TM) -II, which we introduced in 1997, is the most recent general purpose platform in the DC product line. We developed the Pinnacle primarily for use in DC PVD sputtering processes, and it provides substantial improvements in arc prevention, arc suppression capability, reduced size, higher precision and expanded control capability. The low stored energy of Pinnacle, a basic feature of our DC power conversion equipment, is the lowest ever achieved in a switchmode power supply, and is due to the patented basic circuit topology.

The Pinnacle(TM) Plus Platform. This platform, introduced in 1999, is a pulsed DC power system designed principally for use in reactive sputtering to produce insulating films. It is capable of producing up to 10kW of power in short pulses at frequencies up to 350kHz, for virtual elimination of arcing in difficult processes.

Sparc-le(R) Accessories. Our Sparc-le line of DC accessories, first introduced in 1993 and updated several times since, is designed both to reduce the number of arcs that occur in plasma-based processes and to reduce the energy delivered if arcs do occur. The Sparc-le accessories are especially effective in applications involving the deposition of insulating materials where the reaction between the plasma and target is likely to produce

more severe arc conditions. The Sparc-le accessories are most commonly used with the MDX product lines.

Electrostatic Chuck Power Systems. We designed this system of power conversion units for a specific customer for use in wafer handling systems for the semiconductor fabrication market. The electrostatic chuck is a device that uses electric fields to hold or "chuck" a wafer in a vacuum environment without mechanical holding force. This permits more gentle handling of the wafer and simultaneous heating or cooling of the wafer during processing. When our power system applies voltage to the wafer, electric fields are created which hold the wafer in position. Exact control and careful ramping of the voltage permits the wafer to be picked and placed with precision. The system permits multiple power units to be held in a single chassis for ease of integration into the customer's system.

HIGH-POWER PRODUCTS

These products are designed for use in heavy industrial processes such as architectural glass and other large area coating applications.

Astral(TM) Products. The Astral products, made in 20kW, 120kW and 200kW versions, offer a new technology, called "current pulsed dual magnetron sputtering." These units are used for development of coatings for CRT and flat panel displays, automotive applications and new types of glass coatings.

Crystal(TM). The Crystal 180kW power conversion unit was developed for use in industrial PVD applications such as architectural glass coating, but is also useful in PECVD (Plasma Enhanced Chemical Vapor Deposition). The latter may be used for deposition of oxygen- and water-vapor-barrier coatings on films used in food packaging. In PVD the unit is typically used as a powering source for a pair of magnetron sputtering sources in the "dual" configuration in a reactive sputtering system.

LOW AND MID-FREQUENCY PRODUCTS

The PE and PD Series. We introduced the PE low frequency power systems in 1982. The PE series systems are air cooled and primarily intended for use in certain PVD, CVD and industrial surface modification applications, including dual cathode sputtering and printed circuit board de-smearing. The PE series systems range in frequency from 25kHz to 100kHz. The PE-II systems are water cooled and produce 10kW at 40kHz. The PD series of mid-frequency power conversion and control systems, introduced in 1990, represented significant technological advancements by applying switchmode techniques to higher frequencies. The water-cooled PD systems are used primarily in semiconductor etch and CVD applications. The PD series range in frequency from 275kHz to 400kHz. Both the PE and PD series systems have cost-effective single-stage power generation, and include systems with pulsed power technology.

LF Generators. The LF low-frequency generators were introduced to us as a result of the acquisition of RF Power Products. The LF-5 is a 500W unit and the LF-10 is a 1kW unit. Both of these units are variable-frequency, microprocessor-controlled systems. With a frequency range extending from 50kHz to 460kHz, these generators are a good complement to the PD and PE series.

RADIO FREQUENCY PRODUCTS

HFV power generator. The HFV power generator produces 3, 5, or 8kW of power at a variable frequency of about 2MHz for powering inductively coupled plasma (ICP) systems. It is water cooled and ultra compact, providing up to 8kW of power in a 5-1/4 inch rack mount enclosure 20-1/4 inches deep, thereby representing the highest power density in the industry at these frequencies.

The RF Series. The RFX system is a 13.56MHz, 600W, air-cooled platform introduced in 1985. This low-power system is used primarily in research and development applications. The RFG and RFXII, introduced in the early 1990s, are water-cooled power conversion and control systems utilizing a hybrid switchmode technology. The RFG and RFXII systems operate at frequencies ranging from 4MHz to 13.56MHz. These systems were the first fully switchmode RF designs. These RF systems are most commonly used in semiconductor processes, including RF sputtering, plasma etching/deposition and reactive ion etching applications.

During 1998 we developed the APEX series of power control and conversion systems, which have the highest power density ever produced at radio frequencies. One APEX unit produces 10kW at 13.56MHz in a 5-1/4 inch rack mount enclosure. Another APEX unit produces 5.5kW in a 5x7.5x15 inch enclosure, and still another produces 3kW in the same enclosure but includes a switchable matching network and a voltage-current (V-I) probe measurement system integrated in the package. The APEX line also includes power conversion systems that produce 1, 2, 4 and 8kW at 27.12MHz.

The RF-5, RF-10, RF-20, RF-30 and RF-50 units that we produce generate power between 500W and 5kW, and are selectively available with frequencies from 2 MHz to 40 MHz. They use simple AC transformer front ends and employ linear RF sections, permitting variable frequency and high-speed pulse operation.

The Atlas(TM) Series. The Atlas power systems, introduced in 1998, combine the advantages of a modernized version of the linear RF sections of the RF series with a switchmode AC front end. These systems currently range in power from 1.5kW to 5kW at nominal center frequencies of 12.56, 13.56 and 27.12 MHz. These units complement our new APEX series. For several applications, the ability to sweep the frequency about the nominal center frequency provides significant advantages to the customer. Now the customer can choose to have either the compact package of the fixed-frequency APEX or, where required, the frequency agility of the Atlas systems.

The AZX Series. The AZX series tuners are RF matching networks designed as accessories to match the complex electrical characteristics of a plasma to the requirements of our RF series of power conversion and control systems. AZX tuners, introduced in 1989, are also sold separately for incorporation into other vendors' power conversion and control systems. The AZX tuners typically operate at a 13.56MHz frequency range. The VZX series tuners, introduced in 1998, are digital automatic impedance matching networks which utilize a predictive algorithm to provide tuning speeds up to three times faster than the older AZX series. SwitchMatch(TM) networks, also introduced by us in 1998, are selectable fixed matching units, which we offer both as part of APEX systems and as standalone products.

The AM and Mercury Matching Network Series. The mechanical matching networks are available in power handling capabilities up to 30kW. These matching networks are extremely compact, utilizing two ceramic envelope vacuum variable capacitors. The modular construction of the matching networks allows rapid customization without the delays usually encountered in custom design. Since most applications require custom refinements for optimum performance, this feature has benefited us greatly in achieving numerous design wins. In 1998, we introduced the FTMS (Frequency Transformation Matching System), which is a solid state matching network with no moving parts. We use this system in conjunction with our frequency agile Atlas generators. The FTMS is available in power levels up to 5kW.

ION BEAM SOURCES

Plasma Sources. We introduced our ion sources and inductively coupled plasma (ICP) sources products in 1998. Several versions of the ion sources product include a 12cm round source for the magnetic media and optical markets as well as linear sources up to one meter long for applications in the flat panel display and architectural glass markets. The ICP product, also developed in 1998, allowed us access to reactive deposition and cleaning applications where low energy is critical to prevent substrate damage. This was followed by the development of a toroidal ICP for chamber cleaning with fluorine, called the RAPID-F, and a second toroidal source of activated oxygen for reactive gas processes. All these products feature high reliability, low maintenance designs, and are well suited for the demanding environments in today's production facilities.

OTHER PRODUCTS

The RF-EP End-point Detection System. The RF-EP reduces length of time to end-point on CVD and etch chambers in comparison to optical detection. This system uses one of three signals (voltage, current or phase) to precisely and accurately detect end-point. The RF-EP also greatly reduces the level of greenhouse emissions by consuming less process gas.

The Z-Scan(TM) Voltage-Current (V-I) Probe. This unit, first delivered in 1998, replaces the RFZ impedance probe introduced in 1993. Z-Scan measures the RF

properties of a plasma process and provides condensed information through its Z-Ware software. The sensing technology incorporated in Z-Scan probe allows accurate, real-time measurement of power, voltage, current and impedance levels at both fundamental and harmonic frequencies, under actual powered process conditions. Such measurements not only help our customers design their process systems, but are also used as sensitive detectors of process conditions, including etch endpoint.

The RF-MS Diagnostic System. The RF-MS simultaneously performs endpoint and excursion detection for multiple CVD chambers. Additionally, the system's software monitors the long-term transients in the process tool performance such as wet clean and transition in the film stress. The RF-MS has demonstrated significant cost savings through improved wafer yields, reduced particle contamination and higher throughput.

The ID Series. The ID power conversion and control systems, introduced in 1981, were the first products we designed. These systems were specifically designed to power broad-beam ion sources. ID series systems are composed of a coordinated set of multiple special purpose power supplies that are used for ion-beam deposition and sputtering, implantation, etching and milling.

The E'Wave(TM). The E'Wave is designed for the semiconductor industry for electroplating copper onto a wafer. The power supply can produce up to four channels of multi-step, bipolar, square waveforms, which permit the copper to be alternatively plated and etched in precisely controlled ways, in order to fill very small cavities on the wafer surface. Each channel can produce 400W continuous and up to 2kW peak, for a total supply output of 1.6kW continuous and 8kW peak.

The Virtual Front End. This product enables one to operate or control the power system from a laptop or desktop PC. It has a graphing capability, which permits real-time monitoring of the plasma characteristics and the power delivered to it.

New Power Supply Architecture ("NPSA"). In 1998, we embarked on a program to adapt our high frequency technology to the powering of microprocessors, which now require higher currents at lower voltages, and which require the powering source to be extremely agile (able to handle rapidly changing power drains). We sold the first of such products in 1999. Our technology permits smaller, less expensive power regulators, which are stable under high rates of change of current draw, without the use of expensive electrolytic capacitors.

MARKETS AND CUSTOMERS

MARKETS

Most of our sales historically have been to customers in the semiconductor capital equipment industry. Sales to customers in this industry represented 65% of our sales 1999

and 70% in 2000. Our power conversion and control systems are also used in the flat panel display, data storage and advanced product applications markets. Following is a discussion of the major markets for our systems:

SEMICONDUCTOR CAPITAL EQUIPMENT MANUFACTURING MARKET. We sell our products primarily to semiconductor capital equipment manufacturers for incorporation into equipment used to make integrated circuits. Our products are currently used in a variety of applications including dielectric and metal film deposition, etch, ion implantation, photo-resist strip and megasonic cleaning. The precise control over plasma-based processes that use our power conversion and control systems enables the production of integrated circuits with reduced feature sizes and increased speed and performance. We also sell plasma abatement systems and high-density plasma sources through LITMAS, solid state temperature control systems through Noah, and optical fiber thermometers through Sekidenko. We anticipate that the semiconductor capital equipment industry will continue to be a substantial part of our business for the foreseeable future.

DATA STORAGE MANUFACTURING EQUIPMENT MARKETS. We also sell systems to data storage equipment manufacturers and to data storage device manufacturers for use in producing a variety of products, including CDs, computer hard disks, including both media and thin film heads, CD-ROMs and DVDs. These products use a PVD process to produce optical and magnetic thin film layers, as well as a protective wear layer. In this market the trend towards higher recording densities is driving the demand for increasingly dense, thinner and more precise films. The use of equipment incorporating magnetic media to store analog and digital data continues to expand with the growth of the laptop, desktop and workstation computer markets and the consumer electronics audio and video markets.

FLAT PANEL DISPLAY MANUFACTURING EQUIPMENT MARKET. We also sell our systems to manufacturers of flat panel displays and flat panel projection devices, which have fabrication processes similar to those employed in manufacturing integrated circuits. Flat panel technology produces bright, sharp, large, color-rich images on flat screens for products ranging from hand-held computer games to laptop and desktop computer monitors to large-screen televisions. There are three major types of flat panel displays, including liquid crystal displays, field emitter displays and gas plasma displays. There are two types of flat panel projection devices, including liquid crystal projection and digital micro-mirror displays. We sell our products to all five of these markets.

ADVANCED PRODUCT APPLICATIONS MARKETS. We also sell our products to OEMs and producers of end products in a variety of industrial markets. Thin film optical coatings are used in the manufacture of many industrial products including solar panels, architectural glass, eyeglasses, lenses, barcode readers and front surface mirrors. Thin films of diamond-like coatings and other materials are currently applied to products in plasma-based processes to strengthen and harden surfaces on such diverse products as tools, razor blades, automotive parts and hip joint replacements. Other thin film processes

that use our products also enable a variety of industrial packaging applications, such as decorative wrapping and food packaging. The advanced thin film production processes allow precise control of various optical and physical properties, including color, transparency and electrical and thermal conductivity. The improved adhesion and high film quality resulting from plasma-based processing make it the preferred method of applying the thin films. Many of these thin film industrial applications require power levels substantially greater than those used in our other markets. We also sell low-wattage power supplies to OEMs in the telecommunications, non-impact printing and laser markets through Tower.

APPLICATIONS

We have sold our products for use in connection with the following processes and applications:

SEMICONDUCTOR	DATA STORAGE	FLAT PANEL DISPLAY	ADVANCED PRODUCT APPLICATIONS
-----	-----	-----	-----
Chemical vapor deposition (CVD) (metal and dielectric)	CD-ROMs	Active matrix LCDs	Automobile coatings
Plasma-enhanced CVD	CDs	Digital micro-mirror	Chemical, physical and materials research
High-density plasma CVD	Recordable CDs	Field emission displays	Circuit board etch-back and de-smear
Etch	DVDs	Large flat panel displays	Consumer product coatings
Ion implantation	Hard disk carbon wear coatings	LCD projection	Diamond-like coatings
Magnet field controls	Hard disk magnetic media	Liquid crystal displays	Food package coatings
Megasonic cleaning	Magneto-optic CDs	Medical applications	Glass coatings
Photo-resist stripping	Thin film heads	Plasma displays	Non-impact printing
Physical vapor deposition (PVD)			Optical coatings
			Photovoltaics
			Superconductors
			Telecommunications

CUSTOMERS

We have sold our systems worldwide to more than 100 OEMs and directly to more than 500 end-users. Since inception we have sold more than 200,000 power conversion and control systems. Our ten largest customers accounted for 60% of our total sales in 1998, 67% in 1999 and 72% in 2000. We expect that sales of our products to these customers will continue to account for a high percentage of our sales in the foreseeable future. Representative customers include:

Alcatel Comptech	Novellus
Applied Materials	Optical Coating Laboratory
Axcelis	Singulus
First Light Technology	Sony
Fujitsu	Texas Instruments
Hewlett-Packard	Tokyo Electron, Ltd.
IBM	ULVAC
Intevac	Unaxis
Lam Research	Veeco
Mattson Technologies	Verteq
Micron Technology	VideoJet International
Motorola	

MARKETING, SALES AND SERVICE

We sell our systems primarily through direct sales personnel to customers in the United States, Europe and Asia. Our sales personnel are located at our headquarters in Fort Collins, Colorado, and in regional sales offices in Voorhees, New Jersey; Austin, Texas; Milpitas, California; and Concord, Massachusetts. To serve customers in Asia and Europe, we have offices in Tokyo, Japan; Filderstadt, Germany; Bicester, England; Bundang, South Korea; Taipei Hsien, Taiwan; and Shenzhen, China. These offices have primary responsibility for sales in their respective markets. We also have distributors in Australia, China, France, India, Israel, Italy, Mexico, Singapore and Sweden. Noah, located in San Jose, California, and Sekidenko, located in Vancouver, Washington, sell through direct sales personnel. Our United States operations also sell through manufacturers' representatives. EMCO, located in Longmont, Colorado, sells through direct sales personnel and manufacturers' representatives.

Sales outside the United States represented approximately 27% of our total sales during 1998, 27% in 1999 and 28% in 2000. We expect sales outside the United States to continue to represent a significant portion of future sales. Although we have not experienced any significant difficulties involving international sales, such sales are subject to certain risks, including exposure to currency fluctuations, the imposition of governmental controls, political and economic instability, trade restrictions, changes in tariffs and taxes and longer payment cycles typically associated with international sales. Our future performance will depend, in part, upon our ability to compete successfully in Japan, one of the largest markets for semiconductor fabrication equipment and flat panel display equipment, and a major market for data storage and other industrial equipment utilizing our systems. The Japanese market has historically been difficult for non-Japanese companies to penetrate. Although we and a number of our significant non-Japanese customers have established operations in Japan, there can be no assurance that we or our customers will be able to maintain or improve our competitive positions in Japan.

We believe that customer service and technical support are important competitive factors and are essential to building and maintaining close, long-term relationships with our customers. We maintain customer service offices in Fort Collins, Colorado; Austin, Texas; Voorhees, New Jersey; Tokyo, Japan; Filderstadt, Germany; Bundang, South Korea; Taipei Hsien, Taiwan; and Shenzhen, China. Noah maintains a customer service office in San Jose, California. Sekidenko maintains a customer service office in Vancouver, Washington. EMCO has a repair facility in Longmont, Colorado.

We offer warranty coverage for our systems for periods ranging from 12 to 30 months after shipment against defects in design, materials and workmanship.

MANUFACTURING

We conduct the majority of our manufacturing at facilities in Fort Collins, Colorado, and Voorhees, New Jersey. We also conduct manufacturing for one customer in Austin, Texas. Noah conducts manufacturing at its facility in San Jose, California, Sekidenko conducts manufacturing at its facility in Vancouver, Washington, and EMCO conducts manufacturing at its facility in Longmont, Colorado. We generally manufacture different systems at each facility. Our manufacturing activities consist of the assembly and testing of components and subassemblies, which are then integrated into our final products. Once final testing of all electrical and electro-mechanical subassemblies is completed, the final product is subjected to a series of reliability enhancing operations prior to shipment to customers. We purchase a wide range of electronic, mechanical and electrical components, some of which are designed to our specifications. We outsource some of our subassembly work.

We rely on sole and limited source suppliers for certain parts and subassemblies. This reliance creates a potential inability to obtain an adequate supply of required components, and reduced control over pricing and timing of delivery of components. An inability to obtain adequate supplies would require us to seek alternative sources of supply or might require us to redesign our systems to accommodate different components or subassemblies. We could be prevented from the timely shipping of our systems to our customers if we were forced to seek alternative sources of supply, manufacture such components or subassemblies internally, or redesign our systems.

INTELLECTUAL PROPERTY

We have a policy of seeking patents on inventions governing new products or technologies as part of our ongoing research, development, and manufacturing activities. We currently hold twenty-seven United States patents and four foreign patents covering various aspects of our products, and have over fifty patent applications pending in the United States, Europe and Japan. Our intellectual property is not protected by patents in several countries in which we do business, and we have limited patent protection in certain other countries. The costs of applying for patents in foreign countries and translating the applications into foreign languages require us to select carefully the inventions for which we apply for patent protection and the countries in which we seek such protection. Generally, we have concentrated our efforts to obtain international patents in the United Kingdom, Germany, France, Italy and Japan because there are other manufacturers and developers of power conversion and control systems in those countries, as well as customers for those systems.

Litigation from time to time may be necessary to enforce patents issued to us, to protect trade secrets or know-how owned by us, to defend us against claimed infringement of the rights of others or to determine the scope and validity of the proprietary rights of others. See "Cautionary Statements - Risk Factors - We are highly

dependent on our intellectual property but may not be able to protect it adequately" and "--Intellectual property litigation could be costly."

COMPETITION

The markets we serve are highly competitive and characterized by ongoing technological development and changing customer requirements. Significant competitive factors in our markets include product performance, price, quality and reliability and level of customer service and support. We believe that we currently compete effectively with respect to these factors, although there can be no assurance that we will be able to compete effectively in the future.

The markets in which we compete have seen an increase in global competition, especially from Japanese- and European-based equipment vendors. We have several foreign and domestic competitors for each of our product lines. Some of these competitors are larger and have greater resources than we have. Our ability to continue to compete successfully in these markets depends on our ability to make timely introductions of system enhancements and new products. Our primary competitors are ENI, a subsidiary of Astec America, Inc.; Applied Science and Technology (ASTeX), a subsidiary of MKS Instruments, Inc.; Huettinger; Shindingen; Kyosan; Comdel; and Daihen. Our competitors are expected to continue to improve the design and performance of their systems and to introduce new systems with competitive performance characteristics. We believe we will be required to maintain a high level of investment in research and development and sales and marketing in order to remain competitive.

OPERATING SEGMENT

We operate and manage our business of supplying products and systems for plasma-based manufacturing processes as one segment.

RESEARCH AND DEVELOPMENT

The market for power conversion and control systems and related accessories is characterized by ongoing technological changes. We believe that continued and timely development of new products and enhancements to existing systems to support OEM requirements is necessary for us to maintain a competitive position in the markets we serve. Accordingly, we devote a significant portion of our personnel and financial resources to research and development projects and seek to maintain close relationships with our customers and other industry leaders to remain responsive to their product requirements.

Research and development expenses were \$24.4 million in 1998, \$28.3 million in

1999 and \$37.0 million in 2000. Such expenses represented 18.2% of our total sales in 1998, 14.0% in 1999 and 10.2% in 2000. We believe that continued research and development investment and ongoing development of new products are essential to the expansion of our markets, and expect to continue to make significant investments in research and development activities.

NUMBER OF EMPLOYEES

As of December 31, 2000, we had a total of 1,498 employees, of whom 1,343 are full-time continuous employees. There is no union representation of our employees, and we have never experienced a work stoppage. We utilize temporary employees as a means to provide additional staff while reviewing the performance of the temporary employee. We consider our employee relations to be good.

EFFECTS OF ENVIRONMENTAL LAWS

We are subject to federal, state and local environmental laws and regulations. We believe we are in material compliance with all such laws and regulations.

CAUTIONARY STATEMENTS - RISK FACTORS

This Form 10-K 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. 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. As a result, our actual results may differ materially from the results discussed in the forward-looking statements. Factors that could cause or contribute to such differences or prove any forward-looking statements, by hindsight, to be overly optimistic or unachievable, include without limitation the risks described in this section. We do not have any obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

OUR QUARTERLY OPERATING RESULTS ARE SUBJECT TO SIGNIFICANT FLUCTUATIONS, WHICH COULD NEGATIVELY IMPACT OUR STOCK PRICE.

Our quarterly operating results have fluctuated significantly and we expect them to continue to experience significant fluctuations. Downward fluctuations in our quarterly results have historically resulted in decreases in the price of our common stock. Quarterly operating results are affected by a variety of factors, many of which are beyond our control. These factors include:

- o changes or slowdowns in economic conditions in the semiconductor and semiconductor capital equipment industries and other industries in which our customers operate;

- o the timing and nature of orders placed by major customers;

- o changes in customers' inventory management practices;

- o customer cancellations of previously placed orders and shipment delays;

- o pricing competition from our competitors;

- o component shortages resulting in manufacturing delays;

- o the introduction of new products by us or our competitors;

- o costs incurred by responding to specific feature requests by customers; and

- o declines in macroeconomic conditions.

In addition, companies in the semiconductor capital equipment industry and other electronics companies experience pressure to reduce costs. Our customers exert pressure on us to reduce prices, shorten delivery times and extend payment terms. These pressures could lead to significant changes in our operating results from quarter to quarter.

In the past, we have incurred charges and costs related to events such as acquisitions, restructuring and storm damages. The occurrence of similar events in the future could adversely affect our operating results in the applicable quarter.

Our operating results in one or more future quarters may fall below the expectations of analysts and investors. In those circumstances, the trading price of our common stock would likely decrease and, as a result, any trading price of the convertible notes may decrease.

THE MARKET PRICE OF OUR COMMON STOCK IS HIGHLY VOLATILE, WHICH COULD LEAD TO LOSSES FOR INDIVIDUAL INVESTORS AND COSTLY SECURITIES CLASS ACTION LITIGATION.

The market for technology stocks, including our common stock, has experienced significant price and volume fluctuations. These fluctuations often have been unrelated or disproportionate to the operating performance of the companies. From our IPO in November 1995 through February 28, 2001, the closing prices of our common stock on the Nasdaq National Market have ranged from \$3.50 to \$73.25. The market for our common stock likely will continue to be subject to fluctuations. Many factors could cause the trading price of our common stock to fluctuate substantially, including the following:

- o future announcements concerning our business, our technology, our customers or competitors;

- o variations in our operating results;
- o introduction of new products or changes in product pricing policies by us, our competitors or our customers;
- o changes in earnings estimates by securities analysts or announcements of operating results that are not aligned with the expectations of analysts and investors;
- o the economic and competitive conditions in the industries in which our customers operate; and
- o general stock market trends.

In the past, following periods of volatility in the market price of a particular company's securities, securities class action litigation has often been brought against that company. Many technology companies have been subject to this type of litigation. We may also become involved in this type of litigation. Litigation is often expensive and diverts management's attention and resources, which could significantly harm our business, financial condition and results of operations.

THE SEMICONDUCTOR AND SEMICONDUCTOR CAPITAL EQUIPMENT INDUSTRIES ARE HIGHLY VOLATILE AND OUR OPERATING RESULTS ARE AFFECTED TO A LARGE EXTENT BY EVENTS IN THOSE INDUSTRIES.

The semiconductor industry historically has been highly volatile and has experienced periods of oversupply resulting in significantly reduced demand for semiconductor capital equipment. These reductions, in turn, have significantly reduced demand for our systems. During downturns, some of our customers have drastically reduced their orders to us and have implemented substantial cost reduction programs. Sales to customers in the semiconductor capital equipment industry accounted for 52% of our total sales in 1998, 65% in 1999 and 70% in 2000. We expect that we will continue to depend significantly on the semiconductor and semiconductor capital equipment industries for the foreseeable future.

A rapid decrease in demand for our products can occur with limited advance notice because we supply subsystems to equipment manufacturers and make a portion of our shipments on a just-in-time basis. This decrease in demand can adversely impact our business and financial results disproportionately because of its unanticipated nature.

A SIGNIFICANT PORTION OF OUR SALES ARE CONCENTRATED AMONG A FEW CUSTOMERS.

Our ten largest customers accounted for 60% of our total sales in 1998, 67% in 1999 and 72% in 2000. Our largest customer accounted for 24% of our total sales in 1998, 34% in 1999 and 39% in 2000. The loss of any of these customers or a material reduction in

any of their purchase orders would significantly harm our business, financial condition and results of operations.

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 ENI, a subsidiary of Astec America, Inc.; Applied Science and Technology (ASTeX), a subsidiary of MKS Instruments, Inc.; Huettinger; Shindigen; Kyosan; Comdel; and Daihen. We expect that our competitors will continue to develop new products in direct competition with ours, improve the design and performance of their systems and introduce new systems with enhanced performance characteristics.

To remain competitive, we need to continue to improve and expand our systems and system offerings. In addition, we 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 may not be able to make the technological advances and investments necessary to remain competitive.

New products developed by competitors or more efficient production of their products could increase pressure on the pricing of our systems. In addition, electronics companies, including companies in the semiconductor capital equipment industry, have been facing pressure to reduce costs. Either of these factors may require us to make significant price reductions to avoid losing orders. Further, our current and prospective customers consistently exert pressure on us to lower prices, shorten delivery times and improve the capability of our systems. Failure to respond adequately to such pressures could result in a loss of customers or orders.

WE MAY NOT BE ABLE TO INTEGRATE OUR ACQUISITIONS.

We have experienced significant growth through acquisitions and continue to actively pursue acquisition opportunities. Prior to 1997, we did not make any significant acquisitions. In the three years from 1997 through 1999, we acquired five companies. From January 2000 through February 2001, we acquired three companies and entered into a strategic partnership arrangement with one other company. Many of our acquisitions to date have been in markets in which we have limited experience. We might not be able to compete successfully in these markets or operate the acquired businesses efficiently.

Our business and results of operations could be adversely affected if integrating our acquisitions results in substantial costs, delays or other operational or financial problems. Further, the increased pace of our acquisitions has required us to try to integrate multiple acquisitions simultaneously. This has exponentially increased the demands placed on our management team and has decreased the time and effort that management can give to integrating each acquisition, while continuing to manage our existing business.

Future acquisitions could place additional strain on our operations and management. Our ability to manage future acquisitions will depend on our success in:

- o evaluating new markets and investments;
- o monitoring operations of acquired companies;
- o controlling costs and unanticipated expenses of acquired companies;
- o integrating acquired operations and personnel;
- o retaining existing customers and strategic partners of acquired companies;
- o maintaining effective quality controls of acquired companies; and
- o expanding our internal management, technical and accounting systems.

Also, in connection with future acquisitions we may issue equity securities, which could be dilutive, incur debt, recognize substantial one-time expenses or create goodwill or other intangible assets that could result in significant amortization expense.

WE ARE GROWING AND MAY BE UNABLE TO MANAGE OUR GROWTH EFFECTIVELY.

We have been experiencing a period of growth and expansion. This growth and expansion is placing significant demands on our management and our operating systems. We need to continue to improve and expand our management, operational and financial systems, procedures and controls, including accounting and other internal management systems, quality control, delivery and service capabilities.

In order to manage our growth, we may also need to spend significant amounts of cash to:

- o fund increases in expenses;
- o acquire additional facilities and equipment;
- o take advantage of unanticipated opportunities, such as major strategic alliances or other special marketing opportunities, acquisitions of complementary businesses or assets, or the development of new products; or
- o otherwise respond to unanticipated developments or competitive pressures.

If we do not have enough cash on hand, cash generated from our operations or cash available under our credit facility to meet these cash requirements, we will need to seek

alternative sources of financing to carry out our growth and operating strategies. We may not be able to raise needed cash on terms acceptable to us, or at all. Financings may be on terms that are dilutive or potentially dilutive. If alternative sources of financing are required but are insufficient or unavailable, we will be required to modify our growth and operating plans to the extent of available funding.

SHORTAGES OF COMPONENTS NECESSARY FOR OUR PRODUCT ASSEMBLY CAN DELAY OUR SHIPMENTS.

Manufacturing our power conversion and control systems requires numerous electronic components. Dramatic growth in the electronics industry has significantly increased demand for these components. This demand has resulted in periodic shortages and allocations of needed components, and we expect to experience additional shortages and allocations from time to time. Shortages and allocations could cause shipping delays for our systems, adversely affecting our results of operations. Shipping delays also could damage our relationships with current and prospective customers.

OUR DEPENDENCE ON SOLE AND LIMITED SOURCE SUPPLIERS COULD AFFECT OUR ABILITY TO MANUFACTURE PRODUCTS AND SYSTEMS.

We rely on sole and limited source suppliers for some of our components and subassemblies that are critical to the manufacturing of our systems. This reliance involves several risks, including the following:

- o the potential inability to obtain an adequate supply of required components;
- o reduced control over pricing and timing of delivery of components; and
- o the potential inability of our suppliers to develop technologically advanced products to support our growth and development of new systems.

We believe that in time we could obtain and qualify alternative sources for most sole and limited source parts or could manufacture the parts ourselves. Seeking alternative sources or commencing internal manufacture of the parts could require us to redesign our systems, resulting in increased costs and likely shipping delays. We may be unable to manufacture the parts internally or redesign our systems, which could result in further costs and shipping delays. These increased costs would decrease our profit margins if we could not pass the costs to our customers. Further, shipping delays could damage our relationships with current and potential customers and have a material adverse effect on our business and results of operations.

WE ARE HIGHLY DEPENDENT ON OUR INTELLECTUAL PROPERTY BUT MAY NOT BE ABLE TO PROTECT IT ADEQUATELY.

Our success depends in part 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 certain foreign countries might not afford our intellectual property the same protection as do the laws of the United States. For example, our intellectual property is not protected by patents in several countries in which we do business, and we have limited patent protection in certain other countries. The costs of applying for patents in foreign countries and translating the applications into foreign languages require us to select carefully the inventions for which we apply for patent protection and the countries in which we seek such protection. Generally, we have concentrated our efforts to obtain international patents in the United Kingdom, Germany, France, Italy and Japan because there are other manufacturers and developers of power conversion and control systems in those countries, as well as customers for those systems. Our inability or failure to obtain adequate patent protection in a particular country could have a material adverse effect on our ability to compete effectively in that country.

Our patents also might not be sufficiently broad to protect our technology, and any existing or future patents might be challenged, invalidated or circumvented. Additionally, our rights under our patents may not provide meaningful competitive advantages.

INTELLECTUAL PROPERTY LITIGATION COULD BE COSTLY.

We do not believe that any of our products are infringing any patents or proprietary rights of others, although infringements may exist or might occur in the future. Litigation may be necessary to enforce patents issued to us, to protect our trade secrets or know-how, to defend ourselves against claimed infringement of the rights of others or to determine the scope and validity of the proprietary rights of others. Litigation has resulted, and in the future may result, in substantial costs and diversion of our efforts. Moreover, an adverse determination in any current or 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. Any of these events could have a material adverse effect on our business, financial condition and results of operations. See Item 3 -- Legal Proceedings.

WE MUST CONSTANTLY DEVELOP AND SELL NEW SYSTEMS IN ORDER TO KEEP UP WITH RAPID TECHNOLOGICAL CHANGES.

The markets for our systems and the markets in which our customers compete are characterized by ongoing technological developments and changing customer requirements. We must continue to improve existing systems and to develop new systems that keep pace with technological advances and meet the needs of our customers in order to succeed. We might not be able to continue to improve our systems or develop new systems. The systems we do develop might not be cost-effective or introduced in a timely

manner. Developing and introducing new systems may involve significant and uncertain costs. Our business, financial condition and results of operations, as well as our customer relationships, could be adversely affected if we fail to develop or introduce improved systems and new systems in a timely manner.

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 often must work with these manufacturers early in their design cycles to modify our equipment to meet the requirements of the new systems. Manufacturers typically choose one or two vendors to provide the power conversion equipment 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.

We typically must customize our systems for particular customers to use in their equipment to achieve design wins. This customization increases our research and development expenses and can strain our engineering and management resources. These investments do not always result in design wins.

Once a manufacturer chooses a power conversion and control system for use in a particular product, it is likely to retain that system 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.

OUR EFFORTS TO BE RESPONSIVE TO CUSTOMERS MAY LEAD TO INCURRING COSTS THAT ARE NOT READILY RECOVERABLE.

We may incur manufacturing overhead and other costs, many of which are fixed, to meet anticipated customer demand. Accordingly, operating results could be adversely affected if orders or revenues in a particular period or for a particular system do not meet expectations.

We often require long lead times for development of our systems during which times we must expend substantial funds and management effort. We may incur significant development and other expenses as we develop our systems without realizing corresponding revenue in the same period, or at all.

OUR SUCCESS DEPENDS UPON OUR ABILITY TO ATTRACT AND RETAIN KEY PERSONNEL.

Our success depends upon the continued efforts of our senior management team and our technical, marketing and sales personnel. These employees may voluntarily terminate their employment with us at any time. Our success also depends on our ability to attract and retain additional highly qualified management, technical, marketing and sales personnel. 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 could be materially and adversely affected.

WE CONDUCT MANUFACTURING AT ONLY A FEW SITES AND OUR SITES ARE NOT GENERALLY INTERCHANGEABLE.

We conduct the majority of our manufacturing at our facilities in Fort Collins, Colorado and in Voorhees, New Jersey. We also conduct manufacturing in Austin, Texas; San Jose, California; Vancouver, Washington; and Longmont, Colorado. Each facility generally manufactures different systems and, therefore, are not readily interchangeable. In July 1997 a severe rainstorm in Fort Collins caused substantial damage to our Fort Collins facilities and to some equipment and inventory. The damage caused us to stop manufacturing at that facility temporarily and prevented us from resuming full production there until mid-September 1997. Our insurance policies did not cover all of the costs that we incurred in connection with the rainstorm. Future natural or other uncontrollable occurrences at any of our primary manufacturing facilities that negatively impact our manufacturing processes may not be fully covered by insurance and could cause significant harm to our operations and results of operations.

WE MIGHT NOT BE ABLE TO COMPETE SUCCESSFULLY IN INTERNATIONAL MARKETS OR TO MEET THE SERVICE AND SUPPORT NEEDS OF OUR INTERNATIONAL CUSTOMERS.

Our customers increasingly require service and support on a worldwide basis as the markets in which we compete become increasingly globalized. We maintain sales and service offices in Germany, Japan, South Korea, the United Kingdom, Taiwan and China.

Sales to customers outside the United States accounted for 27% of our total sales in 1998, 27% in 1999 and 28% in 2000, and we expect international sales to continue to represent a significant portion of our future sales. International sales are subject to various risks, including:

- o currency fluctuations;
- o governmental controls;

- o political and economic instability;
- o barriers to entry;
- o trade restrictions;
- o changes in tariffs and taxes; and
- o longer payment cycles.

In particular, the Japanese market has historically been difficult for non-Japanese companies, including us, to penetrate.

Providing support services for our systems on a worldwide basis also is subject to various risks, including:

- o our ability to hire qualified support personnel;
- o maintenance of our standard level of support; and
- o differences in local customs and practices.

Our international activities are also subject to the difficulties of managing overseas distributors and representatives and managing foreign subsidiary operations.

We cannot assure you that we will be successful in addressing any of these risks.

FLUCTUATIONS IN THE CURRENCY EXCHANGE RATE BETWEEN THE U.S. DOLLAR AND FOREIGN CURRENCIES COULD ADVERSELY AFFECT OUR OPERATING RESULTS.

A portion of our sales is subject to currency exchange risks as a result of our international operations. We have experienced fluctuations in foreign currency exchange rates, particularly against the Japanese yen. We entered into various forward foreign exchange contracts as a hedge against currency fluctuations in the yen. We have not employed hedging techniques with respect to any other currencies. Our current or any future hedging techniques might not protect us adequately against substantial currency fluctuations.

WE MUST MAINTAIN MINIMUM LEVELS OF CUSTOMIZED INVENTORY TO SUPPORT CERTAIN CUSTOMER DELIVERY REQUIREMENTS.

We must keep a relatively large number and variety of customized systems in our inventory to meet client delivery requirements because a portion of our business involves the just-in-time shipment of systems. Our inventory may become obsolete as we develop new systems and as our customers develop new systems. Inventory obsolescence could have a material adverse effect on our financial condition

and results of operations.

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 power conversion and control systems. We must ensure that our systems meet certain safety and emissions standards, many of which vary across the states and countries in which our systems are used. For example, the European Union has published directives specifically relating to power supplies. We must comply with these directives in order to ship our systems into countries that are members of the European Union. In the past, we have invested significant resources to redesign our systems 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 certain systems, make capital expenditures or incur substantial costs. If we do not comply with current or future regulations, directives and standards:

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

WE MAY INVEST IN START-UP COMPANIES AND COULD LOSE OUR ENTIRE INVESTMENT.

We have a majority interest in a start-up company and have invested in other start-up companies that develop products and technologies that we believe may provide us with future benefits. These investments may not provide us with any benefit, and we may not achieve any economic return on any of these investments. Our investments in these start-up companies are subject to all of the risks inherent in investing in companies that are not established. We could lose all or any part of our investments in these companies.

WE LEASE OUR FORT COLLINS, COLORADO FACILITIES AND A CONDOMINIUM FROM ENTITIES IN WHICH TWO INDIVIDUALS WHO ARE INSIDERS AND MAJOR STOCKHOLDERS HAVE FINANCIAL INTERESTS.

We lease our executive offices and manufacturing facilities in Fort Collins, Colorado from Prospect Park East Partnership and from Sharp Point Properties, LLC. Douglas S. Schatz, our Chairman, President and Chief Executive Officer, holds a 26.7% interest in each of the leasing entities. G. Brent Backman, a member of our board of directors, holds a 6.6% interest in each of the leasing entities. Aggregate rental payments under such leases for 2000 totaled approximately \$1.6 million. We also lease a condominium in Breckenridge,

Colorado to provide rewards and incentives to our customers, suppliers and employees. We lease the condominium from AEI Properties, a partnership in which Mr. Schatz holds a 60% interest and Mr. Backman holds a 40% interest. Aggregate rental payments under the condominium lease for 2000 totaled approximately \$36,000. As of March 12, 2001, Mr. Schatz owned approximately 35.9% of our common stock, and Mr. Backman owned approximately 3.8% of our common stock.

OUR EXECUTIVE OFFICERS AND DIRECTORS OWN A SIGNIFICANT PERCENTAGE OF OUR OUTSTANDING COMMON STOCK, WHICH COULD ENABLE THEM TO CONTROL OUR BUSINESS AND AFFAIRS.

Our executive officers and directors owned approximately 41.1% of our common stock outstanding as of March 12, 2001. Douglas S. Schatz, our Chairman, President and Chief Executive Officer, owned approximately 35.9% of our common stock outstanding as of March 12, 2001. These stockholdings give our executive officers and directors collectively, and Mr. Schatz individually, significant voting power. Depending on the number of shares that abstain or otherwise are not voted on a particular matter, our executive officers collectively may be able to elect all of the members of our board of directors and to control our business affairs for the foreseeable future.

ANTI-TAKEOVER PROVISIONS LIMIT THE ABILITY OF A PERSON OR ENTITY TO ACQUIRE CONTROL OF US.

Our certificate of incorporation and bylaws include provisions which:

- o allow the board of directors to issue preferred stock with rights senior to those of the common stock without any vote or other action by the holders of the common stock;
- o limit the right of our stockholders to call a special meeting of stockholders; and
- o impose procedural and other requirements that could make it difficult for stockholders to effect certain corporate actions.

In addition, we are subject to the anti-takeover provisions of the Delaware General Corporation Law. Any of these provisions could delay or prevent a person or entity from acquiring control of us. The effect of these provisions may be to limit the price that investors are willing to pay in the future for our securities. These provisions might also discourage potential acquisition proposals or could diminish the opportunities for our stockholders to participate in a tender offer, even if the acquisition proposal or tender offer is at a price above the then current market price for our common stock.

EXECUTIVE OFFICERS OF THE COMPANY

Our executive officers and their ages as of March 20, 2001 are as follows:

NAME ----	AGE ---	POSITION -----
Douglas S. Schatz	55	Chief Executive Officer, President and Chairman of the Board
Richard P. Beck	67	Senior Vice President, Chief Financial Officer and Director
James F. Gentilcore	48	Executive Vice President
Joseph R. Monkowski, Ph.D.	47	Senior Vice President, Business Development
William A. Ruff	50	President, Advanced Energy Voorhees, Inc.
Richard A. Scholl	62	Senior Vice President and Chief Technology Officer

DOUGLAS S. SCHATZ is a co-founder and has been our Chief Executive Officer and Chairman of the Board since our incorporation in 1981. From our incorporation to July 1999, Mr. Schatz also served as our President. In March 2001 he began serving again as our President. Mr. Schatz also co-founded Energy Research Associates, Inc., a designer of custom power supplies, and served as its Vice President of Engineering from 1977 through 1980. Prior to co-founding Energy Research Associates, Mr. Schatz held various engineering and management positions at Applied Materials. He is also a director of Advanced Power Technology, Inc., a publicly held company.

RICHARD P. BECK joined us in March 1992 as Vice President and Chief Financial Officer and became Senior Vice President in February 1998. He joined our board of directors in September 1995. From 1987 to 1992 Mr. Beck served as Executive Vice President and Chief Financial Officer of Cimage Corporation, a computer software company. Mr. Beck is a director of Applied Films Corporation, TTM Technologies and Photon Dynamics, Inc., all publicly held companies.

JAMES F. GENTILCORE joined us in March 1996 as Vice President of Sales and Marketing. He became Senior Vice President of Sales and Marketing in April 1998 and President of Advanced Energy Voorhees, Inc. in October 1999. In January 2001 he became President of EMCO, one of our wholly owned subsidiaries. In February 2001 he became Executive Vice President. From 1990 to 1996 he served with MKS Instruments and held the position of Vice President, Marketing.

JOSEPH R. MONKOWSKI, PH.D. joined RF Power Products, Inc. in February 1998 as Senior Vice President and General Manager of the Electronics Technology Business Group. In October 1998, upon the merger of Advanced Energy and RF Power Products,

Dr. Monkowski became our Senior Vice President of Sales and Marketing. In August 2000 he became Senior Vice President, Business Development. Prior to joining RF Power Products, Dr. Monkowski held various executive positions with technology companies, including President of the instruments group of Pacific Scientific Company from 1994 to 1997.

WILLIAM A. RUFF joined us in 1990 as the Product Manager - RF Power Systems. From 1995 to 1997 he was the Business Unit Engineering Manager - Applied Materials Business Unit, and from 1997 to 1999 he was an Engineering Director of Advanced Energy. In 1999 Mr. Ruff became Vice President Engineering, Advanced Energy Voorhees, Inc. and in March 2001 became President, Advanced Energy Voorhees, Inc. Prior to joining us, Mr. Ruff held various engineering positions in other technology companies.

RICHARD A. SCHOLL joined us in 1988 as Vice President, Engineering. Mr. Scholl became our Chief Technology Officer in September 1995. Prior to joining us, Mr. Scholl was General Manager, Vacuum Products Division at Varian Associates, Inc., a manufacturer of high-technology systems and components.

ITEM 2. PROPERTIES

Our headquarters and main manufacturing facility are located in Fort Collins, Colorado, in approximately 297,000 square feet of leased space. Additional manufacturing and office facilities are located in Voorhees, New Jersey, in approximately 78,000 square feet of leased space; Longmont, Colorado, in approximately 45,000 square feet of owned space; Austin, Texas, in approximately 20,000 square feet of leased space; San Jose, California, in approximately 20,000 square feet of leased space; Vancouver, Washington, in approximately 20,000 square feet of leased space; and Matthews, North Carolina, in approximately 4,000 square feet of leased space. To serve the needs of our customers, we also maintain regional offices in Milpitas, California; Concord, Massachusetts; Tokyo, Japan; Filderstadt, Germany; Bicester, England; Bundang, South Korea; Taipei Hsien, Taiwan; and Shenzhen, China. We consider the above facilities suitable and adequate to meet our needs for the foreseeable future. We believe that suitable additional or alternative space will be available in the future on commercially reasonable terms as needed.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we are party to various legal proceedings relating to our business. We are not currently party to any material legal proceedings, except as described below:

We are the defendant in an action filed by Applied Science and Technology, Inc., a Delaware corporation. The civil action was filed in the U.S. District Court for the District of Delaware on November 30, 2000. Applied Science and Technology, which is a

subsidiary of MKS Instruments, Inc., alleges that, by manufacturing and selling reactive gas generators, we are infringing upon its patent. Applied Science and Technology seeks injunctive relief and damages in an unspecified amount. The action is in the discovery stage. We have reviewed the allegations with our patent counsel and believe we have meritorious defenses to the claim. We have denied the allegation of infringement and will defend against the claim vigorously.

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

Not applicable.

PART II

ITEM 5. MARKET PRICE FOR REGISTRANT'S COMMON STOCK AND RELATED STOCKHOLDER MATTERS

Advanced Energy's common stock is traded on the Nasdaq National Market under the symbol AEIS. At March 12, 2001, the number of common stockholders of record was 962, and the last sale price on that day was \$24 7/16.

Below is a table showing the range of high and low bid quotations for the common stock as quoted (without retail markup or markdown and without commissions) on the Nasdaq National Market; they do not necessarily represent actual transactions:

	High Bid -----	Low Bid -----
1999 Fiscal Year		
First Quarter	30 1/2	17 7/8
Second Quarter	40 3/4	23 1/2
Third Quarter	45	30
Fourth Quarter	49 7/8	30 3/8
2000 Fiscal Year		
First Quarter	77 7/16	42 15/16
Second Quarter	72 7/8	35 1/4
Third Quarter	63	32 1/8
Fourth Quarter	35 1/2	15

Advanced Energy has not declared or paid any cash dividends on its capital stock since it terminated its election to be treated as an S corporation for tax purposes, effective January 1, 1994. Advanced Energy currently intends to retain all future earnings to finance its business. Accordingly, Advanced Energy does not anticipate paying cash or other dividends on its common stock in the foreseeable future. Furthermore, Advanced Energy's revolving credit facility prohibits the declaration or payment of any cash dividends on its common stock.

We issued 12,791 shares of common stock to Curtis Camus, an employee, as of October 1, 1999. Mr. Camus was a founder of LITMAS, a privately held ion source company in which we now hold a majority interest. The shares were issued to Mr. Camus as partial consideration for his shares of LITMAS and were valued at \$385,000. We did not use any underwriters in connection with the sale of shares to Mr. Camus. We did not register the sale with the Securities and Exchange Commission, as we relied on the exemption from registration provided by Rule 506 under the Securities Act of 1933.

ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data is qualified by reference to, and should be read with, our 2000 Consolidated Financial Statements, related notes and management's discussion included in this Form 10-K. The selected consolidated statement of operations data for the years ended December 31, 2000, 1999 and 1998, and the related consolidated balance sheet data as of and for the years ended December 31, 2000 and 1999, were derived from consolidated financial statements audited by Arthur Andersen LLP, independent accountants, whose related audit report is included in this Form 10-K. The selected consolidated statement of operations data for the years ended December 31, 1997 and 1996, and the related consolidated balance sheet data as of December 31, 1998, 1997 and 1996, were derived from audited consolidated financial statements not included in this Form 10-K.

	YEARS ENDED DECEMBER 31,				
	2000	1999	1998	1997	1996
	(IN THOUSANDS, EXCEPT PER SHARE DATA)				
STATEMENT OF OPERATIONS DATA:					
Sales	\$ 359,782	\$ 202,849	\$ 134,019	\$ 188,339	\$ 138,074
Gross profit	176,453	92,202	40,019	71,656	49,706
Total operating expenses	91,253	62,876	54,767	49,889	39,448
Income (loss) from operations	85,200	29,326	(14,748)	21,767	10,258
Net income (loss)	\$ 68,034	\$ 19,066	\$ (11,025)	\$ 12,931	\$ 6,128
	=====	=====	=====	=====	=====
Diluted earnings (loss) per share	\$ 2.10	\$ 0.62	\$ (0.38)	\$ 0.48	\$ 0.23
Diluted weighted-average common shares outstanding	32,425	30,934	29,007	27,057	26,493
	DECEMBER 31,				
	2000	1999	1998	1997	1996
	(IN THOUSANDS)				
BALANCE SHEET DATA:					
Cash, cash equivalents and marketable securities.....	\$189,527	\$207,483	\$ 28,714	\$ 32,551	\$12,455
Working capital.....	279,626	257,484	63,225	77,188	43,365
Total assets.....	365,835	325,433	107,736	136,545	72,517
Total debt.....	83,980	139,012	1,603	8,784	5,037
Stockholders' equity.....	238,798	156,989	92,163	99,969	56,495

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion contains, in addition to historical information, forward-looking statements, within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. 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. As a result, our actual results may differ materially from the results discussed in the forward-looking statements. Factors that could cause or contribute to such differences or prove any forward-looking statements, by hindsight, to be overly optimistic or unachievable, include, but are not limited to the following:

- o the significant fluctuations in our quarterly operating results;
- o the volatility of the semiconductor and semiconductor capital equipment industries;
- o timing and success of integration of recent and potential future acquisitions; and
- o supply constraints and technological changes.

For a discussion of these and other factors that may impact our realization of our forward-looking statements, see Part I "Cautionary Statements - Risk Factors."

OVERVIEW

We design, manufacture and support products and systems critical to plasma-based manufacturing processes. These systems are important components of industrial manufacturing equipment that modifies surfaces or deposits or etches thin film layers on computer chips, CDs, flat panel displays such as computer screens, DVDs, windows, eyeglasses and other products. We market and sell our systems primarily to large global OEMs of semiconductor, data storage and flat panel display manufacturing equipment and for manufacturers of other products in advanced product applications markets. We recognize revenues upon shipment of our systems.

The semiconductor capital equipment industry accounted for approximately 52% of our sales in 1998, 65% in 1999 and 70% in 2000. We have been successful in achieving a number of design wins each year, which have resulted in our obtaining new customers and solidifying relationships with our existing customers. We believe our ability to continue to achieve design wins with existing and potential customers will be critical to our future success.

We continue to seek to expand our product offerings and customer base through internal development and acquisitions. We took a step towards achieving further market penetration in September 1998 when we acquired the assets of Fourth State Technology, Inc. This acquisition enhanced our capability to design and manufacture RF power-related process control systems used to monitor and analyze data in thin film etch processes.

In October 1998 we acquired RF Power Products, Inc. ("RFPP"), which designs, manufactures and supports RF power conversion and control systems, consisting of generators and matching networks. We believe our ability to offer an expanded line of RF systems to our existing customer base has strengthened our relationships. We sell these products principally to semiconductor capital equipment manufacturers. We also sell similar systems to capital equipment manufacturers in the flat panel display and thin film data storage industries. In April 1999 we changed the name of RFPP to Advanced Energy Voorhees, Inc. and conduct business under that name.

In October 1999 we acquired a majority interest in LITMAS, a company that designs and manufactures plasma gas abatement systems and high-density plasma sources.

In November 1999 we completed two underwritten public offerings, one for \$135 million of convertible subordinated notes, and one for 1,000,000 shares of our common stock, at a price of \$39 per share. These offerings provided aggregate net proceeds of approximately \$167.1 million.

In December 1999 we completed formation of our wholly owned sales and service subsidiary in Taiwan.

In March 2000 we formed a strategic partnership with Symphony Systems, a supplier of network-based applications and open-architecture software solutions to the semiconductor and semiconductor capital equipment industries, to deliver an advanced network-based infrastructure to our customers.

In April 2000 we acquired Noah Holdings, Inc. ("Noah"), which manufactures solid state temperature control systems to control process temperatures during semiconductor manufacturing.

In June 2000 we signed an exclusive distribution agreement with Berkeley Process Control, Inc., a manufacturer of integrated motion and machine control technologies.

In July 2000 we entered into an agreement to acquire EMCO, which manufactures electronic and electromechanical precision instruments for measuring and controlling the flow of liquids, steam and gases. EMCO became a wholly owned subsidiary of Advanced Energy in January 2001.

In August 2000 we acquired Sekidenko, Inc. ("Sekidenko"), which supplies optical fiber thermometers to the semiconductor capital equipment industry.

In October 2000 we opened a representative office in Shenzhen, China, to be responsible for market development, sales and technical support in China.

In October and November 2000 we repurchased \$53.4 million principal amount of our convertible subordinated notes on the open market, leaving us with \$81.6 million of such long-term debt outstanding. These purchases resulted in an after-tax net extraordinary gain of \$7.6 million.

In November 2000 we entered into a strategic investment agreement with Dressler HF Technik GmbH, a privately held supplier of RF power solutions for plasma-based applications located in Germany.

RESULTS OF OPERATIONS

The following table summarizes certain data as a percentage of sales extracted from our statement of operations:

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
Sales	100.0%	100.0%	100.0%
Cost of sales	51.0	54.5	70.1
Gross margin	49.0	45.5	29.9
Operating expenses:			
Research and development	10.2	14.0	18.2
Sales and marketing	6.7	9.0	10.9
General and administrative	6.8	8.0	9.8
Restructuring charges	0.3	--	0.7
Merger costs	1.3	--	2.1
Storm recoveries	--	--	(0.8)
Total operating expenses	25.3	31.0	40.9
Income (loss) from operations	23.7	14.5	(11.0)
Other income (expense)	2.1	0.7	0.1
Net income (loss) before income taxes, minority interest and extraordinary item	25.8	15.2	(10.9)
Provision (benefit) for income taxes	9.0	5.8	(2.7)
Minority interest in net income	0.0	0.0	--
Net income (loss) before extraordinary item	16.8	9.4	(8.2)
Extraordinary item (net of applicable taxes)	2.1	--	--
Net income (loss)	18.9%	9.4%	(8.2)%
	=====	=====	=====

SALES

We sell power conversion and control systems and related equipment primarily to the semiconductor capital equipment, data storage and advanced product applications markets in the United States, to the flat panel display and data storage markets in Japan, and to data storage and advanced product applications and industrial markets in Europe. We also sell spare parts and repair services worldwide through our customer service and technical support organization.

Sales were \$134.0 million, \$202.8 million and \$359.8 million in 1998, 1999 and 2000, respectively, representing an increase of 51% from 1998 to 1999 and an increase of 77% from 1999 to 2000. Our sales increases were due to increased unit sales.

A substantial portion of our sales growth from 1998 to 2000 was due to higher system sales to our four largest customers, two of whom are primarily semiconductor capital equipment OEMs, one of whom is a data storage OEM, and one of whom is a flat panel display OEM. Our sales in 1999 reflected the recovery in the semiconductor capital equipment industry from the severe downturn of 1998, and resulted from capacity expansion and increased investment in advanced technology by the semiconductor industry. This recovery and expansion resulted in record sales for us in 1999. It also resulted in record sales for us in 1999 to the semiconductor capital equipment industry specifically. This recovery continued into 2000, and resulted in another record year of sales for us in total and to the semiconductor capital equipment industry. Our experience has shown that our sales to semiconductor capital equipment customers is dependent on the volatility of that industry, as a result of sudden changes in semiconductor supply and demand, and rapid technological advances in both semiconductor devices and wafer fabrication processes.

Our sales to the semiconductor capital equipment industry in 1999 increased 88% over sales to that industry in 1998. Sales to the data storage industry increased 26% from 1998 to 1999. Sales to the flat panel display industry increased 92% from 1998 to 1999. Sales to advanced product applications industries decreased 15% from 1998 to 1999.

Our sales to the semiconductor capital equipment industry in 2000 increased 92% over sales to that industry in 1999. Sales to the data storage industry increased 13% from 1999 to 2000. Sales to the flat panel display industry increased 162% from 1999 to 2000. Sales to advanced product applications industries increased 32% from 1999 to 2000.

The following tables summarize annual net sales, and percentages of net sales, by customer type for us for each of the three years in the period ended December 31, 2000:

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
	(IN THOUSANDS)		
Semiconductor capital equipment	\$252,889	\$131,395	\$ 69,894
Data storage	24,751	21,823	17,300
Flat panel display	29,273	11,171	5,832
Advanced product applications	37,726	28,563	33,593
Customer service technical support	15,143	9,897	7,400
	\$359,782	\$202,849	\$134,019
	=====	=====	=====

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
Semiconductor capital equipment	70%	65%	52%
Data storage	7	11	13
Flat panel display	8	5	4
Advanced product applications	11	14	25
Customer service technical support	4	5	6
	100%	100%	100%
	=====	=====	=====

The following tables summarize annual net sales, and percentages of net sales, by geographic region for us for each of the three years in the period ended December 31, 2000:

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
	(IN THOUSANDS)		
United States and Canada	\$260,596	\$148,424	\$ 98,042
Europe	52,893	32,344	25,986
Asia Pacific	45,874	21,583	9,580
Rest of world	419	498	411
	\$359,782	\$202,849	\$134,019
	=====	=====	=====

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
United States and Canada	72%	73%	73%
Europe	15	16	20
Asia Pacific	13	11	7
Rest of world	0	0	0
	100%	100%	100%
	=====	=====	=====

GROSS MARGIN

Our gross margins were 29.9%, 45.5% and 49.0% for 1998, 1999 and 2000, respectively. The improvement in gross margin from 1998 to 1999 was primarily a result of our efforts to reduce material costs, improve overhead cost controls and a more favorable absorption of manufacturing costs which resulted from the higher sales base. The improvement in gross margin from 1999 to 2000 was primarily a result of a more favorable absorption of manufacturing costs, which resulted from the higher sale base. We added new facilities in Fort Collins, Colorado in the first quarter of 2001 to increase our manufacturing capacity. Due to substantial fixed costs involved in this expansion, there could be an adverse impact on overhead absorption in 2001 if the increased capacity is not fully utilized.

In the fourth quarter of 1997 the semiconductor capital equipment industry entered a sudden and severe downturn which continued through the end of 1998. The downturn in this industry, with the resulting underutilization of capacity, significantly impacted our financial results for 1998. The combination of the expansion and lower sales resulted in

an over-capacity situation for us, leading to unfavorable absorption of manufacturing overhead and a substantially reduced margin. This underutilization of manufacturing capacity continued to negatively impact gross margins, until sales to the semiconductor capital equipment market recovered in 1999 and 2000.

Historically, price competition has not had a material effect on margins. However, competitive pressures may produce a decline in average selling prices for certain products. Any decline in average selling prices not offset by reduced costs could result in a decline in our gross margins.

We provide warranty coverage for our systems ranging from 12 to 30 months, and estimate the anticipated costs of repairing our systems under such warranties based on the historical average costs of the repairs. To date, we have not experienced significant warranty costs in excess of our recorded reserves.

RESEARCH AND DEVELOPMENT

We invest in research and development to identify new technologies, develop new products and improve existing product designs. Our research and development expenses were \$24.4 million, \$28.3 million and \$37.0 million for 1998, 1999 and 2000, respectively, representing an increase of 16% from 1998 to 1999 and 31% from 1999 to 2000. As a percentage of sales, research and development expenses decreased from 18.2% in 1998 to 14.0% in 1999 and decreased again to 10.2% in 2000 because of the increasingly higher sales base. The increase in expenses from 1998 to 2000 is primarily due to increases in payroll, materials and supplies and depreciation of equipment used for new product development.

We believe continued investment in the research and development of new systems is critical to our ability to serve new and existing markets, and we continue to invest in new product development during industry downturns. Since our inception, the majority of our research and development costs generally have been internally funded and all have been expensed as incurred.

SALES AND MARKETING EXPENSES

Our sales and marketing expenses support domestic and international sales and marketing activities which include personnel, trade shows, advertising, and other marketing activities. Sales and marketing expenses were \$14.6 million, \$18.3 million and \$24.1 million for 1998, 1999 and 2000, respectively. This represents a 25% increase from 1998 to 1999 and a 32% increase from 1999 to 2000. The increase in expenses from 1998 to 2000 is primarily due to higher payroll, commissions, promotion, distribution and travel costs. We incurred these expenses to continue to increase our sales management and product management capabilities. As a percentage of sales, sales and marketing expenses decreased from 10.9% in 1998 to 9.0% in 1999 and decreased again to 6.7% in 2000 because of the increasingly higher sales base, while dollars spent increased.

GENERAL AND ADMINISTRATIVE EXPENSES

Our general and administrative expenses support our worldwide financial, administrative, information systems and human resources functions. General and administrative expenses were \$13.1 million, \$16.2 million and \$24.6 million for 1998, 1999 and 2000, respectively. This represents a 24% increase from 1998 to 1999 and a 51% increase from 1999 to 2000. The increases from 1998 to 2000 are primarily due to higher spending for payroll and purchased services. As a percentage of sales, general and administrative expenses decreased from 9.8% in 1998 to 8.0% in 1999 and decreased again to 6.8% in 2000 because of the increasingly higher sales base.

We continue to implement our management system software, including the replacement of existing systems in our domestic and foreign locations. We expect that charges related to personnel training and implementation of the new software will continue into 2001.

RESTRUCTURING AND MERGER COSTS AND ONE-TIME CREDIT

In 1998 we recorded a \$1.1 million recovery, which represented a settlement with our insurance carrier related to storm damage to our headquarters and main manufacturing facilities in the Fort Collins area in 1997. We had previously recorded \$2.7 million of storm damages in 1997.

In August 1998 we announced a restructuring plan to respond to the downturn in the semiconductor capital equipment market. The plan included a reduction of workforce of 128 people, the closure of one facility in our Fort Collins, Colorado campus, and the abandonment of plans to construct a new manufacturing facility in Fort Collins. We achieved other reductions in workforce at the Voorhees facility throughout 1998. We took a charge of \$1.0 million for the restructuring in the third quarter of 1998.

On October 8, 1998, Advanced Energy acquired RF Power Products, Inc., accounted for as a pooling of interests transaction that involved the exchange of four million shares of Advanced Energy common stock for the publicly-held common stock of RFPP. As part of the business combination, we incurred \$2.7 million of expense recorded in the fourth quarter of 1998 for merger costs. We incurred additional operating expenses during 1999 relating to consolidating and integrating operations of this business combination.

On April 6, 2000, Advanced Energy acquired Noah Holdings, Inc. in a pooling of interests transaction that involved the exchange of approximately 687,000 shares of Advanced Energy common stock for the privately held common stock of Noah. As part of the business combination, we incurred \$2.3 million of expense in the second quarter of 2000 for merger costs. We incurred additional operating expenses during 2000 and expect to incur further operating expenses in 2001 relating to consolidating and integrating operations of this business combination.

On July 17, 2000, we announced the consolidation of our Tower, Inc., facility in Fridley, Minnesota, into our existing facility in Voorhees, New Jersey. We recorded a restructuring charge of \$1.0 million in the third quarter of 2000 related to the consolidation, which was completed during the fourth quarter of 2000.

On August 18, 2000, Advanced Energy acquired Sekidenko, Inc., in a merger that was accounted for as a pooling of interests. This merger involved the exchange of 2.1 million shares of Advanced Energy common stock for the privately held common stock of Sekidenko. As part of the business combination, we took a charge of \$2.3 million in the third quarter of 2000 for merger costs. We incurred additional operating expenses during 2000 and expect to incur further operating expenses in 2001 relating to consolidating and integrating operations of this business combination.

The \$2.7 million of merger costs incurred in 1998 and \$4.6 million of merger costs incurred in 2000 cannot be capitalized, and in certain cases are nondeductible for income tax purposes.

OTHER INCOME (EXPENSE)

Other income (expense) consists primarily of interest income and expense, foreign exchange gains and losses and other miscellaneous gains, losses, income and expense items. Interest income was approximately \$1.1 million, \$2.2 million and \$10.7 million for the years 1998, 1999 and 2000, respectively. In 1998 interest income was earned primarily from earnings on investments made from the proceeds of our initial public offering in 1995 and our underwritten public offering in 1997. In 1999 and 2000 interest income was earned primarily from the proceeds of our offering of convertible subordinated notes and common stock offering of November 1999.

Interest expense consists principally of accruals of interest on our convertible subordinated notes, on borrowings under our bank credit and capital lease facilities and a state government loan. Interest expense was approximately \$340,000, \$1.4 million and \$7.7 million for the years 1998, 1999 and 2000, respectively. The increase of interest expense from 1998 to 2000 was primarily due to interest on the convertible subordinated notes.

Our foreign subsidiaries' sales are primarily denominated in currencies other than the U.S. dollar. We recorded net foreign currency gains of \$369,000 and \$1.5 million for 1998 and 1999, respectively, and a net foreign currency loss of \$196,000 in 2000. The increase from 1998 to 1999 was primarily due to strengthening of the exchange rate of the Japanese yen to the U.S. dollar. The loss in 2000 was due to a weakening of the exchange rate of the Japanese yen to the U.S. dollar offset by the effect of our use of forward foreign exchange contracts to hedge our exposure to fluctuations in foreign exchange rates. Since 1997 we have entered into various forward foreign exchange contracts as a hedge against currency fluctuations in the Japanese yen. We will continue to evaluate various policies to minimize the effect of foreign currency fluctuations.

Eleven European countries adopted a Single European Currency (the "euro") as of January 1, 1999 with a transition period continuing through at least January 1, 2002. As of January 1, 1999, these eleven of the fifteen member countries of the European Union (the "participating countries") established fixed conversion rates between their existing sovereign currencies and the euro. For three years after the introduction of the euro, the participating countries can perform financial transactions in either the euro or their original local currencies. This will result in a fixed exchange rate among the participating countries, whereas the euro (and the participating countries' currencies in tandem) will continue to float freely against the U.S. dollar and other currencies of non-participating countries. A twelfth European country adopted the euro on January 1, 2001. Although we do not expect the introduction of the euro currency to have a significant impact on our revenues or results of operations, we are unable to determine what effects, if any, the currency change in Europe will have on competition and competitive pricing in the affected regions.

Miscellaneous expense items were \$939,000 and \$698,000 in 1998 and 1999, respectively. Miscellaneous income of \$4.7 million in 2000 was primarily due to a \$4.8 million gain on a sale of an investment.

PROVISION (BENEFIT) FOR INCOME TAXES

The income tax benefit for 1998 was \$3.5 million and represented an effective tax rate of 24%. The income tax provision of \$11.7 million for 1999 represented an effective rate of 38%. The income tax provision of \$36.8 million in 2000, which included \$4.6 million of provision for an extraordinary item, represented an effective rate of 35%. Changes in our relative earnings and the earnings of our foreign subsidiaries affect our consolidated effective tax rate. We adjust our income taxes periodically based upon the anticipated tax status of all foreign and domestic entities.

EXTRAORDINARY GAIN

In the fourth quarter of 2000 we repurchased an aggregate of approximately \$53.4 million principal amount of our convertible subordinated notes in the open market, for a cost of approximately \$40.8 million. These purchases resulted in a pretax extraordinary gain of \$12.2 million, or \$7.6 million after tax.

QUARTERLY RESULTS OF OPERATIONS

The following tables present unaudited quarterly results in dollars and as a percentage of sales for each of the eight quarters in the period ended December 31, 2000. We believe that all necessary adjustments have been included in the amounts stated below to present fairly such quarterly information. The operating results for any quarter are not necessarily indicative of results for any subsequent period.

	QUARTERS ENDED							
	MAR. 31, 1999	JUNE 30, 1999	SEPT. 30, 1999	DEC. 31, 1999	MAR. 31, 2000	JUNE 30, 2000	SEPT. 30, 2000	DEC. 31, 2000
	(IN THOUSANDS, EXCEPT PER SHARE DATA)							
Sales	\$ 36,419	\$ 45,363	\$ 55,626	\$ 65,441	\$ 75,028	\$ 85,701	\$ 96,317	\$102,736
Cost of sales	21,187	25,093	30,675	33,692	38,361	43,338	49,492	52,138
Gross profit	15,232	20,270	24,951	31,749	36,667	42,363	46,825	50,598
Operating expenses:								
Research and development	6,029	6,983	7,211	8,103	8,113	8,504	9,711	10,668
Sales and marketing	3,432	4,187	4,589	6,117	5,867	5,373	6,232	6,629
General and administrative	3,509	3,746	4,437	4,533	5,639	5,810	6,748	6,376
Restructuring charge	--	--	--	--	--	--	1,000	--
Merger costs	--	--	--	--	--	2,333	2,250	--
Total operating expenses	12,970	14,916	16,237	18,753	19,619	22,020	25,941	23,673
Income from operations	2,262	5,354	8,714	12,996	17,048	20,343	20,884	26,925
Other (expense) income	(80)	45	1,063	522	120	731	5,598	1,036
Net income before income taxes, minority interest and extraordinary item	2,182	5,399	9,777	13,518	17,168	21,074	26,482	27,961
Provision for income taxes	951	2,109	3,687	4,994	5,947	8,023	10,195	8,076
Minority interest in net income	--	--	--	69	(17)	(67)	(2)	106
Net income before extraordinary item	1,231	3,290	6,090	8,455	11,238	13,118	16,289	19,779
Extraordinary item (net of income taxes)	--	--	--	--	--	--	--	7,610
Net income	\$ 1,231	\$ 3,290	\$ 6,090	\$ 8,455	\$ 11,238	\$ 13,118	\$ 16,289	\$ 27,389
Diluted earnings per share before extraordinary item	\$ 0.04	\$ 0.11	\$ 0.20	\$ 0.27	\$ 0.35	\$ 0.40	\$ 0.50	\$ 0.61
Diluted earnings per share from extraordinary item	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ 0.22
Diluted earnings per share	\$ 0.04	\$ 0.11	\$ 0.20	\$ 0.27	\$ 0.35	\$ 0.40	\$ 0.50	\$ 0.83
Diluted weighted-average common shares outstanding	30,814	30,604	30,932	31,816	32,512	32,543	32,417	34,078 *

* Includes dilution from subordinated notes

	QUARTERS ENDED							
	MAR. 31, 1999	JUNE 30, 1999	SEPT. 30, 1999	DEC. 31, 1999	MAR. 31, 2000	JUNE 30, 2000	SEPT. 30, 2000	DEC. 31, 2000
PERCENTAGE OF SALES:								
Sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of sales	58.2	55.3	55.1	51.5	51.1	50.7	51.4	50.7
Gross margin	41.8	44.7	44.9	48.5	48.9	49.3	48.6	49.3
Operating expenses:								
Research and development	16.6	15.4	13.0	12.4	10.8	9.9	10.0	10.4
Sales and marketing	9.4	9.2	8.2	9.3	7.9	6.2	6.5	6.5
General and administrative	9.6	8.3	8.0	6.9	7.5	6.8	7.0	6.2
Restructuring charge	--	--	--	--	--	--	1.0	--
Merger costs	--	--	--	--	--	2.7	2.4	--
Total operating expenses	35.6	32.9	29.2	28.6	26.2	25.6	26.9	23.1
Income from operations	6.2	11.8	15.7	19.9	22.7	23.7	21.7	26.2
Other (expense) income	(0.2)	0.1	1.9	0.8	0.2	0.9	5.8	1.0
Net income before income taxes, minority interest and extraordinary item	6.0	11.9	17.6	20.7	22.9	24.6	27.5	27.2
Provision for income taxes	2.6	4.6	6.7	7.7	7.9	9.4	10.6	7.8
Minority interest in net income	--	--	--	0.1	0.0	(0.1)	0.0	0.1
Net income before extraordinary item	3.4	7.3	10.9	12.9	15.0	15.3	16.9	19.3
Extraordinary item (net of income taxes) ..	--	--	--	--	--	--	--	7.4
Net income	3.4%	7.3%	10.9%	12.9%	15.0%	15.3%	16.9%	26.7%

We have experienced and expect to continue to experience significant fluctuations in our quarterly operating results. Our expense levels are based, in part, on expectations of future revenues. If revenue levels in a particular quarter do not meet expectations, operating results may be

adversely affected. A variety of factors have an influence on the level of our revenues in a particular quarter. These factors include:

- o general economic conditions;
- o specific economic conditions in the semiconductor and semiconductor capital equipment industries and other industries in which our customers operate;
- o timing and nature of orders from major customers;
- o changes in customers' inventory management practices;
- o customer cancellations of previously placed orders and shipment delays;
- o pricing competition from our competitors;
- o costs incurred by responding to specific feature requests by customers;
- o component shortages resulting in manufacturing delays;
- o exchange rate fluctuations;
- o management decisions to commence or discontinue product lines;
- o our ability to design, introduce and manufacture new products on a cost effective and timely basis;
- o the introduction of new products by us or our competitors;
- o the timing of research and development expenditures; and
- o expenses related to acquisitions, strategic alliances, and the further development of marketing and service capabilities.

We are dependent on obtaining orders for shipment in a particular quarter to achieve our revenue objectives for that quarter. Accordingly, it is difficult for us to predict accurately the timing and level of sales in a particular quarter. We anticipate quarterly fluctuations in sales to continue.

Our quarterly operating results in 1999 and 2000 reflect the changing demand for our products during this period, principally from manufacturers of semiconductor capital equipment, data storage equipment and flat panel displays, and our ability to adjust our manufacturing capacity to meet this demand. Sales to the semiconductor capital equipment industry increased each quarter throughout 1999 and 2000. Data storage sales were flat from the first quarter of 1999 to the second quarter of 1999, then increased in the third and fourth quarters of 1999. Data storage sales then decreased in the first and second quarters of 2000, increased in the third quarter of 2000 and decreased in the fourth quarter of 2000. Sales to the flat panel display industry increased each quarter of 1999 and 2000. Sales to advanced product applications markets, though fluctuating on a

quarterly basis throughout 1999 and 2000, were higher in the second half of 1999 than in the first half of 1999, were higher again in the first half of 2000 and again in the second half of 2000. Our revenue from all sectors is heavily influenced by general economic conditions in each of the industries we serve.

Our gross margin improved on a quarterly basis in 1999 and reached a relatively consistent level in each of the quarters in 2000. Gross margin improved from 41.8% in the first quarter of 1999 to 44.7% in the second quarter of 1999, then improved to 44.9% in the third quarter of 1999 and to 48.5% in the fourth quarter of 1999. These increases were due to increased utilization of capacity from the recovery in the semiconductor capital equipment industry and from our increased efforts to lower material costs. Gross margin improved slightly to 48.9% in the first quarter of 2000 and again to 49.3% in the second and fourth quarters of 2000, with a slight decrease to 48.6% in the third quarter of 2000.

Operating expenses were \$13.0 million, \$14.9 million, \$16.2 million and \$18.8 million during the first, second, third and fourth quarters of 1999, respectively, but declined as a percentage of sales throughout 1999 as the sales base increased each quarter. Operating expenses excluding restructuring and merger costs were \$19.6 million, \$19.7 million, \$22.7 million and \$23.7 million during the first, second, third and fourth quarters of 2000, respectively. Operating expenses, excluding restructuring and merger costs, declined as a percentage of sales in the first and second quarters of 2000, and increased slightly as a percentage of sales in the third and fourth quarters of 2000. As a percentage of sales, operating expenses have generally declined during periods of rapid sales growth, when sales increased at a rate faster than our ability to add personnel and facilities to support the growth. Operating expenses as a percentage of sales have generally increased during periods of flat or decreased sales, when our infrastructure is retained to support anticipated future growth.

Other income (expense) consists primarily of interest income and expense, foreign currency gain and loss, and miscellaneous gains, losses, income and expense items. Interest income and expense increased significantly in the fourth quarter of 1999, when the interest income and expense from the proceeds of the convertible subordinated notes and the interest from the proceeds of the common stock sale began. Interest income and expense stayed at higher levels throughout 2000. During 1999 we recorded a net foreign exchange gain of \$1.5 million, which occurred mostly in the second half of the year, and in 2000 we recorded a \$196,000 foreign currency loss. We continue to utilize forward foreign exchange contracts in Japan to mitigate the effects of foreign currency fluctuations. The third quarter of 2000 included a \$4.8 million gain on a sale of an investment.

Our effective rate for income tax provision fluctuated throughout 1999 and 2000, varying from 31% to 44%. The fluctuations were due to certain nondeductible expenses including merger costs, and due to initiatives we implemented in 2000 to reduce our overall rate.

LIQUIDITY AND CAPITAL RESOURCES

Since our inception, we have financed our operations, acquired equipment and met our working capital requirements through borrowings under our revolving lines of credit, long-term loans secured by property and equipment, cash flow from operations and proceeds from underwritten public offerings of our common stock and convertible subordinated debt.

Operating activities provided cash of \$10.4 million in 1999, primarily as a result of net income, depreciation, amortization, increases in accounts payable and increased accruals for payroll, employee benefits and income taxes, offset by increases in accounts receivable and inventories. Operating activities provided cash of \$22.8 million in 2000, primarily as a result of net income, depreciation, amortization and increases in accounts payable and increased accruals for payroll, employee benefits and income taxes, partially offset by increases in receivables and inventories, gains on retirement of convertible subordinated notes and a sale of an investment, and earnings from marketable securities. We expect future receivable and inventory balances to fluctuate with net sales. We are required to maintain higher levels of buffer stock inventory to satisfy our customers' delivery requirements. Any increase in our inventory levels will require the use of cash to finance the inventory.

Investing activities used cash of \$176.2 million in 1999, and consisted of a net increase in marketable securities of \$168.9 million, the purchase of property and equipment of \$7.2 million and an addition to an investment of \$175,000. Investing activities provided cash of \$27.4 million in 2000, and consisted of a net decrease in marketable securities of \$38.1 million, proceeds from a sale of an investment of \$4.5 million and proceeds from a sale of equipment of \$150,000, offset by purchases of property and equipment of \$14.1 million, a purchase of technology of \$1.0 million and an addition to an investment of \$250,000.

Financing activities provided cash of \$174.5 million in 1999, and consisted of net proceeds from convertible subordinated debt of \$130.5 million, net proceeds from the sale of common stock of \$37.8 million, proceeds from the exercise of employee stock options and sale of common stock through our employee stock purchase plan ("ESPP") of \$4.5 million, and other proceeds of \$1.7 million. Financing activities used cash of \$37.5 million in 2000, and consisted of open market repurchases of our convertible notes of \$40.8 million and other uses of \$1.6 million, offset by proceeds from the exercise of employee stock options and sale of common stock through our ESPP of \$4.9 million.

In the fourth quarter of 2000 we repurchased an aggregate of approximately \$53.4 million principal amount of our convertible subordinated notes in the open market, for a cost of approximately \$40.8 million. The note purchases were funded from our available cash. We may repurchase additional notes in the open market from time to time, if market conditions and our financial position are deemed favorable for such purchases.

We plan to spend approximately \$12.5 million in 2001 for the acquisition of equipment, leasehold improvements and furnishings, with depreciation expense for 2001 projected to be \$9.5 million. In January 2001 we used cash to purchase the outstanding common stock of EMCO for approximately \$30 million.

As of December 31, 2000, we had working capital of \$279.6 million. Our principal sources of liquidity consisted of \$31.7 million of cash and cash equivalents, \$157.8 million of marketable securities, and a credit facility consisting of a \$30.0 million revolving line of credit, with options to convert up to \$10.0 million to a three-year term loan. Advances under the revolving line of credit bear interest at either the prime rate (8.5% at February 28, 2001) minus 1.25% or the LIBOR 360-day rate (4.88375% at February 28, 2001) plus 150 basis points, at our option. All advances under this revolving line of credit will be due and payable April 7, 2001. As of December 31, 2000 there was an advance outstanding of \$875,000 to our Japanese subsidiary, Advanced Energy Japan K.K. We also had another line of credit of \$1.9 million of which there was no balance outstanding at December 31, 2000. This credit line expired in January 2001.

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 through at least the end of 2001. 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.

ITEM 7A. 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 December 31, 2000, our investments consisted primarily of commercial paper, municipal bonds and notes and mutual funds.

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. We have entered into various

forward foreign exchange contracts to hedge against currency fluctuations in the Japanese yen. We will continue to evaluate various methods to minimize the effects of currency fluctuations. At December 31, 2000, we held foreign forward exchange contracts with nominal amounts of \$11.5 million and market settlement amounts of \$10.7 million for an unrealized gain position of \$826,000.

OTHER RISK

We have invested in a start-up company and may in the future make additional investments in start-up companies that develop products which we believe may provide future benefits. The current start-up investment and any future start-up investments will be subject to all of the risks inherent in investing in companies that are not established.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To Advanced Energy Industries, Inc.:

We have audited the accompanying consolidated balance sheets of Advanced Energy Industries, Inc. (a Delaware corporation) and subsidiaries as of December 31, 2000 and 1999, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2000. These consolidated financial statements and the schedule referred to below are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and schedule based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Advanced Energy Industries, Inc. and subsidiaries as of December 31, 2000 and 1999, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2000 in conformity with accounting principles generally accepted in the United States.

Our audits were made for the purpose of forming an opinion on the basic consolidated financial statements taken as a whole. The schedule attached to the consolidated financial statements is presented for purposes of complying with the Securities and Exchange Commission's rules and is not a part of the basic consolidated financial statements. This schedule has been subjected to the auditing procedures applied in our audits of the basic consolidated financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic consolidated financial statements taken as a whole.

Denver, Colorado ARTHUR ANDERSEN LLP February 12, 2001.

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(IN THOUSANDS)

		DECEMBER 31,	
		2000	1999
		-----	-----
ASSETS			
CURRENT ASSETS:			
Cash and cash equivalents	\$	31,716	\$ 21,043
Marketable securities - trading		157,811	186,440
Accounts receivable --			
Trade (less allowances for doubtful accounts of approximately			
\$784 and \$639 at December 31, 2000 and 1999, respectively)		72,732	44,652
Related parties		38	32
Other		3,775	1,787
Notes receivable		2,472	--
Income tax receivable		74	1,453
Inventories		45,266	28,410
Other current assets		2,508	1,803
Deferred income tax assets, net		7,483	3,753
		-----	-----
Total current assets		323,875	289,373
		-----	-----
PROPERTY AND EQUIPMENT, at cost, net of accumulated			
depreciation of \$24,427 and \$18,629 at December 31,			
2000 and 1999, respectively		24,101	17,699
		-----	-----
OTHER ASSETS:			
Deposits and other		995	559
Goodwill and intangibles, net of accumulated amortization of			
\$6,061 and \$3,860 at December 31, 2000 and 1999, respectively		9,890	11,040
Investments - available for sale		1,824	--
Demonstration and customer service equipment, net of			
accumulated depreciation of \$2,302 and \$2,235 at December 31,			
2000 and 1999, respectively		2,889	2,352
Deferred debt issuance costs, net		2,261	4,410
		-----	-----
		17,859	18,361
		-----	-----
Total assets	\$	365,835	\$ 325,433
		=====	=====

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

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(IN THOUSANDS)

	DECEMBER 31,	
	2000	1999
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable trade	\$ 18,250	\$ 15,702
Accrued payroll and employee benefits	11,723	7,606
Other accrued expenses	4,383	3,040
Customer deposits	104	804
Accrued income taxes payable	7,923	1,266
Capital lease obligations, current portion	53	100
Notes payable, current portion	1,284	2,485
Accrued interest payable on convertible subordinated notes	529	886
	-----	-----
Total current liabilities	44,249	31,889
	-----	-----
LONG-TERM LIABILITIES:		
Capital lease obligations, net of current portion	--	46
Notes payable, net of current portion	1,043	1,381
Convertible subordinated notes payable	81,600	135,000
	-----	-----
	82,643	136,427
	-----	-----
Total liabilities	126,892	168,316
	-----	-----
COMMITMENTS AND CONTINGENCIES (Note 14)		
MINORITY INTEREST	145	128
	-----	-----
STOCKHOLDERS' EQUITY:		
Preferred stock, \$0.001 par value, 1,000 shares authorized, none issued and outstanding	--	--
Common stock, \$0.001 par value, 40,000 shares authorized; 31,537 and 30,981 shares issued and outstanding at December 31, 2000 and 1999, respectively	32	31
Additional paid-in capital	124,930	108,997
Retained earnings	116,971	48,937
Deferred compensation	(1,620)	(86)
Accumulated other comprehensive loss	(1,515)	(890)
	-----	-----
Total stockholders' equity	238,798	156,989
	-----	-----
Total liabilities and stockholders' equity	\$ 365,835	\$ 325,433
	=====	=====

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

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF OPERATIONS
(IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
SALES	\$ 359,782	\$ 202,849	\$ 134,019
COST OF SALES	183,329	110,647	94,000
Gross profit	176,453	92,202	40,019
OPERATING EXPENSES:			
Research and development	36,996	28,326	24,405
Sales and marketing	24,101	18,325	14,616
General and administrative	24,573	16,225	13,121
Restructuring charges	1,000	--	1,000
Merger costs	4,583	--	2,742
Storm recoveries	--	--	(1,117)
Total operating expenses	91,253	62,876	54,767
INCOME (LOSS) FROM OPERATIONS	85,200	29,326	(14,748)
OTHER INCOME (EXPENSE):			
Interest income	10,727	2,174	1,111
Interest expense	(7,698)	(1,430)	(340)
Foreign currency (loss) gain	(196)	1,504	369
Other income (expense), net	4,652	(698)	(939)
Net income (loss) before income taxes, minority interest and extraordinary item	92,685	30,876	(14,547)
PROVISION (BENEFIT) FOR INCOME TAXES	32,241	11,741	(3,522)
MINORITY INTEREST IN NET INCOME	20	69	--
NET INCOME (LOSS) BEFORE EXTRAORDINARY ITEM	60,424	19,066	(11,025)
EXTRAORDINARY ITEM (LESS APPLICABLE INCOME TAXES OF \$4,566) (Note 11)	7,610	--	--
NET INCOME (LOSS)	\$ 68,034	\$ 19,066	\$ (11,025)
NET EARNINGS (LOSS) PER SHARE BEFORE EXTRAORDINARY ITEM:			
BASIC	\$ 1.93	\$ 0.64	\$ (0.38)
DILUTED	\$ 1.86	\$ 0.62	\$ (0.38)
EARNINGS PER SHARE FROM EXTRAORDINARY ITEM:			
BASIC	\$ 0.24	\$ --	\$ --
DILUTED	\$ 0.24	\$ --	\$ --
NET EARNINGS (LOSS) PER SHARE:			
BASIC	\$ 2.17	\$ 0.64	\$ (0.38)
DILUTED	\$ 2.10	\$ 0.62	\$ (0.38)
BASIC WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING	31,336	29,706	29,007
DILUTED WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING	32,425	30,934	29,007

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

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
(IN THOUSANDS)

FOR THE YEARS ENDED DECEMBER 31, 2000, 1999 AND 1998

	COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	RETAINED EARNINGS	STOCKHOLDERS' NOTES RECEIVABLE	DEFERRED COMPENSATION	ACCUMULATED OTHER COMPREHENSIVE (LOSS) INCOME	TOTAL STOCKHOLDERS' EQUITY
	SHARES	AMOUNT						
BALANCES, December 31, 1997	27,241	\$ 27	\$ 59,357	\$ 41,378	\$ (67)	\$ (34)	\$ (692)	\$ 99,969
Exercise of stock options for cash	219	--	728	--	--	--	--	728
Proceeds from stockholders' notes receivable.....	--	--	--	--	67	--	--	67
Sale of common stock through employee stock purchase plan	20	--	133	--	--	--	--	133
Amortization of deferred compensation	--	--	--	--	--	34	--	34
Issuance of common stock for intangibles	1,680	2	2,094	--	--	--	--	2,096
Tax benefit related to shares acquired by employees under stock compensation plans	--	--	365	--	--	--	--	365
Adjustment to conform year-end of merged entity	--	--	--	(482)	--	--	--	(482)
Comprehensive loss: Equity adjustment from foreign currency translation	--	--	--	--	--	--	278	--
Net loss	--	--	--	(11,025)	--	--	--	--
Total comprehensive loss	--	--	--	--	--	--	--	(10,747)
BALANCES, December 31, 1998	29,160	29	62,677	29,871	--	--	(414)	92,163
Exercise of stock options for cash	490	1	4,147	--	--	--	--	4,148
Sale of common stock through employee stock purchase plan ..	22	--	345	--	--	--	--	345
Issuance of common stock for intangibles	227	--	2,335	--	--	--	--	2,335
Tax benefit related to shares acquired by employees under stock compensation plans	--	--	1,422	--	--	--	--	1,422
Sale of common stock through private and public offerings, net of approximately \$2,448 of expenses ...	1,070	1	37,826	--	--	--	--	37,827
Issuance of common stock for services rendered	12	--	136	--	--	--	--	136
Deferred compensation on stock options issued	--	--	109	--	--	(109)	--	--
Amortization of deferred compensation	--	--	--	--	--	23	--	23
Comprehensive income: Equity adjustment from foreign currency translation	--	--	--	--	--	--	(476)	--
Net income	--	--	--	19,066	--	--	--	--
Total comprehensive income	--	--	--	--	--	--	--	18,590
BALANCES, December 31, 1999	30,981	31	108,997	48,937	--	(86)	(890)	156,989
Exercise of stock options for cash	488	1	4,393	--	--	--	--	4,394
Issuance of common stock for services								

provided and merger costs	55	--	2,430	--	--	--	--	2,430
Sale of common stock through employee stock purchase plan ..	13	--	520	--	--	--	--	520
Tax benefit related to shares acquired by employees under stock compensation plans ...	--	--	6,595	--	--	--	--	6,595
Deferred compensation on stock options issued	--	--	1,995	--	--	(1,995)	--	--
Amortization of deferred compensation	--	--	--	--	--	461	--	461
Comprehensive income: Equity adjustment from foreign currency translation	--	--	--	--	--	--	(1,990)	--
Unrealized holding gains	--	--	--	--	--	--	1,365	--
Net income	--	--	--	68,034	--	--	--	--
Total comprehensive income	--	--	--	--	--	--	--	67,409
<hr/>								
BALANCES, December 31, 2000	31,537	\$ 32	\$ 124,930	\$ 116,971	\$ --	\$ (1,620)	\$ (1,515)	\$ 238,798
	=====	=====	=====	=====	=====	=====	=====	=====

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

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS
(IN THOUSANDS)

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income (loss)	\$ 68,034	\$ 19,066	\$ (11,025)
Adjustment for conforming year-end of merged entity	--	--	(482)
Adjustments to reconcile net income (loss) to net cash provided by operating activities -			
Depreciation and amortization	10,506	8,356	7,113
Amortization of deferred debt issuance costs	616	81	--
Provision for restructuring	1,000	--	1,000
Minority interest	17	69	--
Stock issued for services rendered and merger costs	2,430	136	--
Provision for deferred income taxes	(3,730)	851	(1,620)
Amortization of deferred compensation	461	23	34
(Gain) loss on disposal of property and equipment	(54)	(15)	120
Gain on sale of investment	(4,841)	--	--
Gain on retirement of convertible subordinated notes	(12,176)	--	--
Earnings from marketable securities, net	(9,471)	(1,724)	(765)
Writedown of LITMAS investment	--	322	600
Changes in operating assets and liabilities -			
Accounts receivable-trade, net	(28,080)	(28,822)	20,648
Related parties and other receivables	(1,994)	(1,306)	1,473
Notes receivable	(2,472)	--	--
Inventories	(16,856)	(4,882)	10,305
Other current assets	(705)	(252)	2,109
Deposits and other	(502)	280	(991)
Demonstration and customer service equipment	(1,282)	(563)	(1,034)
Accounts payable trade	2,548	9,171	(9,603)
Accrued payroll and employee benefits	4,117	4,467	(2,585)
Customer deposits and other accrued expenses	558	1,022	916
Income taxes payable/receivable, net	14,631	4,088	(5,929)
Net cash provided by operating activities	22,755	10,368	10,284
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchase of marketable securities	(10,000)	(170,805)	(1,000)
Sale of marketable securities	48,100	1,928	6,100
Proceeds from sale of investment	4,464	--	--
Proceeds from sale of equipment	150	--	--
Purchase of property and equipment, net	(14,062)	(7,168)	(5,410)
Purchase of technology	(981)	--	--
Purchase of LITMAS, net of cash acquired	(250)	(175)	(1,000)
Acquisition of assets of Fourth State Technology, Inc.	--	--	(2,500)
Net cash provided by (used in) investing activities	27,421	(176,220)	(3,810)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from notes payable	1,491	3,304	2,201
Repayment of notes payable and capital lease obligations	(3,123)	(1,637)	(9,382)
Proceeds from convertible debt, net	--	130,509	--
Repurchase of convertible debt, net	(40,795)	--	--
Sale of common stock, net of expenses	--	37,827	--
Sale of common stock through employee stock purchase plan	520	345	133
Proceeds from exercise of stock options and warrants	4,394	4,148	728
Proceeds from stockholders' notes receivable	--	--	67
Net cash (used in) provided by financing activities	(37,513)	174,496	(6,253)
EFFECT OF CURRENCY TRANSLATION ON CASH	(1,990)	(476)	278
INCREASE IN CASH AND CASH EQUIVALENTS	10,673	8,168	499
CASH AND CASH EQUIVALENTS, beginning of period	21,043	12,875	12,376
CASH AND CASH EQUIVALENTS, end of period	\$ 31,716	\$ 21,043	\$ 12,875
SUPPLEMENTAL DISCLOSURE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:			
Tax benefit related to shares acquired by employees under stock option plans	\$ 6,595	\$ 1,422	\$ 365
Conversion of royalty payable to note payable	\$ --	\$ 742	\$ --
Deferred compensation on stock options issued	\$ 1,995	\$ 109	\$ --
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:			
Cash paid for interest	\$ 7,385	\$ 459	\$ 423
Cash paid for income taxes, net	\$ 25,791	\$ 6,221	\$ 2,395

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

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) COMPANY OPERATIONS

Advanced Energy Industries, Inc. (the "Company") was incorporated in Colorado in 1981 and reincorporated in Delaware in 1995. The Company is primarily engaged in the development and production of products and systems critical to plasma-based manufacturing processes, which are used by manufacturers of semiconductors and in industrial thin film manufacturing processes. The Company owns 100% of each of the following subsidiaries: Advanced Energy Japan K.K. ("AE-Japan"), Advanced Energy Industries GmbH ("AE-Germany"), Advanced Energy Industries U.K. Limited ("AE-UK"), Advanced Energy Industries Korea, Inc. ("AE-Korea") and Advanced Energy Taiwan, Ltd. ("AE-Taiwan"). The Company also owns 100% of Advanced Energy Voorhees, Inc. ("AEV"), formerly RF Power Products, Inc. ("RFPP"), Tower Electronics, Inc. ("Tower"), Noah Holdings, Inc. ("Noah") and Sekidenko, Inc. ("Sekidenko") and 59.5% of LITMAS. As discussed in Note 3, Noah was merged into the Company on April 6, 2000, and Sekidenko was merged into the Company on August 18, 2000. The acquisitions of Noah and Sekidenko have been accounted for as a pooling of interests under Accounting Principles Board Opinion No. 16. Accordingly, all prior period consolidated financial statements have been restated to include Noah and Sekidenko as though they had always been part of the Company. AEV is a New Jersey-based designer and manufacturer of radio frequency power systems, matching networks and peripheral products primarily used by original equipment providers in the semiconductor capital equipment, commercial coating, flat panel display and analytical instrumentation markets. Tower is a Minnesota-based designer and manufacturer of custom, high-performance switchmode power supplies used principally in the telecommunications, medical and non-impact printing industries. Noah is a California-based manufacturer of solid state temperature control systems used to control process temperatures during semiconductor manufacturing. Sekidenko is a Washington-based manufacturer and supplier of optical fiber thermometers to the semiconductor capital equipment industry. LITMAS is a start-up company that designs and manufactures plasma gas abatement systems and high-density plasma sources.

The Company continues to be subject to certain risks similar to other companies in its industry. These risks include significant fluctuations of quarterly operating results, the volatility of the semiconductor and semiconductor capital equipment industries, customer concentration within the markets the Company serves, manufacturing facilities risks, recent and potential future acquisitions, management of growth, supply constraints and dependencies, dependence on design wins, barriers to obtaining new customers, the high level of customized designs, rapid technological changes, competition, international sales risks, the Asian financial markets, intellectual property rights, governmental regulations, and the volatility of the market price of the Company's common stock. A significant change in any of these risk factors could have a material impact on the Company's business.

(2) SIGNIFICANT ACCOUNTING POLICIES

BASIS OF PRESENTATION -- The consolidated financial statements include the accounts of the Company and its subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation.

CASH AND CASH EQUIVALENTS -- For cash flow purposes, the Company considers all cash and highly liquid investments with an original maturity of 90 days or less to be cash and cash equivalents.

INVENTORIES -- Inventories include costs of materials, direct labor and manufacturing overhead. Inventories are valued at the lower of market or cost, computed on a first-in, first-out basis.

MARKETABLE SECURITIES - TRADING -- The Company has investments in marketable equity securities and municipal bonds, which have original maturities of 90 days or more. In accordance with Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities," the investments are classified as trading securities and reported at fair value with unrealized gains and losses included in earnings.

DEMONSTRATION AND CUSTOMER SERVICE EQUIPMENT -- Demonstration and customer service equipment are manufactured products utilized for sales demonstration and evaluation purposes. The Company also utilizes this equipment in its customer service function as replacement and loaner equipment to existing customers.

The Company depreciates the equipment based on its estimated useful life in the sales and customer service functions. The depreciation is computed based on a three-year life.

PROPERTY AND EQUIPMENT -- Property and equipment is stated at cost. Additions, improvements, and major renewals are capitalized. Maintenance, repairs, and minor renewals are expensed as incurred.

Depreciation is provided using straight-line and accelerated methods over three to ten years for machinery and equipment and furniture and fixtures, with computers and communication equipment depreciated over a three-year life. Amortization of leasehold improvements and leased equipment is provided using the straight-line method over the life of the lease term or the life of the assets, whichever is shorter.

GOODWILL AND INTANGIBLES -- Goodwill and intangibles are recorded at the date of acquisition at their allocated cost. Amortization is provided over the estimated useful lives ranging from five to seven years for both the goodwill and the intangible assets.

CONCENTRATIONS OF CREDIT RISK -- The Company's revenues generally are concentrated among a small number of customers, the majority of which are in the semiconductor capital equipment industry. The Company's foreign subsidiaries sales are primarily denominated in currencies other than the U.S. dollar (see Note 15). The Company establishes an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends and other information.

WARRANTY POLICY -- The Company estimates the costs of repairing products under warranty based on the historical average cost of the repairs. The Company offers warranty coverage for its systems for periods ranging from 12 to 30 months after shipment.

CUMULATIVE TRANSLATION ADJUSTMENT -- The functional currency for the Company's foreign operations is the applicable local currency.

The Company records a cumulative translation adjustment from translation of the financial statements of AE-Japan, AE-Germany, AE-Korea, AE-UK and AE-Taiwan. This equity account includes the results of translating balance sheet assets and liabilities at current exchange rates as of the balance sheet date, and the statements of operations and cash flows at the average exchange rates during the respective year.

The Company recognizes gain or loss on foreign currency transactions, which are not considered to be of a long-term investment nature. The Company recognized a loss on foreign currency transactions of \$196,000 for the year ended December 31, 2000, and gains on foreign currency transactions of \$1,504,000 and \$369,000 for the years ended December 31, 1999 and 1998, respectively.

REVENUE RECOGNITION -- The Company recognizes revenue upon shipment of its systems and spare parts, at which time title passes to the customer. For most of its customers, the Company has established a warranty policy as part of its contract with the customer, to provide for repairs and replacement of defective systems. The Company records an estimate for such repairs based upon its experience, and does not record an offset against revenue for such temporary returns.

The Company has an arrangement with one of its major customers, a semiconductor capital equipment manufacturer, in which completed systems are shipped to the customer and held by them on a consignment basis. The customer draws systems 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 systems.

In some instances the Company delivers systems to customers for evaluation purposes. In these arrangements, the customer retains the systems for specified periods of time without commitment to purchase. On or before the expiration of the evaluation period, the customer either rejects the system and returns it to the Company, or accepts the system. Upon acceptance, title passes to the customer, the Company invoices the customer for the system, and revenue is recognized. Pending acceptance by the customer, such systems 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. Also, the Company's deferred income tax assets include certain future tax benefits. The Company records a valuation allowance against any portion of those deferred income tax assets which it believes it will more likely than not fail to realize.

EARNINGS PER SHARE -- Basic EPS is computed by dividing income available to common stockholders 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 include 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 treasury stock and if-converted methods) if potentially dilutive common shares had been issued. For the periods presented, certain stock options outstanding and conversion of the convertible subordinated notes payable were not included in this calculation because to do so would be anti-dilutive. Basic and diluted EPS were the same for fiscal 1998 as the Company incurred losses from operations, therefore, making the effect of all potentially dilutive common shares anti-dilutive.

COMPREHENSIVE INCOME (LOSS) -- SFAS No. 130, "Reporting Comprehensive Income," established rules for the reporting of comprehensive income (loss) and its components. Comprehensive income (loss) for the Company consists of net income (loss), foreign currency translation adjustments and unrealized holding gains and is presented in the Consolidated Statement of Stockholders' Equity.

SEGMENT REPORTING -- SFAS No. 131, "Disclosure about Segments of an Enterprise and Related Information," requires a public business enterprise to report financial and descriptive information about its reportable operating segments. Operating segments are components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision-maker in deciding how to allocate resources and in assessing performance. Management operates and manages the Company's business as one operating segment because all of its products and systems have similar economic characteristics and production processes.

RECENT ACCOUNTING PRONOUNCEMENTS -- In June 1998 the FASB issued SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." The Company is required to adopt SFAS No. 133, as amended by SFAS No. 137, on January 1, 2001. SFAS No. 133 establishes accounting and reporting standards for derivative instruments and for hedging activity by requiring all derivatives to be recorded on the balance sheet as either an asset or liability and measured at their fair value. Changes in the derivative's fair value will be recognized currently in earnings unless specific hedging accounting criteria

are met. SFAS No. 133 also establishes uniform hedge accounting criteria for all derivatives. The Company will not seek specific hedge accounting treatment for its foreign currency forward contracts (Note 18). The Company has assessed its position with regard to its derivative and hedging activities and does not believe that the adoption of SFAS No. 133 will have a material impact on the Company's financial condition or results of operations.

In December 1999 the staff of the Securities and Exchange Commission issued its Staff Accounting Bulletin ("SAB") No. 101, "Revenue Recognition." SAB No. 101 provides guidance on the measurement and timing of revenue recognition in financial statements of public companies. Changes in accounting policies to apply the guidance of SAB No. 101 must be adopted by recording the cumulative effect of the change in the fiscal quarter ending December 31, 2000. The adoption of SAB No. 101 did not have a material effect on the Company's financial position or results of operations.

In March 2000 the FASB issued FASB Interpretation No. 44, "Accounting for Certain Transactions Involving Stock Compensation" ("FIN No. 44"). FIN No. 44 provides clarification and guidance on applying APB No. 25. Generally, FIN No. 44 provides for prospective application for grants or modifications to existing stock options or awards made after June 30, 2000. The adoption of FIN No. 44 in 2000 did not have a material effect on the Company's financial condition or results of operations.

ESTIMATES AND ASSUMPTIONS -- The preparation of the Company's consolidated financial statements in conformity with generally accepted accounting principles requires the Company's management to make estimates and assumptions that affect the amounts reported and disclosed in the consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

ASSET IMPAIRMENTS -- The Company reviews its long-lived assets and certain identifiable intangibles to be held and used by the Company for impairment whenever events or changes in circumstances indicate their carrying amount may not be recoverable. In so doing, the Company estimates the future net cash flows expected to result from the use of the asset and its eventual disposition. If the sum of the expected future net cash flows (undiscounted and without interest charges) is less than the carrying amount of the asset, an impairment loss is recognized to reduce the asset to its estimated fair value. Otherwise, an impairment loss is not recognized. Long-lived assets and certain identifiable intangibles to be disposed of, if any, are reported at the lower of carrying amount or fair value less cost to sell.

RECLASSIFICATIONS -- Certain reclassifications have been made to the 1998 and 1999 financial statements to conform to the 2000 presentation.

(3) ACQUISITIONS

SEKIDENKO, INC. -- On August 18, 2000, Sekidenko, Inc. ("Sekidenko"), a privately held, Vancouver, Washington-based supplier of optical fiber thermometers to the semiconductor capital equipment industry, was merged with a wholly owned subsidiary of the Company. The Company issued 2.1 million shares of its common stock to the former shareholders of Sekidenko. In connection with the merger, the Company recorded in the third quarter of 2000 a charge to operating expenses of \$2.3 million for direct merger-related costs.

NOAH HOLDINGS, INC. -- On April 6, 2000, Noah Holdings, Inc. ("Noah"), a privately held, California-based manufacturer of solid state temperature control systems used to control process temperatures during semiconductor manufacturing, was merged with a wholly owned subsidiary of the Company. The Company issued approximately 687,000 shares of its common stock in connection with the acquisition. In addition, outstanding Noah stock options were converted into options to purchase approximately 40,000 shares of the Company's common stock. In connection with the merger, the Company recorded in the second quarter of 2000 a charge to operating expenses of \$2.3 million for direct merger-related costs.

AEV -- On October 8, 1998, RF Power Products, Inc., since renamed Advanced Energy Voorhees, Inc. ("AEV"), a New Jersey-based designer and manufacturer of radio frequency power systems, matching networks and peripheral products primarily for original equipment providers in the semiconductor capital equipment, commercial coating, flat panel display and analytical instrumentation markets, was merged with a wholly owned subsidiary of the Company. The Company issued approximately four million shares of its common stock to the former shareholders of AEV. In addition, outstanding AEV stock options were converted into options to purchase approximately 148,000 shares of the Company's common stock.

AEV's operating results for the month of December 1998 are not reflected in the accompanying consolidated statement of operations. This is due to changing AEV's year-end from November 30 to December 31 to conform to the Company's year-end. AEV's month of December 1998 operating results were revenues of approximately \$723,000 and a net loss of \$482,000, which has been charged directly to retained earnings in order to report only twelve months' operating results. In connection with the merger, the Company recorded in the fourth quarter of 1998 a charge to operating expenses of \$2,742,000 for direct merger-related costs.

Each of the above mergers constituted a tax-free reorganization and have been accounted for as a pooling of interests under Accounting Principles Board Opinion No. 16. Accordingly, all prior period consolidated financial statements presented have been restated to include the combined balance sheet, statements of operations and cash flows of AEV, Noah and Sekidenko as though each had always been part of the Company. There were no transactions between the Company, AEV, Noah and Sekidenko prior to the combinations, and immaterial adjustments were recorded at AEV, Noah and Sekidenko to conform their accounting policies. Certain reclassifications were made to conform the AEV, Noah and Sekidenko financial statements to the Company's presentations. The results of operations for the separate companies and combined amounts presented in the consolidated financial statements follow:

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
	(IN THOUSANDS)		
Sales:			
Pre-AEV merger			
Advanced Energy	\$ --	\$ --	\$ 86,289
AEV	--	--	18,436
Advanced Energy and AEV combined before Noah and			
Sekidenko mergers	67,171	183,958	19,973
Noah before Noah and Sekidenko mergers	3,080	7,617	5,639
Sekidenko before Noah and Sekidenko mergers	4,777	11,274	3,682
Post-Noah merger			
Advanced Energy combined with AEV and Noah	123,190	--	--
Sekidenko	7,034	--	--
Post-Sekidenko merger	154,530	--	--
Consolidated	\$ 359,782	\$ 202,849	\$ 134,019
	=====	=====	=====
Net income (loss):			
Pre-AEV merger			
Advanced Energy	\$ --	\$ --	\$ (2,748)
AEV	--	--	(3,859)
Advanced Energy and AEV combined before Noah and			
Sekidenko mergers	9,996	16,838	(168)
AEV merger costs	--	--	(2,742)
Noah before Noah and Sekidenko mergers	43	184	(1,620)
Sekidenko before Noah and Sekidenko mergers	1,199	2,044	112
Post-Noah merger			
Advanced Energy combined with AEV and Noah	20,809	--	--
Sekidenko	1,367	--	--
Noah merger costs	(2,333)	--	--
Post-Sekidenko merger	39,203	--	--
Sekidenko merger costs	(2,250)	--	--
Consolidated	\$ 68,034	\$ 19,066	\$ (11,025)
	=====	=====	=====

OTHER INTANGIBLES -- During 1999 Noah acquired various intangible assets, primarily a license agreement and patents, by issuing approximately 214,000 shares of common stock valued at \$1,950,000. The entire purchase price was allocated to other intangibles and is being amortized over a seven-year useful life.

During 1998 Sekidenko acquired various intangible assets, primarily a license agreement, by issuing approximately 1,680,000 shares of common stock valued at \$2,096,000. The entire purchase price was allocated to other intangibles and is being amortized over a five-year useful life.

LITMAS -- During 1998 the Company acquired a 29% ownership interest in LITMAS, a privately held, North Carolina-based start-up company that designs and manufactures 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 are included within the accompanying 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%.

FST -- Effective September 3, 1998, the Company acquired substantially all of the assets of Fourth State Technology, Inc. ("FST"), a privately held, Texas-based designer and manufacturer of process controls used to monitor and analyze data in the RF process. The purchase price consisted of \$2.5 million in cash, assumption of a \$113,000 liability, and an earn-out provision, which is based on profits over a twelve-quarter period beginning October 1, 1998. Approximately \$2.6 million of the initial purchase price was allocated to intangible assets. During the fourth quarter of 1999, the Company accrued \$240,000 to intangible assets as a result of the earn-out provision being met during the fifth quarter period. The results of operations of FST are included within the accompanying consolidated financial statements from the date of acquisition.

(4) PUBLIC OFFERING OF COMMON STOCK

In November 1999 the Company closed on an additional offering of its common stock. In connection with the offering, 1,000,000 shares of common shares were sold at a price of \$39 per share, providing gross proceeds of \$39,000,000, less \$2,448,000 in offering costs.

(5) MARKETABLE SECURITIES - TRADING

MARKETABLE SECURITIES - TRADING are reported at their fair value and consisted of the following:

	DECEMBER 31,	
	2000	1999
	(IN THOUSANDS)	
Commercial paper	\$ 85,827	\$ 118,894
Municipal bonds and notes	54,022	67,453
Mutual funds	17,962	93
	\$ 157,811	\$ 186,440
	=====	=====

These marketable securities have original costs of \$157,112,000 and \$185,069,000 as of December 31, 2000 and 1999, respectively.

(6) ACCOUNTS RECEIVABLE - TRADE

ACCOUNTS RECEIVABLE - TRADE consisted of the following:

	DECEMBER 31,	
	2000	1999
	(IN THOUSANDS)	
Domestic	\$ 41,545	\$ 21,877
Foreign	31,971	23,414
Allowance for doubtful accounts	(784)	(639)
	\$ 72,732	\$ 44,652
	=====	=====

(7) INVENTORIES

INVENTORIES consisted of the following:

	DECEMBER 31,	
	2000	1999
	(IN THOUSANDS)	
Parts and raw materials	\$34,462	\$19,381
Work in process	3,777	2,526
Finished goods	7,027	6,503
	\$45,266	\$28,410
	=====	=====

(8) PROPERTY AND EQUIPMENT

PROPERTY AND EQUIPMENT consisted of the following:

	DECEMBER 31,	
	2000	1999
	(IN THOUSANDS)	
Machinery and equipment.....	\$ 25,075	\$ 18,121
Computers and communication equipment.....	12,484	8,967
Furniture and fixtures.....	4,026	3,781
Vehicles.....	197	161
Leasehold improvements.....	6,746	5,298
	48,528	36,328
Less - accumulated depreciation.....	(24,427)	(18,629)
	\$ 24,101	\$ 17,699
	=====	=====

(9) INVESTMENTS IN MARKETABLE SECURITIES, AVAILABLE FOR SALE

In the third quarter of 2000 the Company exercised warrants of a supplier in a cashless transaction and received 458,000 shares of the supplier's common stock, which is publicly traded. Concurrent with the exercise, the Company sold 320,000 shares of the supplier's common stock and recognized a gain of approximately \$4.8 million. The remaining 138,000 shares have been classified as available-for-sale securities and are reflected as an investment of approximately \$1.7 million in the accompanying balance sheet.

(10) NOTES PAYABLE

	DECEMBER 31,	
	2000	1999
(IN THOUSANDS)		
Revolving line of credit of \$30,000,000, expiring April 7, 2001, interest at bank's prime rate minus 1.25% or the LIBOR 360-day rate plus 150 basis points, (average 1.98718% during 2000, 2.39857% at December 31, 2000) This line includes \$20,000,000 available for general use, with an option to convert up to \$10,000,000 to a three-year term loan; additional advances up to \$5,000,000 each for Optional Currency Rate Advances and Foreign Exchange Contracts. Borrowing base consists of the sum of 80% of eligible accounts receivable plus the lesser of 20% of eligible inventory or \$5,000,000. Loan covenants provide certain financial restrictions related to working capital, leverage, net worth, payment and declaration of dividends and profitability	\$ 875	\$ 1,958
Revolving line of credit of \$1,875,000, expired January 2001, interest at bank's prime rate plus 3.5% (minimum 12% plus 1% discount rate). Loan is secured by a Certificate of Deposit, certain accounts receivable, inventory, equipment and intangibles, and is guaranteed by a stockholder. Agreement provides for an early termination fee of \$30,000 if the line is terminated prior to maturity	--	241
Note payable, shareholder (see Note 16)	356	447
Note payable, royalties, with interest at 7%, with monthly payments ranging from \$5,000 to \$15,000, including interest, due July 2002. The note is unsecured	704	738
Note payable, other	120	--
Note payable to the New Jersey Economic Development Authority, with interest at 5%, principal and interest due monthly, matures January 2002 and secured by machinery and equipment	109	216
Note payable, shareholder (see Note 16)	163	266
	2,327	3,866
Less -- current portion	(1,284)	(2,485)
	\$ 1,043	\$ 1,381
	=====	=====

(11) CONVERTIBLE SUBORDINATED NOTES PAYABLE

In November 1999 the Company issued \$135 million of convertible subordinated notes payable at 5.25%. These notes mature November 15, 2006, with interest payable on May 15th and November 15th each year beginning May 15, 2000. Net proceeds to the Company were approximately \$130.5 million, after deducting \$4.5 million of offering costs, which have been capitalized and are being amortized over a period of seven years. Holders of the notes may convert the notes at any time into shares of the Company's common stock, at \$49.53 per share. The Company may convert the notes on or after November 19, 2002 at a redemption price of 103.00% times the principal amount, and may convert at successively lesser amounts thereafter until November 15, 2006, at which time the Company may convert at a redemption price equal to the principal amount. At December 31, 2000, \$529,000 of interest expense was accrued as a current liability.

In October and November 2000, the Company repurchased an aggregate of approximately \$53.4 million principal amount of its convertible subordinated notes in the open market, for a cost of approximately \$40.8 million. These purchases resulted in an after-tax extraordinary gain of \$7.6 million. The purchased notes have been cancelled. Approximately \$81.6 million principal amount of the notes remains outstanding, which had a fair market value of approximately \$66.7 million as of December 31, 2000. The Company may continue to purchase additional notes in the open market from time to time, if market conditions and its financial position are deemed favorable for such purposes.

(12) INCOME TAXES

For the years ended December 31, 2000, 1999 and 1998, the provision for income taxes consisted of an amount for taxes currently payable and a provision for tax effects deferred to future periods. In 1997 the

\Company's statutory U.S. tax rate increased from 34% to 35%.

The provision (benefit) for income taxes for the years ended December 31, 2000, 1999 and 1998 was as follows:

	DECEMBER 31,		
	2000	1999	1998
	(IN THOUSANDS)		
Federal	\$ 28,869	\$ 8,087	\$ (3,843)
State and local	3,592	1,376	(561)
Foreign taxes	4,346	2,278	882
	<u>\$ 36,807</u>	<u>\$ 11,741</u>	<u>\$ (3,522)</u>
	=====	=====	=====
Current	\$ 40,537	\$ 10,890	\$ (1,902)
Deferred	(3,730)	851	(1,620)
	<u>\$ 36,807</u>	<u>\$ 11,741</u>	<u>\$ (3,522)</u>
	=====	=====	=====

The following reconciles the Company's effective tax rate to the federal statutory rate for the years ended December 31, 2000, 1999 and 1998:

	DECEMBER 31,		
	2000	1999	1998
	(IN THOUSANDS)		
Income tax expense (benefit) per federal statutory rate	\$ 36,703	\$ 10,807	\$ (5,091)
State income taxes, net of federal deduction	2,232	894	(365)
Foreign sales corporation	(2,516)	(331)	--
Nondeductible merger costs	1,604	(228)	960
Nondeductible intangible and goodwill amortization	618	553	500
Other permanent items, net	(2,262)	(137)	(159)
Effect of foreign taxes	578	1,000	80
Foreign operating loss with no benefit provided	--	--	610
Change in valuation allowance	--	(717)	107
Tax credits	(150)	(100)	(164)
	<u>\$ 36,807</u>	<u>\$ 11,741</u>	<u>\$ (3,522)</u>
	=====	=====	=====

The Company's deferred income tax assets are summarized as follows:

	DECEMBER 31, 2000	CHANGE	DECEMBER 31, 1999
	(IN THOUSANDS)		
Employee bonuses and commissions ...	\$ 1,851	\$ 1,821	\$ 30
Warranty reserve	1,046	437	609
Bad debt reserve	229	(4)	233
Vacation accrual	1,076	551	525
Royalties	--	(280)	280
Obsolete and excess inventory	2,433	1,546	887
Investment in LITMAS	395	52	343
Depreciation and amortization	312	(161)	473
Other	141	(232)	373
	<u>\$ 7,483</u>	<u>\$ 3,730</u>	<u>\$ 3,753</u>
	=====	=====	=====

The domestic versus foreign component of the Company's net income (loss) before income taxes at December 31, 2000, 1999 and 1998, was as follows:

	DECEMBER 31,		
	2000	1999	1998
	(IN THOUSANDS)		
Domestic	\$ 94,094	\$ 25,177	\$ (15,021)
Foreign	10,767	5,699	474
	<u>\$ 104,861</u>	<u>\$ 30,876</u>	<u>\$ (14,547)</u>
	=====	=====	=====

(13) RETIREMENT PLAN

The Company has 401(k) Profit Sharing Plans which cover most full-time employees who have completed six months of full-time continuous service and are age eighteen or older. Depending on the plan in which a participant is enrolled, participants may defer up to either 10% or 15% of their gross pay up to a maximum limit determined by law. Participants are immediately vested in their contributions.

The Company may make discretionary contributions based on corporate financial results for the fiscal year. Effective January 1, 1998, the Company increased its matching contribution for participants in the 401(k) Plans up to a 50% matching on contributions by employees up to 6% of the employee's compensation. The Company's total contributions to the plans were approximately \$1,291,000, \$848,000 and \$754,000 for the years ended December 31, 2000, 1999 and 1998, respectively. Vesting in the profit sharing contribution account is based on years of service, with most participants fully vested after five years of credited service.

The Company also has a Money Purchase Pension Plan, which covers certain employees. This plan was frozen, effective July 1, 1998, and the Company is not required to make contributions to the plan for future years. The Company's contributions to this plan were \$63,000 for 1998 and \$62,000 for 2000. The Company made no contributions in 1999.

(14) COMMITMENTS AND CONTINGENCIES

CAPITAL LEASES

The Company finances a portion of its property and equipment under capital lease obligations at interest rates ranging from 7.63% to 24.7%. The future minimum lease payments under capitalized lease obligations as of December 31, 2000 are as follows:

	(IN THOUSANDS)
Total minimum lease payments, all 2001	\$ 56
Less - amount representing interest	(3)
Less - current portion	(53)

	\$ 0
	=====

OPERATING LEASES

The Company has various operating leases for automobiles, equipment, and office and production space (Note 16). Lease expense under operating leases was approximately \$5,155,000, \$4,926,000 and \$4,822,000 for the years ended December 31, 2000, 1999 and 1998, respectively.

The future minimum rental payments required under noncancelable operating leases as of December 31, 2000 are as follows:

	(IN THOUSANDS)
2001	\$ 5,556
2002	4,980
2003	4,017
2004	3,525
2005	3,200
Thereafter	18,156

	\$ 39,434
	=====

GUARANTEE

On April 12, 2000, the Company committed to a lease guarantee of approximately \$1,000,000 through April 12, 2005, to a private company. The Company received 25,000 shares of the private company's common stock, which is valued at approximately \$4,000 and is reflected on the Company's balance sheet in investments.

(15) FOREIGN OPERATIONS

The Company operates in a single operating segment with operations in the U.S., Asia and Europe. The following is a summary of the Company's foreign operations:

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
	(IN THOUSANDS)		
Sales:			
Originating in Japan to unaffiliated customers	\$ 32,404	\$ 16,270	\$ 6,300
Originating in Europe to unaffiliated customers	24,375	12,724	8,489
Originating in U.S. and sold to foreign customers	35,504	23,996	21,188
Originating in U.S. and sold to domestic customers	260,596	148,424	98,042
Originating in South Korea to unaffiliated customers	2,989	1,435	--
Originating in Taiwan to unaffiliated customers	3,914	--	--
Transfers between geographic areas	48,963	24,053	10,304
Intercompany eliminations	(48,963)	(24,053)	(10,304)
	=====	=====	=====
	\$ 359,782	\$ 202,849	\$ 134,019
Income (loss) from operations:			
Japan	\$ 6,533	\$ 1,758	\$ (1,505)
Europe	3,805	2,379	1,722
U.S.	73,508	25,390	(14,944)
South Korea	751	188	(186)
Taiwan	594	--	--
Intercompany eliminations	9	(389)	165
	=====	=====	=====
	\$ 85,200	\$ 29,326	\$ (14,748)
Identifiable assets:			
Japan	\$ 21,567	\$ 13,967	
Europe	19,263	11,950	
U.S.	387,953	345,431	
South Korea	2,609	1,393	
Taiwan	5,105	--	
Intercompany eliminations	(70,662)	(47,308)	
	=====	=====	
	\$ 365,835	\$ 325,433	

Intercompany sales among the Company's geographic areas are recorded on the basis of intercompany prices established by the Company.

(16) RELATED PARTY TRANSACTIONS

The Company leases office and production spaces from a limited liability partnership consisting of certain officers of the Company and other individuals. The leases relating to these spaces expire in 2009 and 2011 with monthly payments of approximately \$52,000 and \$60,000, respectively. The Company also leases other office and production space from another limited liability partnership consisting of certain officers of the Company and other individuals. The lease relating to this space expires in 2002 with a monthly payment of approximately \$28,000.

Approximately \$1,637,000, \$1,693,000 and \$1,359,000 were charged to rent expense attributable to these leases for the years ended December 31, 2000, 1999 and 1998, respectively.

The Company also leases office and production space from a shareholder. Approximately \$228,000, \$197,000 and \$199,000 were charged to rent expense attributable to this lease for the years ended

December 31, 2000, 1999 and 1998, respectively.

The Company leases, for business purposes, a condominium owned by a partnership of certain stockholders. The Company paid the partnership approximately \$36,000 for each of the years ended December 31, 2000, 1999 and 1998, relating to this lease.

During 1999 a shareholder of Sekidenko granted employees options under a preexisting arrangement to purchase shares of his common stock already outstanding at exercise prices below fair market value. Under this agreement, 29,700 and 34,250 of such options were exercised in 1999 and 2000, respectively. These options will result in the Company recognizing \$109,000 as compensation expense over the four-year vesting period related to the 1999 purchases, and \$1,995,000 as compensation expense over the four-year vesting period related to the 2000 purchases. Compensation expense of \$23,000 and \$461,000 was recognized in 1999 and 2000, respectively.

In prior years, certain stockholders of the Company exercised options to purchase shares of the Company's common stock in exchange for notes receivable in the amount of the exercise price. These notes receivable and accrued interest have been paid in full.

The Company has an unsecured note payable to a stockholder of \$356,000, less current portion of \$45,000, with interest at 7%, due November 1, 2002. The note is payable in installments of principal and interest of \$135,000 in 2001 and \$306,000 in 2002.

The Company has a note payable to a stockholder of \$163,000, less current portion of \$107,000, with interest at 5%, due January 2002. The note is payable in installments of principal and interest due semi-annually on January 13th and July 13th.

(17) MAJOR CUSTOMERS

The Company has a major customer (sales in excess of 10% of total sales) that is a manufacturer of semiconductor capital equipment. Sales to this customer accounted for the following percentages of sales for the years ended December 31, 2000, 1999 and 1998:

	DECEMBER 31,		
	2000	1999	1998
Customer A	39%	34%	24%
	====	====	====

(18) FORWARD CONTRACTS

AE-Japan enters into foreign currency forward contracts to buy U.S. dollars to offset foreign currency risk for trade purchases payable and intercompany transactions with its parent. Foreign currency forward contracts reduce the Company's exposure to the risk that the eventual net cash outflows resulting from the purchase of products denominated in other currencies will be adversely affected by changes in exchange rates. Foreign currency forward contracts are entered into with a major commercial Japanese bank that has a high credit rating and the Company does not expect the counterparty to fail to meet its obligations under outstanding contracts. Foreign currency gains and losses under the above 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 December 31, 2000, maturing through August 2001. All forward contracts are held until maturity. At December 31, 2000, the Company held foreign forward exchange contracts with nominal amounts of \$11,500,000 and market settlement amounts of \$10,674,000 for an unrealized gain position of \$826,000 that has been included in other income and expense in the accompanying statement of operations.

(19) STOCK PLANS

EMPLOYEE STOCK OPTION PLAN -- During 1993 the Company adopted an Employee Stock Option Plan (the "Employee Option Plan") which was amended and restated in September 1995, February 1998, February 1999 and December 2000. The Employee Option Plan allows issuance of incentive stock options, non-qualified options, and stock purchase rights. The exercise price of incentive stock options shall not be less than 100% of the stock's fair market value on the date of grant. The exercise price of non-qualified stock options shall not be less than 85% of the stock's fair market value on the date of grant. Options issued in 2000, 1999 and 1998 were issued at 100% of fair market value with typical vesting over three to four years. Under the Employee Option Plan, the Company has the discretion to accelerate the vesting period. The options are exercisable for ten years from the date of grant. The Company has reserved 5,625,000 shares of common stock for the issuance of stock under the Employee Option Plan, which terminates in June 2003.

In connection with the grant of certain stock options in the second quarter of 1995, the Company recorded \$142,000 of deferred compensation for the difference between the deemed fair value for accounting purposes and the option price as determined by the Company at the date of grant. This amount was presented as a reduction of stockholders' equity and was amortized over the three-year vesting period of the related stock options.

In connection with the grant of certain stock options in the third quarter of 1999, the Company recorded \$109,000 of deferred compensation for the difference between the deemed fair value for accounting purposes and the option price as determined by the Company at the date of grant. In connection with the grant of certain stock options in 2000, the Company recorded \$950,000 and \$1,045,000 of deferred compensation in the first and second quarters of 2000, respectively. These amounts also reflected the difference between the deemed fair value for accounting purposes and the option price as determined by the Company at the dates of grant. These amounts are presented as a reduction of stockholders' equity, and are being amortized over the four-year vesting period of the related stock options.

EMPLOYEE STOCK PURCHASE PLAN -- In September 1995 stockholders approved an Employee Stock Purchase Plan (the "Stock Purchase Plan") covering an aggregate of 200,000 shares of common stock. Employees are eligible to participate in the Stock Purchase Plan if employed by the Company for at least 20 hours per week during at least five months per calendar year. Participating employees may have up to 15% (subject to a 5% limitation set by the Company) of their earnings or a maximum of \$1,250 per six month period withheld pursuant to the Stock Purchase Plan. Common stock purchased under the Stock Purchase Plan will be equal to 85% of the lower of the fair market value on the commencement date of each offering period or the relevant purchase date. During 2000, 1999 and 1998, employees purchased an aggregate of 13,025, 22,390 and 20,264 shares under the Stock Purchase Plan, respectively.

NON-EMPLOYEE DIRECTORS STOCK OPTION PLAN -- In September 1995 the Company adopted the 1995 Non-Employee Directors Stock Option Plan (the "Directors Plan") covering 50,000 shares of common stock. In February 1999 the plan was amended to increase the number of shares of common stock issuable under such plan to 100,000 shares of common stock. The Directors Plan provides for automatic grants of non-qualified stock options to directors of the Company who are not employees of the Company ("Outside Directors"). Pursuant to the Directors Plan, upon becoming a director of the Company, each Outside Director will be granted an option to purchase 7,500 shares of common stock. Such options will be immediately exercisable as to 2,500 shares of common stock, and will vest as to 2,500 shares of common stock on each of the second and third anniversaries of the grant date. On each anniversary of the date on which a person became an Outside Director, an option for an additional 2,500 shares is granted. Such additional options vest on the third anniversary of the date of grant. Options will expire ten years after the grant date, and the exercise price of the options will be equal to the fair market value of the common stock on the grant date. The Directors Plan terminates September 2005.

The following summarizes the activity relating to options for the years ended December 31, 2000, 1999 and 1998:

	2000		1999		1998	
	(in thousands, except shares prices)					
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
Stock options:						
Incentive stock options --						
Options outstanding at beginning of period	1,850	\$ 13.90	1,987	\$ 9.01	1,475	\$ 7.02
Granted	461	44.45	417	30.31	937	10.23
Exercised	(488)	9.12	(487)	8.44	(219)	3.35
Terminated	(104)	19.26	(67)	10.44	(206)	6.35
Options outstanding at end of period	1,719	23.29	1,850	13.90	1,987	9.01
Options exercisable at end of period	689	14.09	801	9.10	651	6.89
Weighted-average fair value of options granted during the period	\$ 32.75		\$ 18.78		\$ 6.71	
Price range of outstanding options	\$0.67 - \$60.75		\$ 0.67 - \$44.97		\$0.67 - \$31.63	
Price range of options terminated	\$0.83 - \$43.69		\$3.88- \$28.16		\$0.83 - \$12.75	
Non-employee directors stock options--						
Options outstanding at beginning of period	55	\$ 18.34	40	\$ 12.18	20	\$ 14.67
Granted	20	46.48	18	32.94	20	7.55
Exercised	--	--	(3)	11.05	--	--
Terminated	--	--	--	--	--	--
Options outstanding at end of period	75	26.31	55	18.34	40	12.18
Options exercisable at end of period	32	18.65	22	17.27	15	11.40
Weighted-average fair value of options granted during the period	\$ 30.83		\$ 20.11		\$ 4.93	
Price range of outstanding options	\$6.13 - \$64.94		\$6.13 - \$36.94		\$8.63 - \$29.88	
Price range of options terminated	\$ --		\$ --		\$ --	

Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation" ("SFAS No. 123"), defines a fair value based method of accounting for employee stock options or similar equity instruments. However, SFAS No. 123 allows the continued measurement of compensation cost for such plans using the intrinsic value based method prescribed by APB Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB No. 25"), provided that pro forma disclosures are made of net income or loss and net income or loss per share, assuming the fair value based method of SFAS No. 123 had been applied. The Company has elected to account for stock-based compensation plans under APB No. 25, under which compensation expense, if any, is recognized based on the intrinsic value of stock options and other stock awards, generally measured at the date of grant.

For SFAS No. 123 purposes, the fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

	2000	1999	1998
Risk-free interest rates	6.06%	5.92%	5.06%
Expected dividend yield rates	0.0%	0.0%	0.0%
Expected lives	4 years	4 years	4 years
Expected volatility	103.69%	77.33%	87.48%

The total fair value of options granted was computed to be approximately \$15,719,000, \$8,192,000 and \$6,056,000 for the years ended December 31, 2000, 1999 and 1998, respectively. These amounts are amortized ratably over the vesting period of the options. Cumulative compensation cost recognized in pro forma net income or loss with respect to options that are forfeited prior to vesting is adjusted as a reduction of pro forma compensation expense in the period of forfeiture. Pro forma stock-based compensation, net of the effect of forfeitures

and tax, was approximately \$4,554,000, \$2,999,000 and \$2,033,000 for 2000, 1999

and 1998, respectively.

Had compensation cost for these plans been determined consistent with SFAS No. 123, the Company's net income (loss) would have been reduced (increased) to the following pro forma amounts:

	2000	1999	1998
	(IN THOUSANDS, EXCEPT PER SHARE DATA)		
Net Income (Loss):			
As reported	\$ 68,034	\$ 19,066	\$ (11,025)
Pro forma	63,480	16,067	(13,058)
Diluted Earnings (Loss) Per Share:			
As reported	\$ 2.10	\$ 0.62	\$ (0.38)
Pro forma	1.96	0.52	(0.45)

Because the SFAS No. 123 method of accounting has not been applied to options granted prior to January 1, 1995, the resulting pro forma compensation cost may not be representative of that to be expected in future years.

The following table summarizes information about the stock options outstanding at December 31, 2000:

Range of Exercise Prices	Number Outstanding	Options Outstanding		Options Exercisable	
		Weighted- Average Remaining Contractual Life	Weighted- Average Exercise Price	Number Exercisable	Weighted- Average Exercise Price
\$ 0.67 to \$ 2.57	17,000	2.8 years	\$ 1.19	17,000	\$ 1.19
\$ 3.11 to \$ 6.75	200,000	6.9 years	\$ 5.68	106,000	\$ 4.91
\$ 7.13 to \$ 9.00	308,000	6.6 years	\$ 8.19	154,000	\$ 8.37
\$11.05 to \$ 16.52	391,000	6.8 years	\$ 13.18	279,000	\$ 12.94
\$17.32 to \$ 26.63	90,000	8.7 years	\$ 20.47	42,000	\$ 19.86
\$28.16 to \$ 40.00	326,000	8.4 years	\$ 29.94	98,000	\$ 29.25
\$43.69 to \$ 64.94	462,000	9.1 years	\$ 47.08	25,000	\$ 47.17
	1,794,000	7.7 years	\$ 23.51	721,000	\$ 14.29
	=====	=====	=====	=====	=====

(20) SUBSEQUENT EVENTS

ENGINEERING MEASUREMENTS CO.-- On July 6, 2000, the Company entered into a definitive agreement to acquire Engineering Measurements Company ("EMCO"), a Longmont, Colorado-based company which manufactures electronic and electromechanical precision instruments for measuring and controlling the flow of liquids, steam and gases, for 900,000 shares of the Company's common stock. The Company and EMCO renegotiated the agreement as of October 20, 2000 to change the consideration from stock to cash. Completion of the merger was subject to approval by EMCO's shareholders and certain other conditions. On January 2, 2001, the merger was completed, and the Company paid the EMCO shareholders cash in an aggregate amount of approximately \$30 million, which included the exercise prices paid in cash by EMCO option holders on exercise of any EMCO stock options after October 20, 2000 and before the completion of the merger. Options not exercised before the completion of the merger were converted into options to acquire the Company's common stock. The acquisition will be accounted for using the purchase method of accounting.

(21) QUARTERLY FINANCIAL DATA

The following table presents unaudited quarterly financial data for each of the eight quarters in the period ended December 31, 2000. The quarters ended March 31, 1999 through June 30, 2000 have been restated to include the combined selected financial data of Noah and Sekidenko as though each had always been part of the Company. The Company believes that all necessary adjustments have been included in the amounts stated below to present fairly such quarterly information. The operating results for any quarter are not necessarily indicative of results for any subsequent period.

	QUARTERS ENDED							
	MAR. 31, 1999	JUNE 30, 1999	SEPT. 30, 1999	DEC. 31, 1999	MAR. 31, 2000	JUNE 30, 2000	SEPT. 30, 2000	DEC. 31, 2000
	(IN THOUSANDS, EXCEPT PER SHARE DATA)							
Sales	\$ 36,419	\$ 45,363	\$ 55,626	\$ 65,441	\$ 75,028	\$ 85,701	\$ 96,317	\$102,736
Gross profit	15,232	20,270	24,951	31,749	36,667	42,363	46,825	50,598
Income from operations	2,262	5,354	8,714	12,996	17,048	20,343	20,884	26,925
Net income before extraordinary item	1,231	3,290	6,090	8,455	11,238	13,118	16,289	19,779
Extraordinary item (net of income taxes) ...	--	--	--	--	--	--	--	7,610
Net income	\$ 1,231	\$ 3,290	\$ 6,090	\$ 8,455	\$ 11,238	\$ 13,118	\$ 16,289	\$ 27,389
	=====	=====	=====	=====	=====	=====	=====	=====
Diluted earnings per share before extraordinary item	\$ 0.04	\$ 0.11	\$ 0.20	\$ 0.27	\$ 0.35	\$ 0.40	\$ 0.50	\$ 0.61
	=====	=====	=====	=====	=====	=====	=====	=====
Diluted earnings per share from extraordinary item	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ 0.22
	=====	=====	=====	=====	=====	=====	=====	=====
Diluted earnings per share	\$ 0.04	\$ 0.11	\$ 0.20	\$ 0.27	\$ 0.35	\$ 0.40	\$ 0.50	\$ 0.83
	=====	=====	=====	=====	=====	=====	=====	=====

The following table presents unaudited quarterly financial data for the quarters ended March 31, 1999 through June 30, 2000, retroactively combining the selected financial data of Noah and Sekidenko for the periods prior to the periods in which each was merged with the Company.

	QUARTERS ENDED							
	MAR. 31, 1999	JUNE 30, 1999	SEPT. 30, 1999	DEC. 31, 1999	MAR. 31, 2000	JUNE 30, 2000	SEPT. 30, 2000	DEC. 31, 2000
	(IN THOUSANDS, EXCEPT PER SHARE DATA)							
Sales	\$ 3,691	\$ 3,848	\$ 4,484	\$ 6,868	\$ 7,857	\$ 5,115	\$ --	\$ --
Gross profit	2,134	1,977	2,407	3,827	4,493	3,024	--	--
Income from operations	1,191	886	1,007	901	2,179	1,809	--	--
Net income before extraordinary item	697	520	555	456	1,242	1,088	--	--
Extraordinary item (net of income taxes) ...	--	--	--	--	--	--	--	--
Net income	\$ 697	\$ 520	\$ 555	\$ 456	\$ 1,242	\$ 1,088	\$ --	\$ --
	=====	=====	=====	=====	=====	=====	=====	=====
Diluted earnings per share before extraordinary item	\$ 0.02	\$ 0.01	\$ --	\$ (0.01)	\$ 0.01	\$ --	\$ --	\$ --
	=====	=====	=====	=====	=====	=====	=====	=====
Diluted earnings per share from extraordinary item	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --
	=====	=====	=====	=====	=====	=====	=====	=====
Diluted earnings per share	\$ 0.02	\$ 0.01	\$ --	\$ (0.01)	\$ 0.01	\$ --	\$ --	\$ --
	=====	=====	=====	=====	=====	=====	=====	=====

The following table presents unaudited quarterly financial data for the Company for each of the eight quarters in the period ended December 31, 2000, as each period had been originally presented in quarterly financial statements as reported on Forms 10-Q for the quarterly periods ended March 31, 1999, June 30, 1999, September 30, 1999, March 31, 2000 and June 30, 2000, and on Form 10-K for the quarterly period ended December 31, 1999. The quarterly period ended September 30, 2000 reflects the same financial data as previously reported on the Company's Form 10-Q for that period, and the quarterly period ended December 31, 2000 reflects the same financial data as reported in the Management's Discussion and Analysis of Financial Condition and Results of Operations elsewhere in this document.

	QUARTERS ENDED							
	MAR. 31, 1999	JUNE 30, 1999	SEPT. 30, 1999	DEC. 31, 1999	MAR. 31, 2000	JUNE 30, 2000	SEPT. 30, 2000	DEC. 31, 2000
	(IN THOUSANDS, EXCEPT PER SHARE DATA)							
Sales	\$ 32,728	\$ 41,515	\$ 51,142	\$ 58,573	\$ 67,171	\$ 80,586	\$ 96,317	\$102,736
Gross profit	13,098	18,293	22,544	27,922	32,174	39,339	46,825	50,598
Income from operations	1,071	4,468	7,707	12,095	14,869	18,534	20,884	26,925
Net income before extraordinary item	534	2,770	5,535	7,999	9,996	12,030	16,289	19,779
Extraordinary item (net of income taxes) ..	--	--	--	--	--	--	--	7,610
Net income	\$ 534	\$ 2,770	\$ 5,535	\$ 7,999	\$ 9,996	\$ 12,030	\$ 16,289	\$ 27,389
	=====	=====	=====	=====	=====	=====	=====	=====
Diluted earnings per share before extraordinary item	\$ 0.02	\$ 0.10	\$ 0.20	\$ 0.28	\$ 0.34	\$ 0.40	\$ 0.50	\$ 0.61
	=====	=====	=====	=====	=====	=====	=====	=====
Diluted earnings per share from extraordinary item	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$ 0.22
	=====	=====	=====	=====	=====	=====	=====	=====
Diluted earnings per share	\$ 0.02	\$ 0.10	\$ 0.20	\$ 0.28	\$ 0.34	\$ 0.40	\$ 0.50	\$ 0.83
	=====	=====	=====	=====	=====	=====	=====	=====

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE II -- VALUATION AND QUALIFYING ACCOUNTS

	BALANCE AT BEGINNING OF PERIOD	ADDITIONS CHARGED TO EXPENSE	DEDUCTIONS	BALANCE AT END OF PERIOD
	-----	-----	-----	-----
	(IN THOUSANDS)			
Year ended December 31, 1998:				
Inventory obsolescence reserve	\$ 3,281	\$ 6,712	\$ 7,367	\$ 2,626
Allowance for doubtful accounts	587	229	194	622
	-----	-----	-----	-----
	\$ 3,868	\$ 6,941	\$ 7,561	\$ 3,248
	=====	=====	=====	=====
Year ended December 31, 1999:				
Inventory obsolescence reserve	\$ 2,626	\$ 5,254	\$ 5,576	\$ 2,304
Allowance for doubtful accounts	622	101	84	639
	-----	-----	-----	-----
	\$ 3,248	\$ 5,355	\$ 5,660	\$ 2,943
	=====	=====	=====	=====
Year ended December 31, 2000:				
Inventory obsolescence reserve	\$ 2,304	\$ 1,437	\$ 1,488	\$ 2,253
Allowance for doubtful accounts	639	145	--	784
	-----	-----	-----	-----
	\$ 2,943	\$ 1,582	\$ 1,488	\$ 3,037
	=====	=====	=====	=====

ITEM 9. DISAGREEMENTS ON ACCOUNTING AND FINANCIAL DISCLOSURES

Not applicable.

PART III

In accordance with General Instruction G(3) of Form 10-K, the information required by this Part III is incorporated by reference to the Advanced Energy's definitive proxy statement relating to its 2001 Annual Meeting of Stockholders (the "Proxy Statement"), as set forth below. The Proxy Statement will be filed with the Securities and Exchange Commission within 120 days after the end of 2000.

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information set forth in the Proxy Statement under the captions "Proposal 1/ Election of Directors--Nominees" and "Section 16(a) Beneficial Ownership Reporting Compliance" and in Part I of this Form 10-K under the caption "Executive Officers of the Company" is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information set forth in the Proxy Statement under the caption "Executive Compensation" is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information set forth in the Proxy Statement under the caption "Common Stock Ownership by Management and Other Stockholders" is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information set forth in the Proxy Statement under the caption "Certain Transactions with Management" is incorporated herein by reference.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

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(ii) Financial Statement Schedules for each of the three years in the period ended December 31, 2000	
Schedule II--Valuation and Qualifying Accounts	73
(iii) Exhibits:	
2.1 Agreement and Plan of Reorganization, dated as of June 1, 1998, by and among the Company, Warpspeed, Inc., a wholly owned subsidiary of the Company, and RF Power Products, Inc.(1)	
3.1 The Company's Restated Certificate of Incorporation, as amended(2)	
3.2 The Company's By-laws(3)	
4.1 Form of Specimen Certificate for the Company's Common Stock(3)	
4.2 Indenture dated November 1, 1999 between State Street Bank and Trust Company of California, N.A., as trustee, and the Company (including form of 5 1/4% Convertible Subordinated Note due 2006)(4)	
4.3 The Company hereby agrees to furnish to the SEC, upon request, a copy of the instruments which define the rights of holders of long-term debt of the Company. None of such instruments not included as exhibits herein represents long-term debt in excess of 10% of the consolidated total assets of the Company.	
10.1 Comprehensive Supplier Agreement, dated May 18, 1998, between Applied Materials Inc. and the Company(1)+	
10.2 Purchase Order and Sales Agreement, dated October 12, 1999, between Lam Research Corporation and the Company(4)	
10.3 Purchase Agreement, dated November 1, 1995, between Eaton Corporation and the Company(5)+	
10.4 Loan and Security Agreement, dated August 15, 1997, among Silicon Valley Bank, Bank of Hawaii and the Company(6)	
10.5 Loan Agreement dated December 8, 1997, by and among Silicon Valley Bank, as Servicing Agent and a Bank, and Bank of Hawaii, as a Bank, and the Company, as borrower(7)	
10.6 Lease, dated June 12, 1984, amended June 11, 1992, between Prospect Park East Partnership and the Company for property in Fort Collins, Colorado(3)	
10.7 Lease, dated March 14, 1994, as amended, between Sharp Point Properties, L.L.C., and the Company for property in Fort Collins, Colorado(3)	

- 10.8 Lease, dated May 19, 1995, between Sharp Point Properties, L.L.C. and the Company for a building in Fort Collins, Colorado(3)
- 10.9 Lease agreement, dated March 18, 1996, and amendments dated June 21, 1996 and August 30, 1996, between RF Power Products, Inc., and Laurel Oak Road, L.L.C. for property in Voorhees, New Jersey(8)
- 10.10 Form of Indemnification Agreement(3)
- 10.11 Employment Agreement, dated June 1, 1998, between RF Power Products, Inc., and Joseph Stach(9)
- 10.12 1995 Stock Option Plan, as amended and restated*
- 10.13 1995 Non-Employee Directors' Stock Option Plan, as amended and restated(9)*
- 10.14 License Agreement, dated May 13, 1992 between RF Power Products and Plasma-Therm, Inc.(10)
- 10.15 Lease Agreement dated March 18, 1996 and amendments dated June 21, 1996 and August 30, 1996 between RF Power Products, Inc. and Laurel Oak Road, L.L.C. for office, manufacturing and warehouse space at 1007 Laurel Oak Road, Voorhees, New Jersey(8)
- 10.16 Direct Loan Agreement dated December 20, 1996 between RF Power Products, Inc. and the New Jersey Economic Development Authority(8)
- 10.17 Lease, dated April 15, 1998, between Cross Park Investors, Ltd., and the Company for property in Austin, Texas(1)
- 10.18 Lease, dated April 15, 1998, between Cameron Technology Investors, Ltd., and the Company for property in Austin, Texas(1)
- 10.19 Lease dated March 20, 2000, between Sharp Point Properties, L.L.C. and the Company for a building in Fort Collins, Colorado
- 10.20 Agreement and Plan of Reorganization, dated April 5, 2000, between the Registrant, Noah Holdings, Inc. and AE Cal Merger Sub, Inc.(11)
- 10.21 Escrow and Indemnity Agreement, dated April 5, 2000, between the Registrant, the former stockholders of Noah Holdings, Inc. and Commercial Escrow Services, Inc.(11)
- 10.22 Agreement and Plan of Reorganization, dated July 21, 2000, by and among the Company, Mercury Merger Corporation, a wholly owned subsidiary of the Company, Sekidenko, Inc. and Dr. Ray R. Dils.(12)
- 10.23 Agreement and Plan of Reorganization, dated July 6, 2000, amended and restated as of October 20, 2000, by and among the Company, Flow Acquisition Corporation, a wholly owned subsidiary of the Company, and Engineering Measurements Company(13)
- 21.1 Subsidiaries of the Company
- 23.1 Consent of Arthur Andersen LLP, Independent Accountants
- 24.1 Power of Attorney (included on the signature pages to this Annual Report on Form 10-K)

(b) The Company filed a report on Form 8-K on December 1, 2000. The report contains a summary description of the Company's repurchase in the open market of a portion of its convertible subordinated notes and that such purchased notes have been cancelled.

- (1) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 1998 (File No. 000-26966), filed August 7, 1998.
- (2) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 1999 (File No. 000-26966), filed July 28, 1999.
- (3) Incorporated by reference to the Company's Registration Statement on Form S-1 (File No. 33-97188), filed September 20, 1995, as amended.
- (4) Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 1999 (File No. 000-26966).
- (5) Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 1995 (File No. 000-26966), filed March 28, 1996, as amended.
- (6) Incorporated by reference to the Company's Registration Statement on Form S-3 (File No. 333-34039), filed August 21, 1997, as amended.
- (7) Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 1997 (File No. 000-26966), filed March 24, 1998.
- (8) Incorporated by reference to RF Power Products' Annual Report on Form 10-K for the fiscal year ended November 30, 1996 (File No. 0-20229), filed February 25, 1997.
- (9) Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 1998 (File No. 000-26966), filed March 24, 1999.
- (10) Incorporated by reference to RF Power Products' Registration Statement on Form 10 (File No. 0-020229), filed May 19, 1992 as amended.
- (11) Incorporated by reference to the Company's Registration Statement on Form S-3 (File No. 333-37378), filed May 19, 2000.
- (12) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2000 (File No. 000-26966), filed August 4, 2000.
- (13) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2000 (File No. 000-26966), filed October 30, 2000.
- * Compensation Plan
- + Confidential treatment has been granted for portions of this agreement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

(Registrant)

/s/ Douglas S. Schatz

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

Each person whose signature appears below hereby appoints Douglas S. Schatz and Richard P. Beck, and each of them severally, acting alone and without the other, his true and lawful attorney-in-fact with authority to execute in the name of each such person, and to file with the Securities and Exchange Commission, together with any exhibits thereto and other documents therewith, any and all amendments to this Annual Report on Form 10-K necessary or advisable to enable the registrant to comply with the Securities Exchange Act of 1934, as amended, and any rules, regulations and requirements of the Securities and Exchange Commission in respect thereof, which amendments may make such other changes in the Annual Report on Form 10-K as the aforesaid attorney-in-fact deems appropriate.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signatures	Title	Date
/s/ Douglas S. Schatz ----- Douglas S. Schatz	Chief Executive Officer, President and Chairman of the Board (Principal Executive Officer)	March 27, 2001
/s/ Richard P. Beck ----- Richard P. Beck	Senior Vice President, Chief Financial Officer, Assistant Secretary and Director (Principal Financial Officer and Principal Accounting Officer)	March 27, 2001
/s/ G. Brent Backman ----- G. Brent Backman	Director	March 27, 2001
/s/ Trung Doan ----- Trung Doan	Director	March 27, 2001
/s/ Arthur A. Noeth ----- Arthur A. Noeth	Director	March 27, 2001
/s/ Elwood Spedden ----- Elwood Spedden	Director	March 27, 2001
/s/ Gerald Starek ----- Gerald Starek	Director	March 27, 2001
/s/ Arthur W. Zafiropoulo ----- Arthur W. Zafiropoulo	Director	March 27, 2001

INDEX TO EXHIBITS

EXHIBIT NUMBER -----	DESCRIPTION -----
2.1	Agreement and Plan of Reorganization, dated as of June 1, 1998, by and among the Company, Warpspeed, Inc., a wholly owned subsidiary of the Company, and RF Power Products, Inc.(1)
3.1	The Company's Restated Certificate of Incorporation, as amended(2)
3.2	The Company's By-laws(3)
4.1	Form of Specimen Certificate for the Company's Common Stock(3)
4.2	Indenture dated November 1, 1999 between State Street Bank and Trust Company of California, N.A., as trustee, and the Company (including form of 5 1/4% Convertible Subordinated Note due 2006)(4)
4.3	The Company hereby agrees to furnish to the SEC, upon request, a copy of the instruments which define the rights of holders of long-term debt of the Company. None of such instruments not included as exhibits herein represents long-term debt in excess of 10% of the consolidated total assets of the Company.
10.1	Comprehensive Supplier Agreement, dated May 18, 1998, between Applied Materials Inc. and the Company(1)+
10.2	Purchase Order and Sales Agreement, dated October 12, 1999, between Lam Research Corporation and the Company(4)
10.3	Purchase Agreement, dated November 1, 1995, between Eaton Corporation and the Company(5)+
10.4	Loan and Security Agreement, dated August 15, 1997, among Silicon Valley Bank, Bank of Hawaii and the Company(6)
10.5	Loan Agreement dated December 8, 1997, by and among Silicon Valley Bank, as Servicing Agent and a Bank, and Bank of Hawaii, as a Bank, and the Company, as borrower(7)
10.6	Lease, dated June 12, 1984, amended June 11, 1992, between Prospect Park East Partnership and the Company for property in Fort Collins, Colorado(3)
10.7	Lease, dated March 14, 1994, as amended, between Sharp Point Properties, L.L.C., and the Company for property in Fort Collins, Colorado(3)
10.8	Lease, dated May 19, 1995, between Sharp Point Properties, L.L.C. and the Company for a building in Fort Collins, Colorado(3)
10.9	Lease agreement, dated March 18, 1996, and amendments dated June 21, 1996 and August 30, 1996, between RF Power Products, Inc., and Laurel Oak Road, L.L.C. for property in Voorhees, New Jersey(8)
10.10	Form of Indemnification Agreement(3)
10.11	Employment Agreement, dated June 1, 1998, between RF Power Products, Inc., and Joseph Stach(9)
10.12	1995 Stock Option Plan, as amended and restated*
10.13	1995 Non-Employee Directors' Stock Option Plan, as amended and restated(9)*
10.14	License Agreement, dated May 13, 1992 between RF Power Products and Plasma-Therm, Inc.(10)

- 10.15 Lease Agreement dated March 18, 1996 and amendments dated June 21, 1996 and August 30, 1996 between RF Power Products, Inc. and Laurel Oak Road, L.L.C. for office, manufacturing and warehouse space at 1007 Laurel Oak Road, Voorhees, New Jersey(8)
- 10.16 Direct Loan Agreement dated December 20, 1996 between RF Power Products, Inc. and the New Jersey Economic Development Authority(8)
- 10.17 Lease, dated April 15, 1998, between Cross Park Investors, Ltd., and the Company for property in Austin, Texas(1)
- 10.18 Lease, dated April 15, 1998, between Cameron Technology Investors, Ltd., and the Company for property in Austin, Texas(1)
- 10.19 Lease dated March 20, 2000, between Sharp Point Properties, L.L.C. and the Company for a building in Fort Collins, Colorado
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- * Compensation Plan
- + Confidential treatment has been granted for portions of this agreement.

EXHIBIT 10.12

**ADVANCED ENERGY INDUSTRIES, INC.
1995 STOCK OPTION PLAN**

**ADOPTED JUNE 6, 1993
AS AMENDED AND RESTATED SEPTEMBER 20, 1995**

AND AS FURTHER AMENDED FEBRUARY 10, 1998, FEBRUARY 9, 1999 AND DECEMBER 13, 2000

1. PURPOSES.

- (a) The purpose of the Plan is to provide a means by which selected Employees and Directors of and Consultants to the Company, and its Affiliates, may be given an opportunity to purchase stock of the Company.
- (b) The Company, by means of the Plan, seeks to retain the services of persons who are now Employees or Directors of or Consultants to the Company or its Affiliates, to secure and retain the services of new Employees, Directors and Consultants, and to provide incentives for such persons to exert maximum efforts for the success of the Company and its Affiliates.
- (c) The Company intends that the Options issued under the Plan shall, in the discretion of the Board or any Committee to which responsibility for administration of the Plan has been delegated pursuant to subsection 3(c), be either Incentive Stock Options or Nonstatutory Stock Options. All Options shall be separately designated Incentive Stock Options or Nonstatutory Stock Options at the time of grant, and in such form as issued pursuant to Section 6, and a separate certificate or certificates will be issued for shares purchased on exercise of each type of Option.

2. DEFINITIONS.

- (a) "AFFILIATE" means any parent corporation or subsidiary corporation, whether now or hereafter existing, as those terms are defined in Sections 424(e) and (f) respectively, of the Code.
- (b) "BOARD" means the Board of Directors of the Company.
- (c) "CODE" means the Internal Revenue Code of 1986, as amended.
- (d) "COMMITTEE" means a Committee appointed by the Board in accordance with subsection 3(c) of the Plan.
- (e) "COMPANY" means Advanced Energy Industries, Inc., a Delaware corporation.
- (f) "CONSULTANT" means any person, including an advisor, engaged by the Company or an Affiliate to render consulting services and who is compensated for such services, provided that the term "Consultant" shall not include Directors who are paid only a director's fee by the Company or who are not compensated by the Company for their services as Directors.
- (g) "CONTINUOUS STATUS AS AN EMPLOYEE, DIRECTOR OR CONSULTANT" means the employment or relationship as a Director or Consultant is not interrupted or terminated. The Board, in its sole

discretion, may determine whether Continuous Status as an Employee, Director or Consultant shall be considered interrupted in the case of: (i) any leave of absence approved by the Board, including sick leave, military leave, or any other personal leave; or (ii) transfers between locations of the Company or between the Company, Affiliates or their successors.

(h) "COVERED EMPLOYEE" means the Chief Executive Officer and the four (4) other highest compensated officers of the Company.

(i) "DIRECTOR" means a member of the Board.

(j) "DISINTERESTED PERSON" means a Director who either (i) was not during the one year prior to service as an administrator of the Plan granted or awarded equity securities pursuant to the Plan or any other plan of the Company or any of its affiliates entitling the participants therein to acquire equity securities of the Company or any of its affiliates except as permitted by Rule 16b-3(c)(2)(i); or (ii) is otherwise considered to be a "disinterested person" in accordance with Rule 16b-3(c)(2)(i), or any other applicable rules, regulations or interpretations of the Securities and Exchange Commission.

(k) "EMPLOYEE" means any person, including Officers and Directors, employed by the Company or any Affiliate of the Company. Neither service as a Director nor payment of a director's fee by the Company shall be sufficient to constitute "employment" by the Company.

(l) "EXCHANGE ACT" means the Securities Exchange Act of 1934, as amended.

(m) "FAIR MARKET VALUE" means the value of the common stock as determined in good faith by the Board and in a manner consistent with Section 260.140.50 of Title 10 of the California Code of Regulations.

(n) "INCENTIVE STOCK OPTION" means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code and the regulations promulgated thereunder.

(o) "NONSTATUTORY STOCK OPTION" means an Option not intended to qualify as an Incentive Stock Option.

(p) "OFFICER" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

(q) "OPTION" means a stock option granted pursuant to the Plan.

(r) "OPTION AGREEMENT" means a written agreement between the Company and an Optionee evidencing the terms and conditions of an individual Option grant. Each Option Agreement shall be subject to the terms and conditions of the Plan.

(s) "OPTIONEE" means an Employee, Director or Consultant who holds an outstanding Option.

(t) "OUTSIDE DIRECTOR" means a Director who either (i) is not a current employee of the Company or an "affiliated corporation" (as defined in the Treasury regulations promulgated under Section 162(m) of the Code), is not a former employee of the Company or an affiliated

corporation receiving compensation for prior services (other than benefits under a tax qualified pension plan), was not an officer of the Company or an affiliated corporation at any time, and is not currently receiving compensation for personal services in any capacity other than as a Director, or (ii) is otherwise considered an "outside director" for purposes of Section 162(m) of the Code.

(u) "PLAN" means this 1995 Stock Option Plan.

(v) "RULE 16B-3" means Rule 16b-3 of the Exchange Act or any successor to Rule 16b-3, as in effect when discretion is being exercised with respect to the Plan.

3. ADMINISTRATION.

(a) The Plan shall be administered by the Board unless and until the Board delegates administration to a Committee, as provided in subsection 3(c).

(b) The Board shall have the power, subject to, and within the limitations of, the express provisions of the Plan:

(1) To determine from time to time which of the persons eligible under the Plan shall be granted Options; when and how each Option shall be granted; whether an Option will be an Incentive Stock Option or a Nonstatutory Stock Option; the provisions of each Option granted (which need not be identical), including the time or times such Option may be exercised in whole or in part; and the number of shares for which an Option shall be granted to each such person.

(2) To construe and interpret the Plan and Options granted under it, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan or in any Option Agreement, in a manner and to the extent it shall deem necessary or expedient to make the Plan fully effective.

(3) To amend the Plan as provided in Section 11.

(c) The Board may delegate administration of the Plan to a committee composed of not fewer than two (2) members (the "Committee"), all of the members of which Committee shall be Disinterested Persons and may also be, in the discretion of the Board, Outside Directors. If administration is delegated to a Committee, the Committee shall have, in connection with the administration of the Plan, the powers theretofore possessed by the Board (and references in this Plan to the Board shall thereafter be to the Committee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. The Board may abolish the Committee at any time and revert in the Board the administration of the Plan. Additionally, prior to the date of the first registration of an equity security of the Company under

Section 12 of the Exchange Act, and notwithstanding anything to the contrary contained herein, the Board may delegate administration of the Plan to any person or persons and the term "Committee" shall apply to any person or persons to whom such authority has been delegated.

Notwithstanding anything in this

Section 3 to the contrary, the Board or the Committee may delegate to a committee of one or more members of the Board the authority to grant Options

to eligible persons who (1) are not then subject to Section 16 of the Exchange Act and/or (2) are either (i) not then Covered Employees and are not expected to be Covered Employees at the time of recognition of income resulting from such Option, or (ii) not persons with respect to whom the Company wishes to comply with Section 162(m) of the Code.

(d) Any requirement that an administrator of the Plan be a Disinterested Person shall not apply (i) prior to the date of the first registration of an equity security of the Company under Section 12 of the Exchange Act, or (ii) if the Board or the Committee expressly declares that such requirement shall not apply. Any Disinterested Person shall otherwise comply with the requirements of Rule 16b-3.

4. SHARES SUBJECT TO THE PLAN.

(a) Subject to the provisions of Section 10 relating to adjustments upon changes in stock, the stock that may be sold pursuant to Options shall not exceed in the aggregate five million six hundred twenty-five thousand (5,625,000) shares of the Company's common stock. If any Option shall for any reason expire or otherwise terminate, in whole or in part, without having been exercised in full, the stock not purchased under such Option shall revert to and again become available for issuance under the Plan.

(b) The stock subject to the Plan may be unissued shares or reacquired shares, bought on the market or otherwise.

5. ELIGIBILITY.

(a) Incentive Stock Options may be granted only to Employees. Nonstatutory Stock Options may be granted only to Employees, Directors or Consultants.

(b) A Director shall in no event be eligible for the benefits of the Plan unless at the time discretion is exercised in the selection of the Director as a person to whom Options may be granted, or in the determination of the number of shares which may be covered by Options granted to the Director: (i) the Board has delegated its discretionary authority over the Plan to a Committee which consists solely of Disinterested Persons; or (ii) the Plan otherwise complies with the requirements of Rule 16b-3. The Board shall otherwise comply with the requirements of Rule 16b-3. This subsection 5(b) shall not apply (i) prior to the date of the first registration of an equity security of the Company under Section 12 of the Exchange Act, or (ii) if the Board or Committee expressly declares that it shall not apply.

(c) No person shall be eligible for the grant of an Option if, at the time of grant, such person owns (or is deemed to own pursuant to Section 424 (d) of the Code) stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of any of its Affiliates unless the exercise price of such Option is at least one hundred ten percent (110%) of the Fair Market Value of such stock at the date of grant and the Option is not exercisable after the expiration of five (5) years from the date of grant.

(d) Subject to the provisions of Section 10 relating to adjustments upon changes in stock, no person shall be eligible to be granted Options covering more than three hundred thousand (300,000) shares of the Company's common stock in any calendar year.

6. OPTION PROVISIONS.

Each Option shall be in such form and shall contain such terms and conditions as the Board shall deem appropriate. The provisions of separate Options need not be identical, but each Option shall include (through incorporation of provisions hereof by reference in the Option or otherwise) the substance of each of the following provisions:

(a) **TERM.** No Option shall be exercisable after the expiration of ten (10) years from the date it was granted.

(b) **PRICE.** The exercise price of each Incentive Stock Option shall be not less than one hundred percent (100%) of the Fair Market Value of the stock subject to the Option on the date the Option is granted. The exercise price of each Nonstatutory Stock Option shall be not less than eighty-five percent (85%) of the Fair Market Value of the stock subject to the Option on the date the Option is granted.

(c) **CONSIDERATION.** The purchase price of stock acquired pursuant to an Option shall be paid, to the extent permitted by applicable statutes and regulations, either (i) in cash at the time the Option is exercised, or (ii) at the discretion of the Board or the Committee, either at the time of the grant or exercise of the Option, (A) by delivery to the Company of other common stock of the Company, (B) according to a deferred payment or other arrangement (which may include, without limiting the generality of the foregoing, the use of other common stock of the Company) with the person to whom the Option is granted or to whom the Option is transferred pursuant to subsection 6(d), or (C) in any other form of legal consideration that may be acceptable to the Board.

In the case of any deferred payment arrangement, interest shall be payable at least annually and shall be charged at the minimum rate of interest necessary to avoid the treatment as interest, under any applicable provisions of the Code, of any amounts other than amounts stated to be interest under the deferred payment arrangement.

(d) **TRANSFERABILITY.** An Incentive Stock Option shall not be transferable except by will or by the laws of descent and distribution, and shall be exercisable during the lifetime of the person to whom the Incentive Stock Option is granted only by such person. A Nonstatutory Stock Option shall not be transferable except by will or by the laws of descent and distribution or pursuant to a qualified domestic relations order satisfying the requirements of Rule 16b-3 and the rules thereunder (a "QDRO"), and shall be exercisable during the lifetime of the person to whom the Option is granted only by such person or any transferee pursuant to a QDRO. The person to whom the Option is granted may, by delivering written notice to the Company, in a form satisfactory to the Company, designate a third party who, in the event of the death of the Optionee, shall thereafter be entitled to exercise the Option.

(e) **VESTING.** The total number of shares of stock subject to an Option may, but need not, be allotted in periodic installments (which may, but need not, be equal). The Option Agreement may provide that from time to time during each of such installment periods, the Option may become exercisable ("vest") with respect to some or all of the shares allotted to that period, and may be exercised with respect to some or all of the shares allotted to such period and/or any prior period as to which the Option became vested but was not fully exercised. The Option may be subject to

such other terms and conditions on the time or times when it may be exercised (which may be based on performance or other criteria) as the Board may deem appropriate. The vesting provisions of individual Options may vary but in each case will provide for vesting of at least twenty percent (20%) per year of the total number of shares subject to the Option. The provisions of this subsection 6(e) are subject to any Option provisions governing the minimum number of shares as to which an Option may be exercised.

(f) **SECURITIES LAW COMPLIANCE.** The Company may require any Optionee, or any person to whom an Option is transferred under subsection 6(d), as a condition of exercising any such Option, (1) to give written assurances satisfactory to the Company as to the Optionee's knowledge and experience in financial and business matters and/or to employ a purchaser representative reasonably satisfactory to the Company who is knowledgeable and experienced in financial and business matters, and that he or she is capable of evaluating, alone or together with the purchaser representative, the merits and risks of exercising the Option; and (2) to give written assurances satisfactory to the Company stating that such person is acquiring the stock subject to the Option for such person's own account and not with any present intention of selling or otherwise distributing the stock. The foregoing requirements, and any assurances given pursuant to such requirements, shall be inoperative if (i) the issuance of the shares upon the exercise of the Option has been registered under a then currently effective registration statement under the Securities Act of 1933, as amended (the "Securities Act"), or (ii) as to any particular requirement, a determination is made by counsel for the Company that such requirement need not be met in the circumstances under the then applicable securities laws. The Company may, upon advice of counsel to the Company, place legends on stock certificates issued under the Plan as such counsel deems necessary or appropriate in order to comply with applicable securities laws, including, but not limited to, legends restricting the transfer of the stock.

(g) **TERMINATION OF EMPLOYMENT OR RELATIONSHIP AS A DIRECTOR OR CONSULTANT.** In the event an Optionee's Continuous Status as an Employee, Director or Consultant terminates (other than upon the Optionee's death or disability), the Optionee may exercise his or her Option (to the extent that the Optionee was entitled to exercise it at the date of termination) but only within such period of time ending on the earlier of (i) the date three (3) months after the termination of the Optionee's Continuous Status as an Employee, Director or Consultant (or such longer or shorter period, which in no event shall be less than thirty (30) days, specified in the Option Agreement), or (ii) the expiration of the term of the Option as set forth in the Option Agreement. If, after termination, the Optionee does not exercise his or her Option within the time specified in the Option Agreement, the Option shall terminate, and the shares covered by such Option shall revert to and again become available for issuance under the Plan.

(h) **DISABILITY OF OPTIONEE.** In the event an Optionee's Continuous Status as an Employee, Director or Consultant terminates as a result of the Optionee's disability, the Optionee may exercise his or her Option (to the extent that the Optionee was entitled to exercise it at the date of termination), but only within such period of time ending on the earlier of (i) the date twelve (12) months following such termination (or such longer or shorter period, which in no event shall be less than six (6) months, specified in the Option Agreement), or (ii) the expiration of the term of the Option as set forth in the Option Agreement. If, at the date of termination, the Optionee is not entitled to exercise his or her entire Option, the shares covered by the unexercisable portion of the Option shall revert to and again become available for issuance under the Plan. If, after

termination, the Optionee does not exercise his or her Option within the time specified herein, the Option shall terminate, and the shares covered by such Option shall revert to and again become available for issuance under the Plan.

(i) **DEATH OF OPTIONEE.** In the event of the death of an Optionee during, or within a period specified in the Option after the termination of, the Optionee's Continuous Status as an Employee, Director or Consultant, the Option may be exercised (to the extent the Optionee was entitled to exercise the Option at the date of death) by the Optionee's estate, by a person who acquired the right to exercise the Option by bequest or inheritance or by a person designated to exercise the option upon the Optionee's death pursuant to subsection 6(d), but only within the period ending on the earlier of (i) the date eighteen (18) months following the date of death (or such longer or shorter period, which in no event shall be less than six (6) months, specified in the Option Agreement), or (ii) the expiration of the term of such Option as set forth in the Option Agreement. If, at the time of death, the Optionee was not entitled to exercise his or her entire Option, the shares covered by the unexercisable portion of the Option shall revert to and again become available for issuance under the Plan. If, after death, the Option is not exercised within the time specified herein, the Option shall terminate, and the shares covered by such Option shall revert to and again become available for issuance under the Plan.

(j) **EARLY EXERCISE.** The Option may, but need not, include a provision whereby the Optionee may elect at any time while an Employee, Director or Consultant to exercise the Option as to any part or all of the shares subject to the Option prior to the full vesting of the Option. Any unvested shares so purchased shall be subject to a repurchase right in favor of the Company, with the repurchase price to be equal to the original purchase price of the stock, or to any other restriction the Board determines to be appropriate; provided, however, that (i) the right to repurchase at the original purchase price shall lapse at a minimum rate of twenty percent (20%) per year over five (5) years from the date the Option was granted, and (ii) such right shall be exercisable only within (A) the ninety (90) day period following the termination of employment or the relationship as a Director or Consultant, or (B) such longer period as may be agreed to by the Company and the Optionee (for example, for purposes of satisfying the requirements of Section 1202(c)(3) of the Code (regarding "qualified small business stock")), and (iii) such right shall be exercisable only for cash or cancellation of purchase money indebtedness for the shares. Should the right of repurchase be assigned by the Company, the assignee shall pay the Company cash equal to the difference between the original purchase price and the stock's Fair Market Value if the original purchase price is less than the stock's Fair Market Value.

(k) **WITHHOLDING.** To the extent provided by the terms of an Option Agreement, the Optionee may satisfy any federal, state or local tax withholding obligation relating to the exercise of such Option by any of the following means or by a combination of such means: (1) tendering a cash payment; (2) authorizing the Company to withhold shares from the shares of the common stock otherwise issuable to the participant as a result of the exercise of the Option; or (3) delivering to the Company owned and unencumbered shares of the common stock of the Company.

7. COVENANTS OF THE COMPANY.

(a) During the terms of the Options, the Company shall keep available at all times the number of shares of stock required to satisfy such Options.

(b) The Company shall seek to obtain from each regulatory commission or agency having jurisdiction over the Plan such authority as may be required to issue and sell shares of stock upon exercise of the Options; provided, however, that this undertaking shall not require the Company to register under the Securities Act either the Plan, any Option or any stock issued or issuable pursuant to any such Option. If, after reasonable efforts, the Company is unable to obtain from any such regulatory commission or agency the authority which counsel for the Company deems necessary for the lawful issuance and sale of stock under the Plan, the Company shall be relieved from any liability for failure to issue and sell stock upon exercise of such Options unless and until such authority is obtained.

8. USE OF PROCEEDS FROM STOCK.

Proceeds from the sale of stock pursuant to Options shall constitute general funds of the Company.

9. MISCELLANEOUS.

(a) Neither an Optionee nor any person to whom an Option is transferred under subsection 6(d) shall be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares subject to such Option unless and until such person has satisfied all requirements for exercise of the Option pursuant to its terms.

(b) Throughout the term of any Option, the Company shall deliver to the holder of such Option, not later than one hundred twenty (120) days after the close of each of the Company's fiscal years during the Option term, a balance sheet and an income statement. This section shall not apply when issuance is limited to key employees whose duties in connection with the Company assure them access to equivalent information.

(c) Nothing in the Plan or any instrument executed or Option granted pursuant thereto shall confer upon any Employee, Director, Consultant or Optionee any right to continue in the employ of the Company or any Affiliate or to continue acting as a Director or Consultant or shall affect the right of the Company or any Affiliate to terminate the employment or relationship as a Director or Consultant of any Employee, Director, Consultant or Optionee with or without cause.

(d) To the extent that the aggregate Fair Market Value (determined at the time of grant) of stock with respect to which Incentive Stock Options granted after 1986 are exercisable for the first time by any Optionee during any calendar year under all plans of the Company and its Affiliates exceeds one hundred thousand dollars (\$100,000), the Options or portions thereof which exceed such limit (according to the order in which they were granted) shall be treated as Nonstatutory Stock Options.

10. ADJUSTMENTS UPON CHANGES IN STOCK.

(a) If any change is made in the stock subject to the Plan, or subject to any Option (through merger, consolidation, reorganization, recapitalization, stock dividend, dividend in property other than cash, stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or otherwise), the Plan will be appropriately adjusted in the class(es) and maximum number of shares subject to the Plan pursuant to subsection 4(a) and the maximum number of shares subject to award to any person during any calendar year pursuant to subsection

5(d), and the outstanding Options will be appropriately adjusted in the class(es) and number of shares and price per share of stock subject to such outstanding Options.

(b) In the event of: (1) a merger or consolidation in which the Company is not the surviving corporation or (2) a reverse merger in which the Company is the surviving corporation but the shares of the Company'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: (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 Company, any Options outstanding under the Plan shall terminate if not exercised prior to such event.

11. AMENDMENT OF THE PLAN.

(a) The Board at any time, and from time to time, may amend the Plan. However, except as provided in Section 10 relating to adjustments upon changes in stock, no amendment shall be effective unless approved by the stockholders of the Company within twelve (12) months before or after the adoption of the amendment, where the amendment will:

(1) Increase the number of shares reserved for Options under the Plan;

(2) Modify the requirements as to eligibility for participation in the Plan (to the extent such modification requires stockholder approval in order for the Plan to satisfy the requirements of Section 422 of the Code); or

(3) Modify the Plan in any other way if such modification requires stockholder approval in order for the Plan to satisfy the requirements of Section 422 of the Code or to comply with the requirements of Rule 16b-3.

(b) The Board may in its sole discretion submit any other amendment to the Plan for stockholder approval, including, but not limited to, amendments to the Plan intended to satisfy the requirements of Section 162(m) of the Code and the regulations promulgated thereunder regarding the exclusion of performance-based compensation from the limit on corporate deductibility of compensation paid to certain executive officers.

(c) It is expressly contemplated that the Board may amend the Plan in any respect the Board deems necessary or advisable to provide Optionees with the maximum benefits provided or to be provided under the provisions of the Code and the regulations promulgated thereunder relating to Incentive Stock Options and/or to bring the Plan and/or Incentive Stock Options granted under it into compliance therewith.

(d) Rights and obligations under any Option granted before amendment of the Plan shall not be altered or impaired by any amendment of the Plan unless (i) the Company requests the consent of the person to whom the Option was granted and

(ii) such person consents in writing.

12. TERMINATION OR SUSPENSION OF THE PLAN.

(a) The Board may suspend or terminate the Plan at any time. Unless sooner terminated, the Plan shall terminate on June 5, 2003 which shall be within ten

(10) years from the date the Plan is adopted by the Board or approved by the stockholders of the Company, whichever is earlier. No Options may be granted under the Plan while the Plan is suspended or after it is terminated.

(b) Rights and obligations under any Option granted while the Plan is in effect shall not be altered or impaired by suspension or termination of the Plan, except with the consent of the person to whom the Option was granted.

13. EFFECTIVE DATE OF PLAN.

The Plan shall become effective as determined by the Board, but no Options granted under the Plan shall be exercised unless and until the Plan has been approved by the stockholders of the Company, which approval shall be within twelve (12) months before or after the date the Plan is adopted by the Board, and, if required, an appropriate permit has been issued by the Commissioner of Corporations of the State of California.

EXHIBIT 10.19

**LEASE AGREEMENT
OFFICE AND INDUSTRIAL SPACE**

This Lease Agreement is made and entered into as of the 20th day of March, 2000, by and between Sharp Point Properties, LLC ("Landlord"), whose address is 4875 Pearl East Cr. #300, Boulder, CO 80301, and Advanced Energy Industries, Inc. ("Tenant"), whose address is 1625 Sharp Point Drive, Fort Collins, CO 80525.

In consideration of the covenants, terms, conditions, agreements and payments as herein set forth, the Landlord and Tenant hereby enter into the following Lease:

1. Definitions. Whenever the following words or phrases are used in this Lease, said words or phrases shall have the following meaning:

A. "Area" shall mean the parcel of land depicted on Exhibit "A" attached hereto and commonly known and referred to as Lots 9, 10 and 23 of Prospect East Business Park , Fort Collins , Colorado. The Area includes the Leased Premises and one or more buildings. The Area may include Common Areas.

B. "Building" shall mean a building located in the Area.

C. "Common Areas" shall mean all entrances, exits, driveways, curbs, walkways, hallways, parking areas, landscaped areas, restrooms, loading and service areas, and like areas or facilities which are located in the Area and which are designated by the Landlord as areas or facilities available for the nonexclusive use in common by persons designated by the Landlord.

D. "Leased Premises" shall mean the premises herein leased to the Tenant by the Landlord.

E. "Tenant's Prorata Share" as to the Building in which the Leased Premises are located shall mean an amount (expressed as a percentage) equal to the number of square feet included in the Leased Premises divided by the total number of leasable square feet included in said Building. The Tenant's Prorata Share as to Common Areas shall mean an amount (expressed as a percentage) equal to the number of square feet included in the Leased Premises divided by the total number of leasable square feet included in all Buildings located in the Area. The Tenant's Prorata Share for Common Areas may change from time to time as the leasable square footage in all Buildings located in the Area is increased or decreased.

2. Leased Premises. The Landlord hereby leases unto the Tenant, and the Tenant hereby leases from the Landlord, the following described premises:

Space All in Building located on Lots 9, 10 and 23 of Prospect East Business Park consisting of 63,555 square feet, all as depicted on Exhibit "B" attached hereto.

3. Base Term. The term of this Lease shall commence at 12:00 noon on November 1, 2000, and, unless sooner terminated as herein provided for, shall end at 12:00 noon on November 1, 2015 ("Lease Term"). Except as specifically provided to the contrary herein, the Leased Premises shall, upon the termination of this Lease, by virtue of the expiration of the Lease Term or otherwise, be returned to the Landlord by the Tenant in as good or better condition than when entered upon by the Tenant, ordinary wear and tear excepted.

4. Rent. Tenant shall pay the following rent for the Leased Premises:

A. Base Monthly Rent. Tenant shall pay to Landlord, without notice and without setoff, at the address of Landlord as herein set forth, the following Base Monthly Rent ("Base Monthly Rent"), said Base Monthly Rent to be paid in advance on the first day of each month during the term hereof. In the event that this Lease commences on a date other than the first day of a month, the Base Monthly Rent for the first month of the Lease Term shall be prorated for said partial month. Below is a schedule of Base Monthly Rental payments as agreed upon:

Advanced Energy Lease
Lots 9, 10 & 23

Initials

During Lease Term

For Period Starting	To Period Ending	A Base Monthly Rent of
November 1, 2000	November 1, 2015	\$62,230.94 NNN per month (\$11.75psf) + annual CPI Increases on:
		November 1, 2001
		November 1, 2002
		November 1, 2003
		November 1, 2004
		November 1, 2005
		November 1, 2006
		November 1, 2007
		November 1, 2008
		November 1, 2009
		November 1, 2010
		November 1, 2011
		November 1, 2012
		November 1, 2013
		November 1, 2014

B. Lease Term Adjustment. If, for any reason, other than delays caused by the Tenant, the Leased Premises are not ready for Tenant's occupancy on November 1, 2000, the Tenant's rental obligation and other monetary expenses (i.e. taxes, utilities, etc.) shall be abated in direct proportion to the number of days of delay. It is hereby agreed that the premises shall be deemed ready for occupancy on the day the Landlord receives a T.C.O. or C.O. from the appropriate authority, or on the day the Landlord gives Tenant the keys to the Leased Premises if a building permit has not been applied for and/or is not required by the appropriate authority.

C. Cost of Living Adjustment. The Base Monthly Rental specified in paragraph 4A above shall be recalculated for each Lease Year as defined hereinafter following the first Lease Year of this Lease Agreement. The recalculated Base Monthly Rental shall be hereinafter referred to as the "Adjusted Monthly Rental". The Adjusted Monthly Rental for each Lease Year after the first Lease Year shall be the greater of: (i) the amount of the previous year's Adjusted Monthly Rental, (or the Base Monthly Rental if calculating the Adjusted Monthly Rental for the second Lease Year), or (ii) an amount calculated by the rent adjustment formula set forth below. In applying the rent adjustment formula, the following definitions shall apply:

(1) "Lease Year" shall mean a period of twelve (12) consecutive full calendar months with the first Lease Year commencing on the date of the commencement of the term of this Lease and each succeeding Lease Year commencing upon the anniversary date of the first Lease Year; however, if this Lease does not commence on the first day of a month, then, the first Lease Year and each succeeding Lease Year shall commence on the first day of the first month following each anniversary date of this Lease;

(2) "Bureau" shall mean the Bureau of Labor Statistics of the United States Department of Labor or any successor agency that shall issue the Price Index referred to in this Lease Agreement.

(3) "Price Index" shall mean the "Consumer Price Index-All Urban Consumers-All Items (CPI-U) U.S. City Average (1982-84=100)" issued from time to time by the Bureau. In the event the Price Index shall hereafter be converted to a different standard reference base or otherwise revised, the determination of the increase in the Price Index shall be made with the use of such conversion factor, formula or table as may be published by Prentice-Hall, Inc. or failing such publication, by another nationally recognized publisher of similar statistical information. In the event the Price Index shall cease to be published, then, for the purposes of this paragraph 4C there shall be substituted for the Price Index such other index as the Landlord and the Tenant shall agree upon, and if they are unable to agree within sixty (60) days after the Price Index ceases to be published, such matter shall be determined by arbitration in accordance with the Rules of the American Arbitration Association.

(4) "Base Price Index" shall mean the Price Index released to the public during the second calendar month preceding the commencement of this Lease Agreement.

Initials

Advanced Energy Lease
Lots 9, 10 & 23

(5) "Revised Price Index" shall mean the Price Index released to the public during the second calendar month preceding the Lease Year for which the Base Annual Rental is to be adjusted;

(6) "Basic Monthly Rental" shall mean the Basic Monthly Rental set forth in subparagraph 4A above. The rent adjustment formula used to calculate the Adjusted Monthly Rental is as follows:

Adjusted Monthly = Revised Price Index X Base Monthly Rental Rental ----- Base Price Index

Notwithstanding the above formula, the Adjusted Monthly Rental shall not be less than 103% or greater than 106% of the previous year's Adjusted Monthly Rental, or the Basic Monthly Rental if such adjustment is for the Second Lease Year. The Adjusted Monthly Rental as herein above provided shall continue to be payable monthly as required in paragraph 4A above without necessity of any further notice by the Landlord to the Tenant.

D. Total Net Lease. The Tenant understands and agrees that this Lease is a total net lease (a "net, net, net lease"), whereby the Tenant has the obligation to reimburse the Landlord for a share of all costs and expenses (taxes, assessments, other charges, insurance, trash removal, Common Area operation and maintenance and like costs and expenses), incurred by the Landlord as a result of the Landlord's ownership and operation of the Area.

5. Security Deposit [THIS SECTION WAS DELETED BY THE PARTIES PRIOR TO EXECUTION]

6. Use of Premises. Tenant shall use the Leased Premises only for Office and Manufacturing and for no other purpose whatsoever except with the written consent of Landlord. Tenant shall not allow any accumulation of trash or debris on the Leased Premises or within any portion of the Area. All receiving and delivery of goods and merchandise and all removal of garbage and refuse shall be made only by way of the rear and/or other service door provided therefore. In the event the Leased Premises shall have no such door, then these matters shall be handled in a manner satisfactory to Landlord. No storage of any material outside of the Leased Premises shall be allowed unless first approved by Landlord in writing, and then in only such areas as are designated by Landlord. Tenant shall not commit or suffer any waste on the Leased Premises nor shall Tenant permit any nuisance to be maintained on the Leased Premises or permit any disorderly conduct or other activity having a tendency to annoy or disturb any occupants of any part of the Area and/or any adjoining property.

7. Laws and Regulations. -- Tenant Responsibility. The Tenant shall, at its sole cost and expense, comply with all laws and regulations of any governmental entity, board, commission or agency having jurisdiction over the Leased Premises. Tenant agrees not to install any electrical equipment that overloads any electrical paneling, circuitry or wiring and further agrees to comply with the requirements of the insurance underwriter or any governmental authorities having jurisdiction thereof.

8. Landlord's Rules and Regulations. Landlord reserves the right to adopt and promulgate rules and regulations applicable to the Leased Premises and from time to time amend or supplement said rules or regulations. Notice of such rules and regulations and amendments and supplements thereto shall be given to Tenant, and Tenant agrees to comply with and observe such rules and regulations and amendments and supplements thereto provided that the same apply uniformly to all Tenants of the Landlord in the Area.

9. Parking. If the Landlord provides off street parking for the common use of Tenants, employees and customers of the Area, the Tenant shall park all vehicles of whatever type used by Tenant and/or Tenant's employees only in such areas thereof as are designated by Landlord for this purpose, and Tenant accepts the responsibility of seeing that Tenant's employees park only in the areas so designated. Tenant shall, upon the request of the Landlord, provide to the Landlord license numbers of the Tenant's vehicles and the vehicles of Tenant's employees.

10. Control of Common Areas. -- Exclusive control of the Landlord. All Common Areas shall at all times be subject to the exclusive control and management of Landlord, notwithstanding that Tenant and/or Tenant's employees and/or customers may have a nonexclusive right to

the use thereof. Landlord shall have the right from time to time to establish, modify and enforce rules and regulations with respect to the use of said facilities and Common Areas.

11. Taxes.

A. Real Property Taxes and Assessments. The Tenant shall pay to the Landlord on the first day of each month, as additional rent, the Tenant's Prorata Share of all real estate taxes and special assessments levied and assessed against the Building in which the Leased Premises are located and the Common Areas. If the first and last years of the Lease Term are not calendar years, the obligations of the Tenant hereunder shall be prorated for the number of days during the calendar year that this Lease is in effect. The monthly payments for such taxes and assessments shall be \$6,356.00 until the Landlord receives the first tax statement for the referred to properties. Thereafter, the monthly payments shall be based upon 1/12th of the prior year's taxes and assessments. Once each year the Landlord shall determine the actual Tenant's Prorata Share of taxes and assessments for the prior year and if the Tenant has paid less than the Tenant's Prorata Share for the prior year the Tenant shall pay the deficiency to the Landlord with the next payment of Base Monthly Rent, or, if the Tenant has paid in excess of the Tenant's Prorata Share for the prior year the Landlord shall forthwith refund said excess to the Tenant. Additionally, upon Lease expiration or termination Landlord shall also determine Tenant's Prorata Share of taxes and assessments for the calendar year in which the Lease expires or terminates based on the most recent valuation and estimate of taxes provided by Boulder County. If the Tenant has paid less than the Tenant's prorated Prorata Share for the current year the Tenant shall pay the deficiency, or, if the Tenant has paid in excess of the Tenant's prorated Prorata Share for the current year the Landlord shall forthwith refund the excess to the Tenant.

B. Personal Property Taxes. Tenant shall be responsible for, and shall pay promptly when due, any and all taxes and/or assessments levied and/or assessed against any furniture, fixtures, equipment and items of a similar nature installed and/or located in or about the Leased Premises by Tenant.

C. Rent Tax. If a special tax, charge or assessment is imposed or levied upon the rents paid or payable hereunder or upon the right of the Landlord to receive rents hereunder (other than to the extent that such rents are included as a part of the Landlord's income for the purpose of an income tax), the Tenant shall reimburse the Landlord for the amount of such tax within fifteen (15) days after demand therefore is made upon the Tenant by the Landlord.

D. Other Taxes, Fees and Charges. Tenant shall pay to Landlord, on the first day of each month, as additional rent, Tenant's Pro Rata Share of any "Other Charges" (as hereinafter defined) levied, assessed, charged or imposed against the Area, as a whole. Unless paid directly by Tenant to the authority levying, assessing, charging or imposing same, Tenant shall also pay to Landlord, on the first day of the month following payment of same by Landlord, the entire costs of any such "Other Charges" levied, assessed, charged or imposed against the Leased Premises, Tenant's use of same, or Tenant's conduct of business thereon. For purposes of this provision, "Other Charges" shall mean and refer to any and all taxes, assessments, impositions, user fees, impact fees, utility fees, transportation fees, infrastructure fees, system fees, license fees, and any other charge or assessment imposed by any governmental authority or applicable subdivision on the Area, the Leased Premises or the ownership or use of the Area or Leased Premises, or the business conducted thereon, whether or not formally denominated as a tax, assessment, charge or other nominal description, whether now in effect or hereafter enacted or imposed (excluding, however, Landlord's income taxes).

E. Should Landlord protest and win a reduction in the real estate taxes for the Building and Area, Tenant shall be obligated to pay its Prorata Share of the cost of such protest, if the protest is handled by a party other than the Landlord.

12. Insurance.

A. Landlord's Insurance. Landlord shall obtain and maintain such fire and casualty insurance on the core and shell of the Building in which the Leased Premises are located and the Common Areas, as well as such loss of rents, business interruption, liability or any other insurance, as it deems appropriate, with such companies and on such terms and conditions as Landlord deems acceptable. Such insurance shall not be required to cover any of Tenant's inventory, furniture, furnishings, fixtures, equipment or tenant improvements (whether or not installed on the Leased Premises by or for Tenant and whether or not included within the tenant finish provided by Landlord), and Landlord shall not be obligated to repair any damage thereto or replace any of same, and Tenant shall have no interest in any proceeds of Landlord's insurance.

B. Tenant's Insurance. Tenant shall, at its sole cost and expense, obtain and maintain throughout the term of this Lease, on a full replacement cost basis, "all risk" insurance covering all of Tenant's inventory, furniture, furnishings, fixtures, equipment and all tenant improvements or tenant finish (whether or not installed by Landlord) and betterments located on or within the Leased Premises. In addition, Tenant shall obtain and maintain, at its sole cost and expense, comprehensive general public liability insurance providing coverage from and against any loss or damage occasioned by an accident or casualty on, about or adjacent to the Leased Premises, including protection against death, personal injury and property damage. Such liability coverage shall be written on an "occurrence" basis, with limits of not less than \$1,000,000.00 combined single limit coverage.

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All policies of insurance required to be carried by Tenant hereunder shall be written by an insurance company licensed to do business in the State of Colorado, and shall name Landlord as an additional named insured and/or loss payee, as Landlord may direct. Each such policy shall provide that same shall not be changed or modified without at least thirty (30) days' prior written notice to Landlord and any mortgagee of Landlord. Certificates evidencing the extent and effectiveness of all Tenant's insurance shall be delivered to Landlord. The limits of such insurance shall not, under any circumstances, limit the liability of Tenant under this Lease.

In the event that Tenant fails to maintain any of the insurance required of it pursuant to this provision, Landlord shall have the right (but not the obligation) at Landlord's election, to pay Tenant's premiums or to arrange substitute insurance with an insurance company of Landlord's choosing, in which event any premiums advanced by Landlord shall constitute additional rent payable under this Lease and shall be payable by Tenant to Landlord immediately upon demand for same. Landlord shall also have the right, but no the obligation, whether or not Tenant maintains coverage to carry any such insurance as Landlord may elect in order to provide coverage in the event Tenant fails to properly maintain such insurance.

The rights of Landlord hereunder shall be in addition to, and not in lieu of, of any other rights or remedies available to Landlord under this Lease or provided by law or in equity. Without limiting the foregoing, in the event that coverage of any risk for which Tenant is responsible pursuant to this Section 12 is ultimately provided by coverage maintained by Landlord, whether due to Tenant's failure to provided or maintain such insurance or otherwise, Tenant shall promptly reimburse Landlord for an amount equal to any deductible incurred, immediately upon demand for same.

C. Tenant's High Pressure Steam Boiler Insurance. If Tenant makes use of any kind of steam or other high pressure boiler or other apparatus which presents a risk of damage to the Leased Premises or to the Building or other improvements of which the Leased Premises are a part or to the life or limb of persons within such premises, Tenant shall secure and maintain appropriate boiler insurance in an amount satisfactory to Landlord. The Landlord shall be named insured in any such policy or policies. Certificates for such insurance shall be delivered to Landlord and shall provide that said insurance shall not be changed, modified, reduced or canceled without thirty (30) days prior written notice thereof being given to Landlord.

D. Tenant's Share of Landlord Insurance. Tenant shall pay the Landlord as additional rent Tenant's Prorata Share of the insurance secured by the Landlord pursuant to "12A" above. Payment shall be made on the first day of each month as additional rent. The monthly payments for such insurance shall be \$ 212.00 until changed by Landlord as a result of an increase or decrease in the cost of such insurance.

E. Mutual Subrogation Waiver. Landlord and Tenant hereby grant to each other, on behalf of any insurer providing fire and extended coverage to either of them covering the Leased Premises, Buildings or other improvements thereon or contents thereof, a waiver of any right of subrogation any such insurer of one party may acquire against the other or as against the Landlord or Tenant by virtue of payments of any loss under such insurance. Such a waiver shall be effective so long as the Landlord and Tenant are empowered to grant such waiver under the terms of their respective insurance policy or policies and such waiver shall stand mutually terminated as of the date either Landlord or Tenant gives notice to the other that the power to grant such waiver has been so terminated.

13. Utilities.

A. Tenant shall be solely responsible for and promptly pay all charges for heat, water, gas, electric, sewer service and any other utility service used or consumed on the Leased Premises. For all utility services used or consumed on the Leased Premises which are included in utility services to an area larger than the Leased Premises, Tenant shall pay monthly, commencing with the first month of the Lease Term, as additional rent due under the terms hereof, a sum equal to Tenant's Prorata Share of the estimated costs for said twelve (12) month period, divided by 12. The estimated initial monthly costs are \$ N/A for water and \$ N/A for Public Service. Once each year the Landlord shall determine the actual costs of the foregoing expenses for the prior year and if the actual costs are greater than the estimated costs, the Tenant shall pay its Tenant's Prorata Share of the difference between the estimated costs and the actual costs to the Landlord with the next payment of Base Monthly Rent, or, if the actual costs are less than the estimated costs, the Landlord shall forthwith refund the amount of the Tenant's excess payment to the Tenant. Additionally, upon Lease expiration or termination Landlord shall also determine Tenant's Prorata Share of the annualized actual costs of the foregoing expenses for the number of days the Lease is in effect during the calendar year in which the Lease expires or terminates. If the annualized actual costs are greater than the estimated costs, the Tenant shall pay its Tenant's Prorata Share of the difference between the estimated costs and the annualized actual costs to the Landlord, or, if the annualized actual costs are less than the estimated costs, the Landlord shall forthwith refund the excess payment to the Tenant. For purposes of calculating Tenant's share of expenses under this paragraph, annualized actual costs shall be the sum of actual costs for the year at the time of reconciliation plus the total estimated costs prorated for the number of days from the date the last actual cost was paid to the end of the year. For all utility services used or consumed on the Leased Premises in which the utility

service

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is used solely on the Leased Premises, the Tenant shall forthwith upon taking occupancy of the Leased Premises make arrangements with the Public Service Company, U.S. West or other appropriate utility company to pay the utilities used on the Leased Premises and to have the same billed to the Tenant at the address designated by the Tenant. Should there be a time where the Landlord remains responsible for utilities supplied to the Leased Premises, the Landlord shall bill the Tenant therefore and the Tenant shall promptly reimburse the Landlord therefore. In no event shall Landlord be liable for any interruption or failure in the supply of any such utility to the Leased Premises.

In the event the utility company supplying water and/or sewer to the Leased Premises determines that an additional service fee, impact fee, and/or assessment, or any other type of payment or penalty is necessary due to Tenant's use and occupancy of the Building, nature of operation and/or consumption of utilities, said expense shall be borne solely by the Tenant. Said expense shall be paid promptly and any repairs requested by the utility company shall be performed by Tenant immediately and without any delay.

B. Landlord Controls Selection. Landlord has advised Tenant that presently Public Service Company of Colorado ("Utility Service Provider") is the utility company selected by Landlord to provide electricity and gas service for the Building. Notwithstanding the foregoing, if permitted by Law, Landlord shall have the right at any time and from time to time during the Lease Term to either contract for service from a different company or companies providing electricity and/or gas service (each such company shall hereinafter be referred to as an("Alternative Service Provider")) or continue to contract for service from the Utility Service Provider.

C. Tenant Shall Give Landlord Access. Tenant shall cooperate with Landlord, Utility Service Provider, and any Alternative Service Provider at all times and, as reasonably necessary, shall allow Landlord, Utility Service Provider, and any Alternative Service Provider reasonable access to the Building's electric lines, feeders, risers, wiring, gas lines, and any other machinery within the Premises.

D. Landlord Not Responsible for Interruption of Service. Landlord shall in no way be liable or responsible for any loss, damage, or expense that Tenant may sustain or incur by reason of any change, failure, interference, disruption, or defect in the supply or character of the electrical and/or gas energy furnished to the Premises, or if the quantity or character of the electric and/or gas energy supplied by the Utility Service Provider or any Alternate Service Provider is no longer available or suitable for Tenant's requirements, and no such change, failure, defect, unavailability, or unsuitability shall constitute an actual or constructive eviction, in whole or in part, or entitle Tenant to any abatement or diminution of rent, or relieve Tenant from any of its obligations under the Lease.

14. Maintenance Obligations of Landlord. Except as herein otherwise specifically provided for, Landlord shall keep and maintain the roof and exterior of the Building of which the Leased Premises are a part in good repair and condition. Tenant shall repair and pay for any damage to roof, foundation and external walls caused by Tenant's action, negligence or fault.

15. Maintenance Obligations of the Tenant. Subject only to the maintenance obligations of the Landlord as herein provided for, the Tenant shall, during the entire Lease Term, including all extensions thereof, at the Tenant's sole cost and expense, keep and maintain the Leased Premises in good condition and repair, including specifically the following:

A. Electrical Systems. Tenant agrees to maintain in good working order and to make all required repairs and replacements to the electrical systems for the Leased Premises.

B. Plumbing Systems. Tenant agrees to maintain in good working order and to make all required repairs or replacements to the plumbing systems for the Leased Premises.

C. Inspections and Service. Upon termination of Lease Agreement, Tenant agrees, before vacating premises, to employ at Tenant's sole cost and expense, a licensed contractor to inspect, service and write a written report on the systems referred to in "A" and "B" of this Paragraph. Landlord shall have the right to order such an inspection if Tenant fails to provide evidence of such inspection, and, to follow the recommendations of such reports and to charge the expense thereof to the Tenant.

D. Tenant's Responsibility for Building and Area Repairs. Tenant shall be responsible for any repairs required for any part of the Building or Area of which the Leased Premises are a part if such repairs are necessitated by the actions or inactions of Tenant.

E. Cutting Roof. Tenant must obtain in writing the Landlord's approval prior to making any roof penetrations. Failure by Tenant to obtain written permission to penetrate a roof shall relieve Landlord of any roof repair obligations as set forth in Paragraph "14" hereof. Tenant further agrees to repair, at its sole cost and expense, all roof penetrations made by the Tenant and to use, if so requested by Landlord, a licensed contractor selected by the Landlord to make such penetrations and repairs.

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F. Glass and Doors. The repair and replacement of all glass and doors on the Leased Premises shall be the responsibility of the Tenant. Any such replacements or repairs shall be promptly completed at the expense of the Tenant.

G. Liability for Overload. Tenant shall be responsible for the repair or replacement of any damage to the Leased Premises, the Building or the Area which result from the Tenant's movement of heavy articles therein or thereon. Tenant shall not overload the floors of any part of the Leased Premises.

H. Liability for Overuse and Overload of Operating Systems. Tenant shall be responsible for the repair, upgrade, modification, and/or replacement of any operating systems servicing the Leased Premises and/or all or part of the Building which is necessitated by Tenant's change or increase in use of or non-disclosed use of all or a part of the Leased Premises. Operating systems include, but are not limited to, electrical systems; plumbing systems (both water and natural gas); heating, ventilating, and air conditioning systems; telecommunications systems; computer and network systems; lighting systems, fire sprinkler systems; security systems; and building control systems, if any.

I. Inspection of Leased Premises "As Is" Conditions [THIS SECTION WAS DELETED BY THE PARTIES PRIOR TO EXECUTION]

J. Failure of Tenant to Maintain Premises. Should Tenant neglect to keep and maintain the Leased Premises as required herein, the Landlord shall have the right, but not the obligation, to have the work done and any reasonable costs plus a ten percent (10%) overhead charge therefore shall be charged to Tenant as additional rental and shall become payable by Tenant with the payment of the rental next due.

16. Common Area Maintenance. Tenant shall be responsible for Tenant's Prorata share of the total costs incurred for the operation, maintenance and repair of the Common Areas, including, but not limited to, the costs and expenses incurred for the operation, maintenance and repair of parking areas (including restriping and repaving); removal of snow; utilities for common lighting and signs; normal HVAC maintenance and elevator maintenance (if applicable); trash removal; security to protect and secure the Area; common entrances, exits, and lobbies of the Building; all common utilities, including water to maintain landscaping; replanting in order to maintain a smart appearance of landscape areas; supplies; depreciation on the machinery and equipment used in such operation, maintenance and repair; the cost of personnel to implement such services; the cost of maintaining in good working condition the HVAC system(s) for the Leased premises; the cost of maintaining in good working condition the elevator(s) for the Leased Premises, if applicable. These costs shall be estimated on an annual basis by the Landlord and shall be adjusted upwards or downwards depending on the actual costs for the preceding twelve months. Tenant shall pay monthly, commencing with the first month of the Lease Term, as additional rent due under the terms hereof, a sum equal to Tenant's Prorata Share of the estimated costs for said twelve (12) month period, divided by 12. The estimated initial monthly costs are \$2,383.00 Once each year the Landlord shall determine the actual costs of the foregoing expenses for the prior year and if the actual costs are greater than the estimated costs, the Tenant shall pay its Tenant's Prorata Share of the difference between the estimated costs and the actual costs to the Landlord with the next payment of Base Monthly Rent, or, if the actual costs are less than the estimated costs, the Landlord shall forthwith refund the amount of the Tenant's excess payment to the Tenant.

Additionally, upon Lease expiration or termination Landlord shall also determine Tenant's prorated Prorata Share of the annualized actual costs of the foregoing expenses for the number of days the Lease is in effect during the calendar year in which the Lease expires or terminates. If the annualized actual costs are greater than the estimated costs, the Tenant shall pay its prorated Tenant's Prorata Share of the difference between the estimated costs and the annualized actual costs to the Landlord, or, if the annualized actual costs are less than the estimated costs, the Landlord shall forthwith refund the excess to the Tenant. For purposes of calculating Tenant's share of expenses under this paragraph, annualized actual costs shall be the sum of actual costs for the year at the time of reconciliation plus the total estimated costs prorated for the number of days from the date the last actual cost was paid to the end of the year.

17. Inspection of and Right of Entry to Leased Premises--Regular, Emergency, Reletting. Landlord and/or Landlord's agents and employees, shall have the right to enter the Leased Premises at all times during regular business hours and, at all times during emergencies, to examine the Leased Premises, to make such repairs, alterations, improvements or additions as Landlord deems necessary, and Landlord shall be allowed to take all materials into and upon said Leased Premises that may be required therefore without the same constituting an eviction of Tenant in whole or in part, and the rent reserved shall in no way abate while such repairs, alterations, improvements or additions are being made, by reason of loss or interruption of business of Tenant or otherwise. During the six months prior to the expiration of the term of this Lease or any renewal thereof, Landlord may exhibit the Leased Premises to prospective tenants and/or purchasers and may place upon the Leased Premises the usual notices indicating that the Leased Premises are for lease and/or sale.

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18. Alteration-Changes and Additions-Responsibility. Unless the Landlord's approval is first secured in writing, the Tenant shall not install or erect inside partitions, add to existing electric power service, add telephone outlets, add light fixtures, install additional heating and/or air conditioning or make any other changes or alterations to the interior or exterior of the Leased Premises. Any such changes or alterations shall be made at the sole cost and expense of the Tenant. At the end of this Lease, all such fixtures, equipment, additions, changes and/or alterations (except trade fixtures installed by Tenant) shall be and remain the property of Landlord; provided, however, Landlord shall have the option to require Tenant to remove any or all such fixtures, equipment, additions and/or alterations and restore the Leased Premises to the condition existing immediately prior to such change and/or installation, normal wear and tear excepted, all at Tenant's cost and expense. All such work shall be done in a good and workmanlike manner and shall consist of new materials unless agreed to otherwise by Landlord. Any and all repairs, changes and/or modifications thereto shall be the responsibility of, and at the cost of, Tenant. Landlord may require adequate security from Tenant assuring no mechanics' liens on account of work done on the Leased Premises by Tenant and may post the Leased Premises, or take such other action as is then permitted by law, to protect the Landlord and the Leased Premises against mechanics' liens. Landlord may also require adequate security to assure Landlord that the Leased Premises will be restored to their original condition upon termination of this Lease.

19. Sign Approval. Except for signs which are located inside of the Leased Premises and which are not attached to any part of the Leased Premises, the Landlord must approve in writing any sign to be placed in or on the interior or exterior of the Leased Premises, regardless of size or value. Specifically, signs attached to windows of the Leased Premises must be so approved by the Landlord. As a condition to the granting of such approval, Landlord shall have the right to require Tenant to furnish a bond or other security acceptable to Landlord sufficient to insure completion of and payment for any such sign work to be so performed. Tenant shall, during the entire Lease Term, maintain Tenant's signs in good condition and repair at Tenant's sole cost and expense. Tenant shall, remove all signs at the termination of this Lease, at Tenant's sole risk and expense and shall in a workmanlike manner properly repair any damage and close any holes caused by the installation and/or removal of Tenant's signs. Tenant shall give Landlord prior notice of such removal so that a representative of Landlord shall have the opportunity of being present when the signage is removed, or shall pre-approve the manner and materials used to repair damage and close the holes caused by removal.

20. Right of Landlord to Make Changes and Additions. Landlord reserves the right at any time to make alterations or additions to the Building or Area of which the Leased Premises are a part. Landlord also reserves the right to construct other buildings and/or improvements in the Area and to make alterations or additions thereto, all as Landlord shall determine. Easements for light and air are not included in the leasing of the Leased Premises to Tenant. Landlord further reserves the exclusive right to the roof of the Building of which the Leased Premises are a part. Landlord also reserves the right at any time to relocate, vary and adjust the size of any of the improvements or Common Areas located in the Area, provided, however, that all such changes shall be in compliance with the requirements of governmental authorities having jurisdiction over the Area.

21. Damage or Destruction of Leased Premises. In the event the Leased Premises and/or the Building of which the Leased Premises are a part shall be totally destroyed by fire or other casualty or so badly damaged that, in the opinion of Landlord, it is not feasible to repair or rebuild same, Landlord shall have the right to terminate this Lease upon written notice to Tenant. If the Leased Premises are partially damaged by fire or other casualty, except if caused by Tenant's negligence, and said Leased Premises are not rendered untenable thereby, as determined by Landlord, an appropriate reduction of the rent shall be allowed for the unoccupied portion of the Leased Premises until repair thereof shall be substantially completed. If the Landlord elects to exercise the right herein vested in it to terminate this Lease as a result of damage to or destruction of the Leased Premises or the Building in which the Leased Premises are located, said election shall be made by giving notice thereof to the Tenant within thirty (30) days after the date of said damage or destruction.

22. Governmental Acquisition of Property. The parties agree that Landlord shall have complete freedom of negotiation and settlement of all matters pertaining to the acquisition of the Leased Premises, the Building, the Area, or any part thereof, by any governmental body or other person or entity via the exercise of the power of eminent domain, it being understood and agreed that any financial settlement made or compensation paid respecting said land or improvements to be so taken, whether resulting from negotiation and agreement or legal proceedings, shall be the exclusive property of Landlord, there being no sharing whatsoever between Landlord and Tenant of any sum so paid. In the event of any such taking, Landlord shall have the right to terminate this Lease on the date possession is delivered to the condemning person or authority. Such taking of the property shall not be a breach of this Lease by Landlord nor give rise to any claims in Tenant for damages or compensation from Landlord. Nothing herein contained shall be construed as depriving the Tenant of the right to retain as its sole property any compensation paid for any tangible personal property owned by the Tenant which is taken in any such condemnation proceeding.

23. Assignment or Subletting. Tenant may not assign this Lease, or sublet the Leased Premises or any part thereof, without the written consent of Landlord. No such assignment or subletting if approved by the Landlord shall relieve Tenant of any of its obligations hereunder, and, the performance or nonperformance of any of the covenants herein contained by subtenants shall be considered as the performance or the nonperformance by the Tenant.

24. Warranty of Title. Subject to the provisions of the following three (3) paragraphs hereof, Landlord covenants it has good right to lease the Leased Premises in the manner described herein and that Tenant shall peaceably and quietly have, hold, occupy and enjoy the Leased Premises during the term of the Lease.

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25. Access. Landlord shall provide Tenant nonexclusive access to the Leased Premises through and across land and/or other improvements owned by Landlord. Landlord shall have the right, during the term of this Lease, to designate, and to change, such nonexclusive access.

26. Subordination. Tenant agrees that this Lease shall be subordinate to any mortgages, trust deeds or ground leases that may now exist or which may hereafter be placed upon said Leased Premises and to any and all advances to be made thereunder, and to the interest thereon, and all renewals, replacements and extensions thereof. Tenant shall execute and deliver whatever instruments may be required for the above purposes, and failing to do so within ten (10) days after demand in writing, does hereby make, constitute and irrevocably appoint Landlord as its attorney-in-fact and in its name, place and stead so to do. Tenant shall in the event of the sale or assignment of Landlord's interest in the Area or in the Building of which the Leased Premises form a part, or in the event of any proceedings brought for the foreclosure of or in the event of exercise of the power of sale under any mortgage made by Landlord covering the Leased Premises, attorn to the purchaser and recognize such purchaser as Landlord under this Lease.

27. Easements. The Landlord shall have the right to grant any easement on, over, under and above the Area for such purposes as Landlord determines, provided that such easements do not materially interfere with Tenant's occupancy and use of the Leased Premises.

28. Indemnification and Waiver Except in the case of a breach or default in the performance of any obligation under this Lease, each party shall indemnify, defend and hold harmless the other party and nothing in this Lease shall be construed as imposing any liability on them for any loss, costs, expense (including reasonable attorney's fees), or any claims, suits, actions or damages arising from the ownership, use, control or occupancy of any portion of the Project including the Building, Common Areas and Premises unless such loss, cost, expense, claim, suit or action is a result of or caused by the negligent acts or omissions of such other party or its agents, servants, employees, contractors, or invitees.

Tenant shall not indemnify Landlord for acts or failure to observe or comply with any of the rules by any other Tenant or occupant of the Building or Project that adversely affect Tenant's use and occupancy in which Landlord has been put on notice of such adverse impact to Tenant.

29. Acts or Omission of Others. The Landlord, or its employees or agents, or any of them, shall not be responsible or liable to the Tenant or to the Tenant's guests, invitees, employees, agents or any other person or entity, for any loss or damage that may be caused by the acts or omissions of other tenants, their guests or invitees, occupying any other part of the Area or by persons who are trespassers on or in the Area, or for any loss or damage caused or resulting from the bursting, stoppage, backing up or leaking of water, gas, electricity or sewers or caused in any other manner whatsoever, unless such loss or damage is caused by or results from the negligent acts of the Landlord, its agents or contractors.

30. Interest on Past Due Obligations. Any amount due to Landlord not paid when due shall bear interest at two (2%) percent per month from due date until paid. Payment of such interest shall not excuse or cure any default by Tenant under this Lease.

31. Holding Over-Double Last Month's Rent. If Tenant shall remain in possession of the Leased Premises after the termination of this Lease, whether by expiration of the Lease Term or otherwise, without a written agreement as to such possession, then Tenant shall be deemed a month-to-month Tenant. The rent rate during such holdover tenancy shall be equivalent to double the monthly rent paid for the last full month of tenancy under this Lease, excluding any free rent concessions which may have been made for the last full month of the Lease. No holding over by Tenant shall operate to renew or extend this Lease without the written consent of Landlord to such renewal or extension having been first obtained. Tenant shall indemnify Landlord against loss or liability resulting from the delay by Tenant in surrendering possession of the Leased Premises including, without limitation, any claims made with regard to any succeeding occupancy bounded by such holdover period.

32. Modification or Extensions. No modification or extension of this Lease shall be binding upon the parties hereto unless in writing and unless signed by the parties hereto.

33. Notice Procedure. All notices, demands and requests which may be or are required to be given by either party to the other shall be in writing and such that are to be given to Tenant shall be deemed to have been properly given if served on Tenant or an employee of Tenant or sent to Tenant by United States registered or certified mail, return receipt requested, properly sealed, stamped and addressed to Tenant at 1625 Sharp Point Drive, Fort Collins CO 80525 or at such other place as Tenant may from time to time designate in a written notice to Landlord; and, such as are to be given to Landlord shall be deemed to have been properly given if personally served on Landlord or if sent to Landlord, United States registered or certified mail, return receipt requested, properly sealed, stamped and addressed to Landlord at 4875 Pearl East Cr. #300, Boulder, CO 80301 or at such other place as Landlord may from time to time designate in a written notice to Tenant. Any notice given by mailing shall be effective as of the date of mailing.

34. Memorandum of Lease-Notice to Mortgagee. The Landlord and Tenant agree not to place this Lease of record, but upon the request of either party to execute and acknowledge so the same may be recorded a short form lease indicating the names and respective addresses of the

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Landlord and Tenant, the Leased Premises, the Lease Term, the dates of the commencement and termination of the Lease Term and options for renewal, if any, but omitting rent and other terms of this Lease. Tenant agrees to an assignment by Landlord of rents and of the Landlord's interest in this Lease to a mortgagee, if the same be made by Landlord. Tenant further agrees if requested to do so by the Landlord that it will give to said mortgagee a copy of any request for performance by Landlord or notice of default by Landlord; and in the event Landlord fails to cure such default, the Tenant will give said mortgagee a sixty (60) day period in which to cure the same. Said period shall begin with the last day on which Landlord could cure such default before Tenant has the right to exercise any remedy by reason of such default. All notices to the mortgagee shall be sent by United States registered or certified mail, postage prepaid, return receipt requested.

35. Controlling Law. The Lease, and all terms hereunder shall be construed consistent with the laws of the State of Colorado. Any dispute resulting in litigation hereunder shall be resolved in court proceedings instituted in Larimer County and in no other jurisdiction.

36. Landlord Not a Partner With the Tenant. Nothing contained in this Lease shall be deemed, held or construed as creating Landlord as a partner, agent, associate of or in joint venture with Tenant in the conduct of Tenant's business, it being expressly understood and agreed that the relationship between the parties hereto is and shall at all times remain that of Landlord and Tenant.

37. Partial Invalidity. If any term, covenant or condition of this Lease or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Lease or the application of such term, covenant or condition to persons and circumstances other than those to which it has been held invalid or unenforceable, shall not be affected thereby, and each term, covenant and condition of this Lease shall be valid and shall be enforced to the fullest extent permitted by law.

38. Default-Remedies of Landlord.

A. The occurrence of any of the following events shall constitute a default by Tenant under this Lease:

- (1) Failure to make due and punctual payment of rent or any other charges, assessments or amounts due or payable or required to be paid under this Lease; or
- (2) Neglect or failure by Tenant to perform or observe, or any other breach of, any other term, covenant or condition of this Lease; or
- (3) Adjudication of Tenant as bankrupt or insolvent, or filing by or against Tenant of any petition in bankruptcy or for reorganization or for the adoption of any arrangement under the Bankruptcy Code; application is made for the appointment of receiver or conservator for Tenant's business or property; or assignment by Tenant is made of its property for the benefit of its creditors; or Tenant's interest in this Lease or any substantial amount of Tenant's other real or personal property is levied or executed upon by process of law; or
- (4) Petition or other proceeding is made by or against Tenant for its dissolution or liquidation; or voluntary dissolution or liquidation of Tenant; or
- (5) Abandonment of the Leased Premises, or any part thereof, by Tenant for a period of time in excess of thirty (30) consecutive days.

B. If Tenant shall default in the payment of rent or in the keeping of any of the terms, covenants or conditions of this Lease to be kept and/or performed by Tenant or shall otherwise commit any event of default as defined above, Landlord may upon the expiration of any applicable cure, immediately, or at any time thereafter, reenter the Leased Premises, remove all persons and property therefrom, without being liable to indictment, prosecution for damage therefore, or for forcible entry and detainer and repossess and enjoy the Leased Premises, together with all additions thereto or alterations and improvements thereof. Landlord may, at its option, at any time and from time to time thereafter, relet the Leased Premises or any part thereof for the account of Tenant or otherwise, and receive and collect the rents therefore and apply the same first to the payment of such expenses as Landlord may have incurred in recovering possession and for putting the same in good order and condition for rental, and expense, commissions and charges paid by Landlord in reletting the Leased Premises. Any such reletting may be for the remainder of the term of this Lease or for a longer or shorter period. In lieu of reletting such Leased Premises, Landlord may occupy the same or cause the same to be occupied by others. Whether or not the Leased Premises or any part thereof be relet, Tenant shall pay the Landlord the rent and all other charges required to be paid by Tenant up to the time of the expiration of this Lease or such recovered possession, as the case may be and thereafter, Tenant, if required by Landlord, shall pay to Landlord until the end of the term of this Lease, the equivalent of the amount of all rent reserved herein and all other charges required to be paid by Tenant, less the net amount received by Landlord for such reletting, if any, unless waived by written notice from Landlord to Tenant. No action by Landlord to obtain possession of the Leased Premises and/or to recover any amount due to Landlord hereunder shall be taken as a waiver of Landlord's right to require full and complete performance by Tenant of all terms hereof,

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including payment of all amounts due hereunder or as an election on the part of Landlord to terminate this Lease Agreement. If the Leased Premises shall be reoccupied by Landlord, then, from and after the date of repossession, Tenant shall be discharged of any obligations to Landlord under the provisions hereof for the payment of rent. If the Leased Premises are reoccupied by the Landlord pursuant hereto, and regardless of whether the Leased Premises shall be relet or possessed by Landlord, all fixtures, additions, furniture, and the like then on the Leased Premises may be retained by Landlord. In the event Tenant is in default under the terms hereof and, by the sole determination of Landlord, has abandoned the Leased Premises, Landlord shall have the right to remove all the Tenant's property from the Leased Premises and dispose of said property in such a manner as determined best by Landlord, at the sole cost and expense of Tenant and without liability of Landlord for the actions so taken and without liability on the part of Landlord for any action so taken.

C. In the event an assignment of Tenant's business or property shall be made for the benefit of creditors, or, if the Tenant's leasehold interest under the terms of this Lease Agreement shall be levied upon by execution or seized by virtue of any writ of any court of law, or, if application be made for the appointment of a receiver for the business or property of Tenant, or, if a petition in bankruptcy shall be filed by or against Tenant, then and in any such case, at Landlord's option, with or without notice, Landlord may terminate this Lease and immediately retake possession of the Leased Premises without the same working any forfeiture of the obligations of Tenant hereunder.

D. Tenant hereby grants to the Landlord a security interest in and to any and all of Tenant's property located in, on or adjacent to the Leased Premises as security for Tenant's full and complete performance of the terms and conditions of this Lease, which security interest is enforceable by Landlord as provided by the laws of the State of Colorado.

E. In addition to all rights and remedies granted to Landlord by the terms hereof, Landlord shall have available any and all rights and remedies available at law or in equity, or under the statutes of the State of Colorado. No remedy herein or otherwise conferred upon or reserved to Landlord shall be considered exclusive of any other remedy but shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute. Further, all powers and remedies given by this Lease to Landlord may be exercised, from time to time, and as often as occasion may arise or as may be deemed expedient. No delay or omission of Landlord to exercise any right or power arising from any default shall impair any such right or power or shall be considered to be a waiver of any such default or acquiescence thereof. The acceptance of rent by Landlord shall not be deemed to be a waiver of any breach of any of the covenants herein contained or of any of the rights of Landlord to any remedies herein given.

F. If Tenant shall, for any reason, vacate the Leased Premises before the current expiration date, landlord shall have the right to accelerate rental payments and any and all future rent payments due during the course of the Lease Term shall become immediately payable in full to the Landlord.

39. Legal Proceedings-Responsibilities. In the event of proceeding at law or in equity by either party hereto, the defaulting party shall pay all costs and expenses, including all reasonable attorney's fees incurred by the non-defaulting party in pursuing such remedy, if such non-defaulting party is awarded substantially the relief requested.

40. Administrative Charges. In the event any check, bank draft or negotiable instrument given for any money payment hereunder shall be dishonored at any time and from time to time, for any reason whatsoever not attributable to Landlord, Landlord shall be entitled, in addition to any other remedy that may be available, (1) to make an administrative charge of \$100.00 or three times the face value of the check, bank draft or negotiable instrument, whichever is smaller, and (2) at Landlord's sole option, to require Tenant to make all future rental payments in cash or cashiers check.

41. Hazardous Materials and Environmental Considerations.

A. Tenant covenants and agrees that Tenant and its agents, employees, contractors and invitees shall comply with all Hazardous Materials Laws (as hereinafter defined). Without limiting the foregoing, Tenant covenants and agrees that it will not use, generate, store or dispose of, nor permit the use, generation, storage or disposal of Hazardous Materials (as hereinafter defined) on, under or about the Leased Premises, nor will it transport or permit the transportation of Hazardous Materials to or from the Leased Premises, except in full compliance with any applicable Hazardous Materials Laws. Any Hazardous Materials located on the Leased Premises shall be handled in an appropriately controlled environment which shall include the use of such equipment (at Tenant's expense) as is necessary to meet or exceed standards imposed by any Hazardous Materials Laws and in such a way as not to interfere with any other tenant's use of its premises. Upon breach of any covenant contained herein, Tenant shall, at Tenant's sole expense, cure such breach by taking all action prescribed by any applicable Hazardous Materials Laws or by any governmental authority with jurisdiction over such matters.

B. Tenant shall inform Landlord at any time of (i) any Hazardous Materials it intends to use, generate, handle, store or dispose of, on or about or transport from, the Leased Premises and (ii) of Tenant's discovery of any event or condition which constitutes a violation

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of any applicable Hazardous Materials Laws. Tenant shall provide to Landlord copies of all communications to or from any governmental authority or any other party relating to Hazardous Materials affecting the Leased Premises.

C. Tenant shall indemnify and hold Landlord harmless from any and all claims, judgments, damages, penalties, fines, costs, liabilities, expenses or losses (including, without limitation, diminution on value of the Leased Premises, damages for loss or restriction on use of all or part of the Leased Premises, sums paid in settlement of claims, investigation of site conditions, or any cleanup, removal or restoration work required by any federal, state or local governmental agency, attorney's fees, consultant fees, and expert fees) which arise as a result of or in connection with any breach of the foregoing covenants or any other violation of any Hazardous Materials laws by Tenant. The indemnification contained herein shall also accrue to the benefit of the employees, agents, officers, directors and/or partners of Landlord.

D. Upon termination of this Lease and/or vacation of the Leased Premises, Tenant shall properly remove all Hazardous Materials and shall then provide to Landlord an environmental audit report, prepared by a professional consultant satisfactory to Landlord and at Tenant's sole expense, certifying that the Leased Premises have not been subjected to environmental harm caused by Tenant's use and occupancy of the Leased Premises. Landlord shall grant to Tenant and its agents or contractors such access to the Leased Premises as is necessary to accomplish such removal and prepare such report.

E. "Hazardous Materials" shall mean (a) any chemical, material, substance or pollutant which poses a hazard to the Leased Premises or to persons on or about the Leased Premises or would cause a violation of or is regulated by any Hazardous Materials Laws, and (b) any chemical, material or substance defined as or included in the definitions of "hazardous substances", "hazardous wastes", "extremely hazardous waste", "restricted hazardous waste", "toxic substances", "regulated substance", or words of similar import under any applicable federal, state or local law or under the regulations adopted or publications promulgated pursuant thereto, including, but not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. Sec. 9601, et seq.; the Hazardous Materials Transportation Act, as amended, 49 U.S.C. Sec. 1801, et seq.; the Resource Conservation and Recovery Act as amended, 42 U.S.C. Sec. 6901, et seq.; the Solid Waste Disposal Act, 42 U.S.C. Sec. 6991 et seq.; the Federal Water Pollution Control Act, as amended, 33 U.S.C. Sec. 1251, et seq.; and Sections 25-15-101, et seq., 25-16-101, et seq., 25-7-101, et seq., and 25-8-101, et seq., of the Colorado Revised Statutes. "Hazardous Materials Laws" shall mean any federal state or local laws, ordinances, rules, regulations, or policies (including, but not limited to, those laws specified above) relating to the environment, health and safety or the use, handling, transportation, production, disposal, discharge or storage of Hazardous Materials, or to industrial hygiene or the environmental conditions on, under or about the Leased Premises. Said term shall be deemed to include all such laws as are now in effect or as hereafter amended and all other such laws as may hereafter be enacted or adopted during the term of this Lease.

F. All obligations of Tenant hereunder shall survive and continue after the expiration of this Lease or its earlier termination for any reason.

G. Tenant further covenants and agrees that it shall not install any storage tank (whether above or below the ground) on the Leased Premises without obtaining the prior written consent of the Landlord, which consent may be conditioned upon further requirements imposed by Landlord with respect to, among other things, compliance by Tenant with any applicable laws, rules, regulations or ordinances and safety measures or financial responsibility requirements.

H. Should any local governmental entity having jurisdiction over the Leased Premises require any type of environmental audit or report prior to or during the occupancy of the Leased Premises by the Tenant, such cost of the audit or report shall be the sole responsibility of the Tenant.

42. Entire Agreement. It is expressly understood and agree by and between the parties hereto that this Lease sets forth all the promises, agreements, conditions, and understandings between Landlord and/or its agents and Tenant relative to the Leased Premises and that there are no promises, agreements, conditions, or understandings either oral or written, between them other than that are herein set forth.

43. Guarantee and Financial Statements [THIS SECTION WAS DELETED BY THE PARTIES PRIOR TO EXECUTION]

44. Estoppel Certificates. Within no more than 5 days after receipt of written request, the Tenant shall furnish to the owner a certificate, duly acknowledged, certifying, to the extent true:

- A. That this Lease is in full force and effect.
- B. That the Tenant knows of no default hereunder on the part of the owner, or if it has reason to believe that such a default exists, the nature thereof in reasonable detail.

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- C. The amount of the rent being paid and the last date to which rent has been paid.
- D. That this Lease has not been modified, or if it has been modified, the terms and dates of such modifications.
- E. That the term of this Lease has commenced.
- F. The commencement and expiration dates.
- G. Whether all work to be performed by the owner has been completed.
- H. Whether the renewal term option has been exercised if applicable.
- I. Whether there exist any claims or deductions from, or defenses to, the payment of rent.
- J. Such other matters as may be reasonably requested by owner.

If the Tenant fails to execute and deliver to the owner a completed certificate as required under this section, the Tenant hereby appoints the owner as its Attorney-In-Fact to execute and deliver such certificate for and on behalf of the Tenant.

45. Financial Statements. As requested by the Landlord, Tenant shall provide copies of its most recent financial statements and shall also provide Landlord with up to three (3) prior years of financial statements, if so requested.

46. Brokers. Tenant represents and warrants that it has dealt only with N/A (the "Broker") in the negotiation of this Lease. Landlord shall make payment of the commission according to the terms of a separate agreement with the Broker. Tenant hereby agrees to indemnify and hold Landlord harmless of an from any and all loss, costs, damages or expenses (including, without limitation, all attorney's fees and disbursements) by reason of any claim of, or liability to, any other broker or person claiming through Tenant and arising out of this Lease. Additionally, Tenant acknowledges and agrees that Landlord shall have no obligation for payment of any brokerage fee or similar compensation to any person with whom Tenant has dealt or may deal with in the future with respect to leasing of any additional or expansion space in the Building or any renewals or extensions of this Lease unless specifically provided for by separate written agreement with Landlord. In the event any claim shall be made against Landlord by any other broker who shall claim to have negotiated this Lease on behalf of Tenant or to have introduced Tenant to the Building or to Landlord, Tenant hereby indemnifies Landlord, and Tenant shall be liable for the payment of all reasonable attorney's fees, costs, and expenses incurred by Landlord in defending against the same, and in the event such broker shall be successful in any such action, Tenant shall, upon demand, make payment to such broker.

47. Lease Exhibits Attached. This Lease includes the following Lease Exhibits which are incorporated herein and made a part of this Lease Agreement:

Exhibit "A" - Site Plan Depicting Area Exhibit "B" - Interior Space Plan Exhibit "C" - Landlord and Tenant's Construction Obligations Exhibit "D" - Sign Code Obligations Exhibit "E" - Additional Terms and Conditions

48. Miscellaneous. All marginal notations and paragraph headings are for purposes of reference and shall not affect the true meaning and intent of the terms hereof. Throughout this Lease, wherever the words "Landlord" and "Tenant" are used they shall include and imply to the singular, plural, persons both male and female, companies, partnerships and corporations, and in reading said Lease, the necessary grammatical changes required to make the provisions hereof mean and apply as aforesaid shall be made in the same manner as though originally included in said Lease.

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49. Real Estate Broker Disclosure. Tenant acknowledges that William W. Reynolds (individually as Landlord, or as a principal in Landlord if Landlord is an entity) is a licensed Colorado real estate broker, acting on his own behalf in connection with this lease transaction. Tenant furthermore acknowledges that neither William W. Reynolds nor The W.W. Reynolds Companies, Inc., a licensed Colorado real estate brokerage firm, of which William W. Reynolds is a principal, is representing Tenant in connection with this lease transaction.

IN WITNESS WHEREOF, the parties have executed this Lease as of the date hereof.

LANDLORD: SHARP POINT PROPERTIES, LLC

By: /s/ William W. Reynolds

TENANT: ADVANCED ENERGY INDUSTRIES, INC.

By: /s/ Richard P. Beck /s/ Hollis L. Caswell /s/ Douglas S. Schatz

RICHARD P. BECK
VICE PRESIDENT, FINANCE

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Advanced Energy Lease
Lots 9, 10 & 23

ENVIRONMENTAL INDEMNITY AGREEMENT

THIS INDEMNITY is given as of this 20 day of March, 2000, by Advanced Energy Industries, Inc. ("Indemnitor," whether one or more), to and for the benefit of Sharp Point Properties, LLC ("Landlord").

WHEREAS, Sharp Point Properties, LLC is Landlord under a proposed Lease Agreement dated , 200 0, ("the Lease") in which Advanced Energy Industries, Inc. , a Delaware Corporation is the proposed tenant ("Tenant"), regarding the Leased Premises commonly known as Lots 9, 10 and 23 of Prospect East Business Park ("Leased Premises"); and

WHEREAS, Landlord is unwilling to enter into the Lease with Tenant unless the Indemnitor agrees to the indemnities hereinafter provided.

NOW, THEREFORE, in consideration of the matters recited above and to induce Landlord to enter into the Lease with Tenant, Indemnitor undertakes and agrees as follows:

1. Indemnitor shall indemnify, defend and hold Landlord harmless from and against any and all suits, actions, legal or administrative proceedings, demands, claims, judgements, damages, penalties, fines, costs, liabilities, expenses or losses which arise during or after the lease term as a result of or in connection with the presence, use, storage, disposal, transportation or discharge, by or on behalf of Tenant, of any Hazardous Materials (as defined in the Lease) on, in or under or affecting all or any portion of the Leased Premises or any surrounding areas, or the disposition or transportation of any Hazardous Materials therefrom, or any breach by Tenant of the provisions concerning Environmental Considerations as contained in paragraph 41 of the Lease, or the failure of the Tenant to comply with any applicable Hazardous Materials Laws (as defined in the Lease), or otherwise resulting from or arising out of any action or non-action of Tenant or Tenant's operations on the Leased Premises.

Without limiting the generality of the foregoing, it is expressly agreed by Indemnitor that such indemnity shall also include the following: diminution in value of the Leased Premises, damages for loss or restriction on use of rental or useable space or any amenity of the Leased Premises, damages arising from any adverse impact on marketing of space or delay in delivering possession to a subsequent tenant or purchaser, restoration of the Leased Premises to a condition not materially different from its original contour, appearance and condition; costs incurred in connection with any investigation of site conditions or any clean-up, remedial, removal or restoration work required by any federal, state or local governmental agency, political subdivision, court order or lender of the Landlord; costs of removal and lawful disposal off site of all Hazardous Materials; all sums paid in settlement of claims, attorneys' fees, consultant fees and expert fees.

The foregoing indemnities shall survive termination or expiration of the Lease and shall also accrue to the benefit of the employees, agents, officers, directors and/or partners of Landlord.

2. Indemnitor agrees to pay to Landlord, from time to time, upon demand therefor, an amount equal to any and all expenses therefore incurred by Landlord for which Landlord is entitled to indemnification. Any sums not so paid shall thereafter bear interest at a rate of two percent (2%) per month until paid in full.

3. The rights and remedies of Landlord under this indemnity shall be in addition to any rights or remedies available to Landlord under the terms of the Lease. The obligations of Indemnitor hereunder shall not be affected or impaired by: (i) the assertion by Landlord against Tenant of any rights or remedies reserved to Landlord pursuant to provisions of the Lease; (ii) the commencement of summary or any other proceedings against Tenant; (iii) failure of the Landlord to enforce any of its rights against Tenant pursuant to the Lease or otherwise; (iv) the granting by Landlord of any extensions of time to Tenant; (v) the assignment or transfer of the Lease by Tenant; (vi) with release or discharge of Tenant from its obligations under the Lease in any creditors', receivership, bankruptcy or other proceedings or the commencement or pendency of any such proceedings; or (vii) the impairment, limitation or modification of the liability of Tenant or the estate of Tenant in bankruptcy, or of any remedy for the enforcement of tenant's liability under the Lease, resulting from the operation of any present or future bankruptcy code or other statute, or from the decision of any court.

4. Until all Tenant's obligations under the Lease are fully performed, Indemnitor (i) waives any right of subrogation which it might have against Tenant by reason of any payments or acts of performance by Indemnitor pursuant to its obligations hereunder; (ii) waives any other right which Indemnitor may have against Tenant by reason of any one or more payments or acts in compliance with its obligations hereunder; and (iii) subordinates any liability or indebtedness of tenant held by Indemnitor to the obligations of Tenant to Landlord under the Lease.

5. All notices for or allowed hereunder shall be deemed given and received with (a) personally delivered, or (b) at the time the same is deposited in the United States mail, postage prepaid, first class mail, or addressed to the applicable party at the address indicated below for such

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Advanced Energy Lease
Lots 9, 10 & 23

party, or as to each party, at such other address as shall be designated by such party in a written notice to the other party:

If to Indemnitor, to:

Advanced Energy Industries, Inc.
1625 Sharp Point Drive
Fort Collins, CO 80525

If to Landlord, to:

Sharp Point Properties, LLC
4875 Pearl East Circle #300
Boulder, CO 80301

6. In the event of default in its obligations hereunder, Indemnitor agrees to reimburse Landlord for reasonable attorneys' fees and costs incurred by Landlord in the enforcement of such obligations.
7. This Environmental Indemnity Agreement shall apply to the Lease and any extension or renewal thereof, and any holdover term following the term thereof, or any such extension or renewal.
8. This Environmental Indemnity Agreement shall be governed by and construed in accordance with the laws of the State of Colorado.
9. The covenants and agreements herein contained shall extend to and be binding upon the parties hereto and their respective successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed this Environmental Indemnity Agreement on the day and year first above written.

/s/ Richard P. Beck /s/ Hollis L. Caswell /s/ Douglas S. Schatz

"Indemnitor" - ADVANCED ENERGY INDUSTRIES, INC.

/s/ William W. Reynolds

"Landlord" SHARP POINT PROPERTIES, LLC

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EXHIBIT "A"

SITE PLAN

Advanced Energy Lease
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EXHIBIT "B"

INTERIOR SPACE PLAN

Tenant Improvements shall be added to Exhibit "B" at a later date.

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EXHIBIT "C"

LANDLORD AND TENANT'S CONSTRUCTION OBLIGATIONS

LANDLORD'S CONSTRUCTION OBLIGATIONS

Landlord shall pay for all Tenant Improvements to the Premises based upon a mutually agreed upon space plan. In no event shall the Landlord be obligated to any Tenant Improvement cost in excess of \$12.00 psf.

TENANT'S CONSTRUCTION OBLIGATIONS

Tenant shall be responsible for any costs above \$12.00 psf.

Tenant will, within fifteen (15) business days of receiving billing, Tenant shall reimburse Landlord for the costs associated with any Tenant's interior improvements directly paid by Landlord. Plans and all costs associated with Tenant's interior improvements will be mutually approved by both Tenant and Landlord on or before March 22, 2000.

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EXHIBIT "D"

Tenant shall submit signage design to Landlord for approval by the Prospect East Business Park Architectural Control Committee prior to any sign(s) installation.

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EXHIBIT "E"
ADDITIONAL TERMS AND CONDITIONS

1. This Lease is contingent upon Landlord's review and approval of plans no later than March 15, 2000.
2. Landlord has the right to cancel this Lease Agreement no later than March 15, 2000. Notice to be given to Tenant by Landlord in writing.
3. The square footage of the Leased Premises shall be adjusted to the actual, based upon the approved plans as set forth in Number 1. above.
4. The Base Monthly Rent shall be adjusted to equal the square footage of the Leased Premises as determined in Number 3. above multiplied by .97917. As way of example, if the square footage of the Leased Premises as determined in Number 3. above is 63,200 sf the Base Monthly Rent shall be (63,200 times .97917) \$61,883.00.

Advanced Energy Lease
Lots 9, 10 & 23

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EXHIBIT 21.1**SUBSIDIARIES OF THE REGISTRANT**

Name ----	Jurisdiction of Incorporation or Organization -----
Advanced Energy Japan K.K.	Japan
Advanced Energy Industries GmbH	Germany
Advanced Energy Industries U.K. Limited	United Kingdom
Advanced Energy Industries, FSC Inc.	Virgin Islands
Tower Electronics, Inc.	Minnesota
Advanced Energy Industries Korea, Inc.	South Korea
Advanced Energy Voorhees, Inc.	New Jersey
LITMAS	California
Advanced Energy Taiwan, Ltd.	Taiwan
Noah Holdings, Inc.	California
Noah Precision, Inc.	California
Sekidenko, Inc.	Washington
Engineering Measurements Company	Colorado
AEI US Subsidiary, Inc.	Delaware
Advanced Energy California, Inc.	California
Advanced Energy Nevada, LLC	Nevada
Advanced Energy Voorhees Nevada, LLC	Nevada
Advanced Energy Industries Texas, L.P.	Texas
AEI International Holdings CV	Netherlands

EXHIBIT 23.1

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation by reference of our report included in this Form 10-K, into Advanced Energy Industries, Inc.'s previously filed Registration Statements on Forms S-8 (File Nos. 333-01616, 333-04073, 333-46705, 333-57233, 333-65413, 333-79425 and 333-79429); and Forms S-3 (File Nos. 333-37378 and 333-47114).

/s/ Arthur Andersen LLP

Denver, Colorado.

March 26, 2001.

End of Filing

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