

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.

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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

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.

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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

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

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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.

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