

ADVANCED ENERGY INDUSTRIES INC

FORM S-3

(Securities Registration Statement (simplified form))

Filed 11/17/2003

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CIK	0000927003
Industry	Electronic Instr. & Controls
Sector	Technology
Fiscal Year	12/31

As filed with the Securities and Exchange Commission on November 17, 2003

Registration No. 333-

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM S-3

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

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, Colorado 80525

(Address, including zip code, of principal executive offices)

**Michael El-Hillow
Executive Vice President and Chief Financial Officer
Advanced Energy Industries, Inc.
1625 Sharp Point Drive
Fort Collins, Colorado 80525
970-221-4670**

(Name, address including zip code, and telephone number, including area code, of agent for service)

Copy to:
**Carissa C. W. Coze
Hogan & Hartson LLP
2049 Century Park East, Suite 700
Los Angeles, CA 90067
310-551-6655**

Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: ☐

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If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: [X]

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: []

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: []

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box: []

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (1)(2)(4)	Proposed maximum offering price per unit or share (2)	Proposed maximum aggregate offering price (1)(2)(3)	Amount of registration fee (3)
Common Stock, \$0.001 par value				
Debt Securities				
Total:		100%	\$250,000,000	\$20,225.00

- (1)

An indeterminate aggregate principal amount or number of securities is being registered as may from time to time be issued at indeterminate prices with an aggregate initial offering price not to exceed \$250,000,000. If any debt securities are issued at an original issue discount, then the offering price of such debt securities shall be in such greater principal amount as shall result in an aggregate initial offering price not to exceed \$250,000,000, less the aggregate dollar amount of all securities previously issued hereunder. The aggregate amount of common stock registered hereunder is further limited to that which is permissible under Rule 415(a)(4) under the Securities Act of 1933.
- (2)

The proposed maximum aggregate offering price per class of security and per unit or share will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered hereunder and is not specified as to each class of security pursuant to General Instruction II D of Form S-3 under the Securities Act of 1933.
- (3)

Calculated pursuant to Rule 457(o) under the Securities Act of 1933.
- (4)

In addition to the securities issued directly under this registration statement, we are registering an indeterminate number of shares of common stock as may be issued upon conversion or exchange of the securities issued directly under this registration statement. No separate consideration will be received for any shares of common stock so issued upon conversion or exchange.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PROSPECTUS

SUBJECT TO COMPLETION, DATED NOVEMBER 14, 2003

ADVANCED ENERGY INDUSTRIES, INC.

**\$250,000,000
Common Stock
Debt Securities**

This prospectus relates to common stock and debt securities that we may sell from time to time, in one or more offerings, for aggregate proceeds of up to \$250,000,000. We may offer the securities in one or more series, in amounts, at prices and on terms determined at the time of offering. We will provide specific terms of the securities we actually offer for sale in supplements to this prospectus.

You should read this prospectus, the documents incorporated by reference and the applicable prospectus supplement carefully before you invest. This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement.

Our common stock is listed on the Nasdaq National Market under the symbol "AEIS." The closing price of our common stock on the Nasdaq National Market was \$29.74 per share on November 12, 2003. The debt securities are not currently publicly traded.

We may sell the securities directly to you, through agents we select, through underwriters we select or through a combination of these methods. If we use agents, underwriters or dealers to sell the securities, we will name them and describe their compensation in a prospectus supplement. The net proceeds we expect to receive from these sales will also be included in a prospectus supplement.

Investing in our securities involves a high degree of risk. See "Risk Factors" on page 3.

Neither the Securities and Exchange Commission nor state securities regulators have approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is November 14, 2003

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (SEC) using a “shelf” registration process. Under the shelf process, we may sell any combination of the securities described in this prospectus, in one or more offerings, for aggregate proceeds of up to \$250,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we offer securities using this prospectus, we will provide a prospectus supplement that will contain specific information about the securities being offered and the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read this prospectus, any prospectus supplement and the information incorporated by reference in this prospectus before making an investment decision. See “Where You Can Find More Information” for more information.

You should rely only on the information contained or incorporated by reference in this prospectus or the applicable prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. You should assume that the information contained in this prospectus is accurate only as of the date on the front cover of this prospectus.

Unless the context otherwise requires, in this prospectus, “Advanced Energy,” “the Company,” “we,” “us” and “our” refer to Advanced Energy Industries, Inc. and its subsidiaries.

ABOUT ADVANCED ENERGY INDUSTRIES, INC.

We design, manufacture and support a group of key components and subsystems for vacuum process systems. Our primary products are complex power conversion and control systems. Our products also control the flow of gasses into the process chamber and provide thermal control and sensing within the chamber.

Our direct current and radio frequency power 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, deposit or etch very thin films at an even thickness on a mass scale.

Our digital, pressure-based, thermal-based and liquid mass flow controllers and liquid vapor delivery systems control the flow of gasses, liquid vapors and high-purity liquids for semiconductor, flat panel display and data storage applications.

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Our customers use our products in plasma-based thin-film processing equipment that is essential to the manufacture of:

- semiconductors;
- compact disks, DVDs and other digital storage media;
- flat-panel computer and television screens and LCD units;
- coatings for architectural glass and optics; and
- industrial laser and medical applications.

We sell spare parts and repair services worldwide through our customer service and technical support organization.

We also manufacture a power supply used in advanced technology computer workstations.

We market and sell our products primarily to large, original equipment manufacturers (OEMs) of semiconductor, flat panel display, data storage and other industrial thin-film manufacturing equipment. We have sold our products worldwide to more than 100 OEMs and directly to more than 500 end users. Our principal customers include:

- Applied Materials, Inc.
- Axcelis Technologies, Inc.
- Guardian Industries Corp.
- Lam Research Corporation
- Novellus Systems, Inc.
- Singulus Technologies AG
- Tokyo Electron Limited
- ULVAC Technologies, Inc.
- The Unaxis Corporation

Sales to customers in the semiconductor capital equipment industry comprised 58% of our sales in the nine-month period ended September 30, 2003, 71% of our sales in the nine-month period ended September 30, 2002, 62% for the year ended December 31, 2002 and 59% for the year ended December 31, 2001. We sell our products primarily through direct sales personnel to customers in the United States, Europe and Asia, and through distributors in various regions outside the United States. International sales represented 53% of our sales in the nine-month period ended September 30, 2003, 37% of our sales in the nine-month period ended September 30, 2002, 40% in the year ended December 31, 2002 and 36% in the year ended December 31, 2001, although many of our products sold domestically are placed on systems shipped overseas by our customers.

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We incorporated in Colorado in 1981 and reincorporated in Delaware in 1995. Our executive offices are located at 1625 Sharp Point Drive, Fort Collins, Colorado 80525, and our telephone number is 970-221-4670. Our website address is www.advanced-energy.com. The information contained on our website is not a prospectus and does not constitute part of this prospectus.

RISK FACTORS

An investment in our securities involves a high degree of risk. The prospectus supplement applicable to each type of securities we offer will contain a discussion of the risks applicable to an investment in Advanced Energy and to the particular types of securities that we are offering under that prospectus supplement. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the caption “Risk Factors” in the prospectus supplement, together with all of the other information contained or incorporated by reference in the prospectus supplement or contained or incorporated by reference in this prospectus.

SPECIAL NOTE ABOUT FORWARD-LOOKING STATEMENTS

This prospectus, the prospectus supplements and the documents incorporated by reference in this prospectus include “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Statements that are other than historical information are forward-looking statements. For example, financial projections and other statements relating to our beliefs, expectations or plans are forward-looking statements, as are statements that certain actions, conditions or circumstances will continue. Forward-looking statements involve risks and uncertainties, which are difficult to predict and many of which are beyond our control. As a result, our actual results may differ materially from the results discussed in the forward-looking statements.

Factors that could cause or contribute to such differences or prove any forward-looking statements, by hindsight, to be overly optimistic or unachievable, include the following:

- our ability to successfully implement our cost reduction measures, including the transition of our supply base to Tier 1 Asian suppliers and the successful development of our China-based manufacturing facility;
- our customers may not accept products manufactured at our Chinese facility;
- our customers have strict “copy exact” requirements which may delay or prevent acceptance of lower cost components from Tier 1 Asian suppliers;
- we may not be able to attract and retain key personnel in our Chinese facility;

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- we may incur significant costs to test and repair products manufactured in our China facility to mitigate the risk of shipping lower quality products to our customers;
- the Chinese government may allow the yuan to float against the US dollar, which could significantly increase our operating costs;
- disruption of our US employee base;
- changes in economic conditions in the semiconductor and semiconductor capital equipment industries and other industries in which our customers operate;
- declines in macroeconomic conditions;
- the timing and nature of orders placed by our customers;
- the introduction and customer acceptance of new products by us or our competitors;
- changes in customers' inventory management practices;
- customer cancellations of previously placed orders and shipment delays;
- costs incurred by responding to specific feature requests by customers;
- pricing competition from our competitors;
- cost reduction programs initiated by semiconductor manufacturers and semiconductor capital equipment manufacturers, which negatively impact our average selling price;
- component shortages or allocations or other factors that change our levels of inventory or substantially increase our spending on inventory or result in manufacturing delays;
- potential litigation especially regarding intellectual property;
- our ability to attract and retain key personnel; and
- currency exchange rate fluctuations between the several functional currencies in foreign locations in which we have operations.

All forward-looking statements made or incorporated by reference in this prospectus and in any accompanying prospectus supplement are qualified by these cautionary statements. Forward-looking statements are made only as of the date of this prospectus or the related prospectus supplement, as applicable, and we do not undertake any obligation, other than as may be required by law, to update or revise any forward-looking statements to reflect changes in assumptions, the occurrence of unanticipated events or changes in future operating results over time.

USE OF PROCEEDS

Unless we specify otherwise in a prospectus supplement, we intend to use the proceeds from the sales of these securities to provide funds for general corporate

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purposes, including the repayment or refinancing of existing indebtedness, acquisitions, investments, expansion of production capacity and capital expenditures. We may also invest the net proceeds temporarily in short-term securities until we use them for their stated purpose. We will provide in each prospectus supplement specific information about how we intend to use the net proceeds from the offering described in that prospectus supplement.

RATIO OF EARNINGS TO FIXED CHARGES

The following table sets forth our ratio of earnings to fixed charges for the periods indicated.

	For the Nine Months Ended September 30,	For the Years Ended December 31,				
	2003	2002 (2)	2001	2000 (2)	1999	1998
Ratio of earnings to fixed charges (1)	N/A	N/A	N/A	14.25x	19.64x	N/A

- (1) The ratio of earnings to fixed charges is calculated by dividing our “earnings,” as described below, by our “fixed charges,” as described below. For the purposes of this ratio, we calculate “earnings” as our pretax income from continuing operations before fixed charges; less minority interests in income of subsidiaries (unless the subsidiary has fixed charges), minority interests in losses of subsidiaries and income or loss from equity investees. We calculate “fixed charges” by adding (a) our interest expense, (b) the amount of amortization of deferred debt issuance cost and (c) the portion of rental expense under our operating leases that we have deemed to be representative of the interest factor for these leases. Our earnings, as defined, were insufficient to cover our fixed charges by \$14,547,000 for the year ended December 31, 1998; \$48,820,000 for the year ended December 31, 2001; \$63,692,000 for the year ended December 31, 2002; and \$30,802,000 for the nine-month period ended September 30, 2003.
- (2) The calculation of our ratio of earnings to fixed charges and deficit of earnings to cover fixed charges in 2000 and 2002 has been restated to retroactively reclassify our gain on extinguishment of debt from an extraordinary item to an operating item in accordance with Statement of Financial Accounting Standards No. 145 “rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections.”

As of the date of this prospectus, we have no preferred stock outstanding. Accordingly, no ratio of earnings to fixed charges and preferred dividends is presented in this prospectus.

DESCRIPTION OF CAPITAL STOCK

We are authorized to issue 70,000,000 shares of common stock, \$0.001 par value, and 1,000,000 shares of preferred stock, \$0.001 par value. As of September 30, 2003, 32,337,127 shares of common stock were outstanding, 7,395,863 shares were reserved for issuance under our employee stock purchase plan and stock option plans, and 5,410,689 shares were reserved for issuance on conversion of our convertible notes. No shares of preferred stock are currently outstanding.

Common Stock

The following description of our common stock, together with the additional information we include in an applicable prospectus supplement, sets forth the material terms of the common stock that we may offer under this prospectus. You should read the prospectus supplement relating to an offering of common stock, or of securities convertible, exchangeable or exercisable for common stock, for the terms of the offering, including:

- the number of shares of common stock offered,
- the initial offering price and
- market prices and dividend information

For the complete terms of our common stock, please refer to our restated Certificate of Incorporation, as amended, and bylaws, both of which are filed as exhibits to the registration statement that includes this prospectus. The General Corporation Law of the State of Delaware, as amended, also affects the terms of our common stock.

The holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders. Approval of a matter submitted to the stockholders generally requires the affirmative vote of a majority of the shares being voted on that matter. The General Corporation Law of the State of Delaware imposes a greater approval requirement on certain matters that may be submitted to stockholders, such as business combinations or the sale of all or substantially all of our assets. Amendments to our restated Certificate of Incorporation relating to the personal liability of our directors or relating to the requirements applicable to amending our restated Certificate of Incorporation require the approval of the holders of at least 66-2/3% of the then outstanding voting stock. Our bylaws may be amended only with the approval of a majority of our board of directors or the holders of at least 66-2/3% of the then outstanding voting stock.

Subject to preferences that may be applicable to any outstanding shares of preferred stock that may be issued, the holders of common stock are entitled to receive ratably any dividends that may be declared from time to time by the board of directors out of funds legally available for the payment of dividends. The holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and liquidation preferences of any outstanding shares of preferred stock in the event of our liquidation, dissolution or winding up. Holders of common stock have no preemptive rights or rights to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to common stock. All outstanding shares of common stock are fully paid and non-assessable.

Our common stock is quoted on the Nasdaq National Market under the symbol “AEIS.” The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company.

Preferred Stock

Our board of directors has the authority, without further action by the stockholders, to issue up to 1,000,000 shares of preferred stock, in one or more series, and to fix the rights, privileges and preferences of such shares of preferred stock. The rights, privileges and preferences of any series of preferred stock likely will be greater than the rights, privileges and preferences of the common stock. The issuance of preferred stock could adversely affect the voting power of the common stock and reduce the likelihood that the common stockholders will receive dividends or payments upon liquidation of our company. An issuance of preferred stock also may have the effect of delaying, deterring or preventing a change in control of the company. We currently have no plans to issue any shares of preferred stock.

Anti-takeover Effects of Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, Section 203 prohibits a Delaware corporation from engaging in any business combination with an “interested stockholder” for a period of three years following the date that the stockholder became an interested stockholder, subject to specified exceptions.

Section 203 defines an “interested stockholder” as any entity or person who:

- beneficially owns 15% or more of the outstanding voting stock of the corporation;
- beneficially owned 15% or more of the outstanding voting stock of the corporation at anytime within the prior three years; or
- is affiliated with, controls or is controlled by a person or entity having either of the stockholders described above.

Section 203 does not prohibit a business combination with an interested stockholder, if:

- prior to that date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares of voting stock outstanding (but not the voting stock owned by the interested stockholder) those shares owned by persons who are directors and also officers and by excluding employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

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- on or subsequent to that date, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines a “business combination” to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

DESCRIPTION OF DEBT SECURITIES

We might use this prospectus to offer one or more series of debt securities. The debt securities we offer might constitute senior debt or subordinated debt, they might be secured or unsecured and they might be convertible into common stock or other securities. The particular terms of any series of debt securities we offer, which might differ from the general terms set forth below, will be described in a prospectus supplement relating to that series.

We expect that any debt securities we offer will be issued under an indenture, the form of which is filed as an exhibit to the registration statement that includes this prospectus. The indenture actually used to issue any of our debt securities might contain terms different from or in addition to those set forth in the form of indenture. This description of our debt securities, as supplemented by the description in the applicable prospectus supplement, is only a summary of the material terms of our debt securities. You should read the applicable indenture carefully because it, and not this description, will determine your rights as a holder of the debt securities.

Information You Will Find in the Prospectus Supplement

The prospectus supplement will describe the debt securities and the price or prices at which we will offer the debt securities. The description will include, to the extent applicable:

- the title and form of the debt securities;
- any limit on the aggregate principal amount of the debt securities or the series of which they are a part;
- the date or dates on which we must repay the principal;
- the rate or rates at which the debt securities will bear interest, if any; the date or dates from which interest will accrue; and the dates on which we must pay interest;
- the duration and terms of any right to extend interest payment periods;
- whether the debt securities are secured or guaranteed and, if so, the terms on which they will be secured or guaranteed;
- whether the debt securities are convertible into, or exchangeable for, shares of our common stock or other securities and, if so, the terms on which the debt securities may be converted or exchanged;
- whether the debt securities will constitute subordinated debt and, if so, the subordination provisions that will apply;
- the manner in which, and the place or places where, we will pay the principal and any premium or interest on the debt securities;
- the denominations in which we may issue the debt securities;
- whether we may redeem the debt securities and, if so, the terms and conditions under which we may do so;
- any obligation we may have to redeem or purchase any debt securities, and the terms and conditions on which we must do so;
- the principal amount of the debt securities that we will pay upon declaration of acceleration of their maturity;
- the amount that will be deemed to be the principal amount for any purpose, including the principal amount that will be due and payable upon any maturity or that will be deemed to be outstanding as of any date;
- whether the debt securities are defeasible and the terms of any such defeasance;
- the identity of any trustee, authenticating or paying agent, transfer agent or registrar of the debt securities.

We may sell the debt securities at a substantial discount below their stated principal amount. We will describe the U.S. Federal income tax considerations, if any, applicable to debt securities sold at an original issue discount in the prospectus supplement. An “original issue discount security” is any debt security sold for less than its face value and

which provides that the holder cannot receive the full face value if maturity is accelerated. The prospectus supplement relating to any original issue discount securities will describe the particular provisions relating to acceleration of the maturity upon the occurrence of an event of default.

Subordination of Debt Securities

Unless the prospectus supplement indicates otherwise, the debt securities we issue under this prospectus will be subordinate and junior in right of payment to our "senior indebtedness." Senior indebtedness will include our obligations, as well as obligations of others that we guarantee or assume, for borrowed money or evidenced by bonds, debentures, notes or other similar instruments. Our senior indebtedness currently includes two series of convertible notes. As of September 30, 2003, the aggregate principal amount of indebtedness evidenced by our convertible notes was \$187,718,000. If we use this prospectus to offer subordinated debt securities, the applicable prospectus supplement will provide information as to our senior indebtedness as of a date no earlier than the end of the preceding fiscal quarter.

Our subsidiaries will have no direct obligation to pay amounts due on the debt securities, unless the prospectus supplement indicates otherwise. Any debt securities we issue under this prospectus, therefore, will be effectively subordinated to all existing and future indebtedness and other liabilities of our subsidiaries.

The holders of senior indebtedness generally are entitled to receive payment of the full amount unpaid on such senior indebtedness before the holders of any subordinated debt securities are entitled to receive any payment on account of the principal or interest on the indebtedness evidenced by the subordinated debt securities upon the occurrence of certain events, including:

- any insolvency, bankruptcy, receivership, liquidation, dissolution, reorganization or other similar proceeding which concern us or a substantial part of our property;
- any default on the payment of principal, premium, if any, or interest on or other monetary amounts due and payable on any senior indebtedness;
- any other default on senior indebtedness occurs and the maturity of such senior indebtedness is accelerated in accordance with its terms, and unless either (a) such default shall have been cured or waived and any such acceleration shall have been rescinded or (b) such senior indebtedness shall have been paid in full; and
- the principal of, and accrued interest on any series of the subordinated debt securities having been declared due and payable upon an event of default contained in the prospectus supplement.

Interest Rate

Debt securities that bear interest will do so at a fixed rate or a floating rate. We may sell, at a discount below the stated principal amount, any debt securities which bear no interest or which bear interest at a rate that at the time of issuance is below the prevailing market rate. The relevant prospectus supplement will describe the special U.S. Federal income tax considerations applicable to:

- any discounted debt securities; and
- any debt securities issued at par which are treated as having been issued at a discount for U.S. Federal income tax purposes.

Global Securities

The debt securities may be represented, in whole or in part, by one or more global securities that will have an aggregate principal amount equal to that of all debt securities of that series. Each global security will be registered in the name of a depositary identified in the prospectus supplement. We will deposit the global security with the depositary or a custodian, and the global security will bear a legend regarding the restrictions on exchanges and registration of transfer.

No global security may be exchanged in whole or in part for debt securities registered, and no transfer of a global security in whole or in part may be registered, in the name of any person other than the depositary or any nominee or successor of the depositary unless:

- the depositary is unwilling or unable to continue as depositary; or
- the depositary is no longer in good standing under the Exchange Act or other applicable statute or regulation.

The depositary will determine how all securities issued in exchange for a global security will be registered.

As long as the depositary or its nominee is the registered holder of a global security, we will consider the depositary or the nominee to be the sole owner and holder of the global security and the underlying debt securities. Except as stated above, owners of beneficial interests in a global security will not be entitled to have the global security or any debt security registered in their names, will not receive physical delivery of certificated debt securities and will not be considered to be the owners or holders of the global security or underlying debt securities. We will make all payment of principal, premium and interest on a global security to the depositary or its nominee. The laws of some jurisdictions require that some purchasers of securities take physical delivery of such securities in definitive form. These laws may prevent you from transferring your beneficial interests in a global security.

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Only institutions that have accounts with the depositary or its nominee and persons that hold beneficial interests through the depositary or its nominee may own beneficial interests in a global security. The depositary will credit, on its book-entry registration and transfer system, the respective principal amounts of debt securities represented by the global security to the accounts of its participants. Ownership of beneficial interests in a global security will be shown only on, and the transfer of those ownership interests will be effected only through, records maintained by the depositary or any such participant.

The policies and procedures of the depositary may govern payments, transfers, exchanges and other matters relating to beneficial interests in a global security. We and the trustee will assume no responsibility or liability for any aspect of the depositary's or any participant's records relating to, or for payments made on account of, beneficial interests in a global security.

Payment and Paying Agents

Unless the prospectus supplement indicates otherwise, we will pay principal and any premium or interest on a debt security to the person in whose name the debt security is registered at the close of business on the regular record date for such interest.

Unless the prospectus supplement indicates otherwise, we will pay principal and any premium or interest on the debt securities at the office of our designated paying agent. Unless the prospectus supplement indicates otherwise, the corporate trust office of the trustee will be the paying agent for the debt securities.

Any other paying agents we designate for the debt securities of a particular series will be named in the prospectus supplement. We may designate additional paying agents, rescind the designation of any paying agent or approve a change in the office through which any paying agent acts, but we must maintain a paying agent in each place of payment for the debt securities.

The paying agent will return to us all money we pay to it for the payment of the principal, premium or interest on any debt security that remains unclaimed for a specified period. Thereafter, the holder may look only to us for payment, as an unsecured general creditor.

Consolidation, Merger and Sale of Assets

We may not consolidate with or merge into any other entity or convey, transfer, sell or lease our properties and assets substantially as an entirety to any entity other than to one or more of our subsidiaries, and we may not permit any entity to consolidate with or merge into us or convey, transfer, sell or lease the entity's properties and assets substantially as an entirety to us unless:

- the entity formed by the consolidation or into or with which we are merged or the entity to which our properties and assets are so conveyed, transferred, sold

or leased, shall be a corporation, limited liability company, partnership or trust organized and existing under the laws of the United States, any State within the United States or the District of Columbia and, if we are not the surviving entity, the surviving entity assumes the payment of the principal of, premium, if any, and interest on the notes and the performance of our other covenants under the indenture;

- immediately after giving effect to the transaction, no event of default, and no event that, after notice or lapse of time or both, would become an event of default, will have occurred and be continuing; and
- we shall have delivered to the trustee an officers' certificate and an opinion of counsel, each stating that such consolidation, merger or transfer and such supplemental indenture (if any) comply with the indenture.

Events of Default

Unless otherwise indicated in the applicable prospectus supplement, the following will be events of default under the indenture with respect to each series of debt securities issued under the indenture:

- failure to pay when due any interest on any debt security of that series, continued for 30 days;
- failure to pay when due principal of, or premium, if any, on, any debt security of that series;
- default in the payment of any sinking fund installment with respect to any debt security of that series when due and payable;
- failure to comply with the restrictive covenant prohibiting us from engaging in certain consolidations, mergers, or transfers of all or substantially all of our assets;
- failure to perform any other covenant or agreement of ours under the indenture or the supplemental indenture with respect to that series or the debt securities of that series, continued for 60 days after written notice to us by the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the series to which the covenant or agreement relates;
- certain events of bankruptcy, insolvency or similar proceedings affecting us; and
- any other event of default specified in any supplemental indenture under which such series of debt securities are issued.

Except as to certain events of bankruptcy, insolvency or similar proceedings affecting us and except as provided in the applicable prospectus supplement, if any event of default shall occur and be continuing with respect to any series of debt securities under the indenture, either the trustee or the holders of at least 25% in aggregate principal amount

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of outstanding debt securities of such series may accelerate the maturity of all debt securities of such series. Upon certain events of bankruptcy, insolvency or similar proceedings affecting us, the principal, premium, if any, and interest on all debt securities of each series shall be immediately due and payable.

After any such acceleration, but before a judgment or decree based on acceleration, the holders of a majority in aggregate principal amount of each affected series of debt securities may waive all defaults with respect to such series and rescind and annul such acceleration if all events of default, other than the non-payment of accelerated principal, have been cured, waived or otherwise remedied.

No holder of any debt securities will have any right to institute any proceeding with respect to the indenture or for any remedy under the indenture, unless:

- the holder has previously given the trustee written notice of a continuing event of default;
- the holders of a specified percentage in aggregate principal amount of the outstanding securities of that series have made a written request upon the trustee, and have offered reasonable indemnity to the trustee, to institute the proceeding;
- the trustee has failed to institute the proceeding for a specified period of time after its receipt of the notification; and
- the trustee has not received a direction inconsistent with the request within a specified number of days.

However, these limitations do not apply to a suit instituted by a holder of a debt security for enforcement of payment of the principal of and premium, if any, or interest on such debt security on or after the due dates expressed in the debt security.

Modification and Waiver

We and the trustee may change an indenture without the consent of any holders with respect to specific matters, including:

- to fix any ambiguity, defect or inconsistency in the indenture; and
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of notes may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, we and the trustee may only make the following changes with the consent of the holder of any outstanding debt securities affected:

- change the fixed maturity of the principal of, or any installment of interest on, any debt securities;

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- reduce the principal amount of any debt securities or the rate of interest on any debt securities;
- change the currency in which any debt securities are payable;
- release any security interest that may have been granted with respect to such debt securities;
- impair the right of the holders to conduct a proceeding for any remedy available to the trustee;
- reduce the percentage in principal amount of any series of debt securities whose holders must consent to an amendment or supplemental indenture;
- modify the ranking or priority of the debt securities;
- reduce any premium payable upon the redemption of any debt securities or change the time at which any debt security may be redeemed; or
- make any change that adversely affects the relative rights of holders of subordinated debt securities with respect to senior debt securities.

Except in certain limited circumstances, we may set any day as a record date for the purpose of determining the holders of outstanding debt securities of any series entitled to give or take any direction, notice, consent, waiver or other action under the indentures. In certain limited circumstances, the trustee may set a record date. To be effective, the action must be taken by holders of the requisite principal amount of such debt securities within a specified period following the record date.

Defeasance

To the extent stated in the prospectus supplement, we may elect to apply the provisions in the indentures relating to defeasance and discharge of indebtedness, or to defeasance of certain restrictive covenants, to the debt securities of any series. The indentures provide that, upon satisfaction of the requirements described below, we may terminate all of our obligations under the debt securities of any series and the applicable indenture, known as legal defeasance, other than our obligation:

- to maintain a registrar and paying agents and hold moneys for payment in trust;
- to register the transfer or exchange of the notes; and
- to replace mutilated, destroyed, lost or stolen notes.

In addition, we may terminate our obligation to comply with any restrictive covenants under the debt securities of any series or the applicable indenture, known as covenant defeasance.

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We may exercise our legal defeasance option even if we have previously exercised our covenant defeasance option. If we exercise either defeasance option, payment of the notes may not be accelerated because of the occurrence of events of default.

To exercise either defeasance option as to debt securities of any series, we must irrevocably deposit in trust with the trustee money and/or obligations backed by the full faith and credit of the United States that will provide money in an amount sufficient in the written opinion of a nationally recognized firm of independent public accountants to pay the principal of, premium, if any, and each installment of interest on the debt securities. We may only establish this trust if, among other things:

- no event of default shall have occurred or be continuing;
- in the case of legal defeasance, we have delivered to the trustee an opinion of counsel to the effect that we have received from, or there has been published by, the Internal Revenue Service a ruling or there has been a change in law, which in the opinion of our counsel, provides that holders of the debt securities will not recognize gain or loss for federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if such deposit, defeasance and discharge had not occurred;
- in the case of covenant defeasance, we have delivered to the trustee an opinion of counsel to the effect that the holders of the debt securities will not recognize gain or loss for federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if such deposit, defeasance and discharge had not occurred; and
- we satisfy other customary conditions precedent described in the applicable indenture.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York, United States of America.

PLAN OF DISTRIBUTION

We may sell the securities described in this prospectus directly to purchasers, to or through underwriters, through dealers or agents, or through a combination of these methods. The prospectus supplement with respect to the securities being offered will set forth the terms of the offering of those securities, including the names of the underwriters, dealers or agents, if any, the purchase price, the net proceeds to us, any underwriting discounts and other items constituting underwriters' compensation, the

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initial public offering price, any discounts or concessions allowed or reallocated or paid to dealers and any securities exchanges on which such securities may be listed.

If underwriters are used in an offering, we will execute an underwriting agreement with such underwriters and will specify the name of each underwriter and the terms of the transaction (including any underwriting discounts and other terms constituting compensation of the underwriters and any dealers) in a prospectus supplement. The securities may be offered to the public either through underwriting syndicates represented by managing underwriters or directly by one or more investment banking firms or others, as designated. If an underwriting syndicate is used, the managing underwriter(s) will be specified on the cover of the prospectus supplement. If underwriters are used in the sale, the offered securities will be acquired by the underwriters for their own accounts and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time. Unless otherwise set forth in the prospectus supplement, the obligations of the underwriters to purchase the offered securities will be subject to conditions precedent and the underwriters will be obligated to purchase all of the offered securities if any are purchased.

If dealers are used in an offering, we will sell the securities to the dealers as principals. The dealers then may resell the securities to the public at varying prices which they determine at the time of resale. The names of the dealers and the terms of the transaction will be specified in a prospectus supplement.

The securities may be sold directly by us or through agents we designate from time to time at a fixed price or prices, which may be changed, or at varying prices determined at the time of sale. If agents are used in an offering, the names of the agents and the terms of the agency will be specified in a prospectus supplement. Unless otherwise indicated in a prospectus supplement, the agents will act on a best-efforts basis for the period of their appointment.

Dealers and agents named in a prospectus supplement may be deemed to be underwriters (within the meaning of the Securities Act) of the securities described therein. In addition, we may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any resales thereof.

Underwriters, dealers and agents may be entitled to indemnification by us against specific civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments which the underwriters or agents may be required to make in respect thereof, under underwriting or other agreements. The terms of any indemnification provisions will be set forth in a prospectus supplement.

If so indicated in a prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by institutional investors to purchase

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securities pursuant to contracts providing for payment and delivery on a future date. We may enter contracts with commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutional investors. The obligations of any institutional investor will be subject to the condition that its purchase of the offered securities will not be illegal at the time of delivery. The underwriters and other agents will not be responsible for the validity or performance of such contracts.

Each series of securities will be a new issue of securities and will have no established trading market, other than our common stock. Any common stock sold pursuant to a prospectus supplement will be eligible for quotation and trading on the Nasdaq National Market, subject to official notice of issuance. Any underwriters to whom securities are sold by us for public offering and sale may make a market in the securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. The securities, other than the common stock, may or may not be listed on a national securities exchange or eligible for quotation and trading on the Nasdaq National Market.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Hogan & Hartson L.L.P., Los Angeles, California.

EXPERTS

The consolidated financial statements and schedule of Advanced Energy Industries, Inc. as of December 31, 2002 and for the year then ended, have been incorporated by reference herein in reliance upon the report of KPMG LLP, independent accountants, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

The consolidated financial statements of Advanced Energy as of December 31, 2001 and for each of the two years in the period ended December 31, 2001 appearing in Advanced Energy Industries, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2002 have been audited by Arthur Andersen LLP, independent auditors, as set forth in their report thereon, a copy of which is included therein and incorporated herein by reference. The report of Arthur Andersen LLP has not been reissued because Arthur Andersen LLP has ceased operations. These consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

Because we have not been able to obtain, after reasonable efforts, the written consent of Arthur Andersen LLP to our naming it in this prospectus as having certified our

financial statements for the two years ended December 31, 2001, as required by Section 7 of the Securities Act, we have not filed their consent in reliance on Rule 437a promulgated under the Securities Act. Consequently, your ability to assert claims against Arthur Andersen LLP will be limited. In particular, because of this lack of consent, you will not be able to sue Arthur Andersen LLP under Section 11(a) of the Securities Act for any untrue statement of a material fact contained in the financial statements audited by Arthur Andersen LLP or any omissions to state a material fact required to be stated in those financial statements. Therefore, your right of recovery under that section will be limited.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information filed by us at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. Our SEC filings are also available, free of charge, at the SEC's web site at <http://www.sec.gov> and at our web site at <http://www.advanced-energy.com>. In addition, you can read and copy our SEC filings at the office of the National Association of Securities Dealers, Inc. at 1735 "K" Street, Washington, D.C. 20006.

We have filed with the SEC a registration statement on Form S-3 under the Securities Act in connection with this prospectus. This prospectus does not contain all of the information set forth in the registration statement. We have omitted certain parts of the registration statement in accordance with the rules and regulations of the SEC. For further information you should refer to the registration statement. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, you should refer to the copy of such contract or document filed as an exhibit to or incorporated by reference in the registration statement. Each statement as to the contents of such contract or document is qualified in all respects by such reference. You may obtain copies of the registration statement from the SEC's principal office in Washington, D.C. upon payment of the fee prescribed by the SEC, or you may examine the registration statements without charge at the offices of the SEC or via the SEC's website as described above.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" information that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically supercede information in this prospectus. We incorporate by reference in this prospectus the

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documents listed below and any future filings we make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than Current Reports on Form 8-K furnishing information under Item 9 or 12 of Form 8-K, unless otherwise indicated therein) until the offering of our securities under this registration statement is completed or withdrawn:

- our Annual report on Form 10-K for the year ended December 31, 2002, including those portions incorporated by reference therein of our definitive proxy material on Schedule 14A as filed with the SEC on April 11, 2003;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2003, June 30, 2003 and September 30, 2003;
- our Current Report on Form 8-K filed on May 16, 2003; and
- the description of our common stock contained in our registration statement on Form 8-A, filed on October 12, 1995, including any amendment or reports filed for the purpose of updating such description.

Our current reports on Form 8-K dated April 23, 2003, July 24, 2003 and October 16, 2003, which furnished information relating to our quarterly earnings, are not incorporated by reference in this prospectus.

We will provide a copy of the documents we incorporate by reference at no cost to any person who receives this prospectus. To request a copy of any or all of these documents, excluding any exhibits to these documents unless the exhibit is specifically incorporated by reference in such document, you should write or call us at:

Advanced Energy Industries, Inc.
1625 Sharp Point Drive
Fort Collins, CO 80525
Attention: Investor Relations
970-221-4670

Documents incorporated by reference in this prospectus, may also be found on our website at www.advanced-energy.com. Information contained on our website is not a prospectus and does not constitute part of this prospectus.

ADVANCED ENERGY INDUSTRIES, INC.

\$250,000,000
Common Stock
Debt Securities

You should rely only on the information contained in this prospectus, any prospectus supplement or any document to which we have referred you. We have not authorized anyone else to provide you with information that is different. This prospectus and any prospectus supplement may be used only where it is legal to sell these securities. The information in this prospectus or any prospectus supplement is current only as of the date on the front of these documents.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the costs and expenses we expect to incur in connection with the offerings described in this registration statement, other than underwriting discounts and commissions. All of the following costs and expenses are estimates, other than the SEC Registration Fee.

SEC Registration Fee	\$ 20,225
Accounting Fees and Expenses	100,000
Printing Expenses	50,000
Legal Fees and Expenses	*
Miscellaneous	*
	<hr/>
TOTAL	\$ *

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

As permitted by the Delaware General Corporation Law (“DGCL”), Advanced Energy’s Restated Certificate of Incorporation, as amended (the “AE Certificate”), provides that no director shall be personally liable to Advanced Energy or any stockholder for monetary damages for breach of fiduciary duty as a director, except for liability: (i) for any breach of the duty of loyalty to Advanced Energy or its stockholders; (ii) for acts or omissions not in good faith or involving intentional misconduct or a knowing violation of the law; (iii) under Section 174 of the DGCL; or (iv) for any

transaction from which the director derived an improper personal benefit. While the AE Certificate provides protection from awards for monetary damages for breaches of fiduciary duty, it does not eliminate the director's duty of care. Accordingly, the AE Certificate will not affect the availability of equitable remedies, such as an injunction, based on a director's breach of the duty of care. The provisions of the AE Certificate described above apply to officers of Advanced Energy only if they are directors of Advanced Energy and are acting in their capacity as directors, and does not apply to officers of Advanced Energy who are not directors.

In addition, Advanced Energy's Bylaws provide that Advanced Energy shall indemnify its Executive Officers (as defined in Rule 3b-7 promulgated under the Exchange Act) and directors, and any employee who serves as an Executive Officer or director of any corporation at Advanced Energy's request, to the fullest extent permitted under and in accordance with the DGCL; provided, however, that Advanced Energy may modify the extent of such indemnification by individual contracts with its Executive Officers and directors; and, provided further, that Advanced Energy shall not be required to indemnify any Executive Officer or director in connection with any proceeding (or part thereof) initiated by such person unless: (i) such indemnification is expressly required to be made by law; (ii) the proceeding was authorized by the directors of Advanced Energy; (iii) such indemnification is provided by Advanced Energy in its sole discretion, pursuant to the powers vested in Advanced Energy under the DGCL; or (iv) such indemnification is required to be made under Article XI, Section 43, Subsection (d) of Advanced Energy's Bylaws. Under the DGCL, directors and officers as well as employees and individuals may be indemnified against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement in connection with specified actions, suits or proceedings, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation as a derivative action), if they acted in good faith and in a manner they reasonably believed to be in or not opposed to the best interests of the corporation, and with respect to any criminal action or proceeding, had no reasonable cause to believe their conduct was unlawful. Advanced Energy maintains a policy of directors' and officers' liability insurance that insures Advanced Energy's directors and officers against the costs of defense, settlement or payment of a judgment under certain circumstances.

ITEM 16. EXHIBITS

1.1	Form of Underwriting Agreement (1)
3.1	Restated Certificate of Incorporation, as amended, of Advanced Energy Industries, Inc. (2)
3.2	Bylaws of Advanced Energy Industries, Inc. (3)
4.1	Form of Indenture
4.2	Form of Debt Security (1)
4.3	Form of Common Stock Certificate (3)
5.1	Opinion of Hogan & Hartson L.L.P.
12.1	Statement re Computation of Ratios
23.1	Consent of KPMG LLP
23.2	Consent of Arthur Andersen LLP (omitted pursuant to Rule 437a of the Securities Act of 1933)
23.3	Consent of Hogan & Hartson L.L.P. (included in Exhibit 5.1)
24.1	Power of Attorney (included on signature page to this Registration Statement)
25.1	Statement of Eligibility of Trustee (1)

- (1) To be filed by an amendment to this registration statement or by a Current Report on Form 8-K.
- (2) Incorporated by reference to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2003 (File No. 000-26966)
- (3) Incorporated by reference to our registration statement on Form S-1 (File No. 33-97188), filed September 20, 1995.

ITEM 17. UNDERTAKINGS

(a) The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no

more than 20 percent change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement;

- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (i) and (ii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference into the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
 - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant’s annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan’s annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the County of Larimer, State of Colorado on November 14, 2003

ADVANCED ENERGY INDUSTRIES, INC.

By: /s/ Douglas S. Schatz

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

POWER OF ATTORNEY

Each person whose signature appears below hereby appoints Douglas S. Schatz and Michael El-Hillow, and each of them severally, acting alone and without the other, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution for him or in his name, place and stead, in any and all capacities to sign any and all amendments or post-effective amendments to this registration statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, and in connection with any registration of additional securities pursuant to Rule 462(b) under the Securities Act of 1933, as amended, to sign any abbreviated registration statements and any and all amendments thereto, and to file the same, with all exhibits thereto and other documents in connection therewith, in each case, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement 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)	November 14, 2003

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<div>/s/ Michael El-Hillow</div> <div>Michael El-Hillow</div>	Executive Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	November 14, 2003
<div>/s/ Richard P. Beck</div> <div>Richard P. Beck</div>	Director	November 14, 2003
<div>/s/ Trung Doan</div> <div>Trung Doan</div>	Director	November 14, 2003
<div>/s/ Arthur A. Noeth</div> <div>Arthur A. Noeth</div>	Director	November 14, 2003
<div>/s/ Elwood Spedden</div> <div>Elwood Spedden</div>	Director	November 14, 2003
<div>/s/ Gerald Starek</div> <div>Gerald Starek</div>	Director	November 14, 2003

EXHIBIT INDEX

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Exhibit 4.1

INDENTURE

between

ADVANCED ENERGY INDUSTRIES, INC.

and

TRUSTEE

Dated as of _____

Providing for Issuance of
Debt Securities in Series

Reconciliation and tie between Indenture, dated as of _____, and the Trust Indenture Act of 1939, as amended.

Trust Indenture Act of 1939 Section	Indenture Section
-----	-----
310 (a) (1)	6.11
(a) (2)	6.11
(a) (3)	TIA
(a) (4)	Not Applicable
(a) (5)	TIA
(b)	6.9; 6.11; TIA
311 (a)	TIA
(b)	TIA
312 (a)	6.7
(b)	TIA
(c)	TIA
313 (a)	6.6; TIA
(b)	TIA
(c)	6.6; TIA
(d)	6.6
314 (a)	9.6; 9.7; TIA
(b)	Not Applicable
(c) (1)	1.2
(c) (2)	1.2
(c) (3)	Not Applicable
(d)	Not Applicable
(e)	1.2
(f)	TIA
315 (a)	TIA
(b)	6.5
(c)	6.1
(d) (1)	TIA
(d) (2)	TIA
(d) (3)	TIA
(e)	TIA
316 (a) (1) (A)	5.8
(a) (1) (B)	5.7
(b)	5.2; 5.10
(c)	TIA

Trust Indenture Act of 1939 Section	Indenture Section
-----	-----
317 (a) (1)	5.3
(a) (2)	5.4
(b)	9.3
318 (a)	1.11
(b)	TIA
(c)	1.11; TIA

Note: This Cross-Reference Table shall not, for any purpose, be deemed to be part of the Indenture.

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INDENTURE, dated as of _____, between Advanced Energy, Inc., a corporation duly organized and existing under the laws of the State of Delaware (the "Company"), and _____, as trustee, a national banking association organized and existing under the laws of the United States of America (the "Trustee").

RECITALS

The Company has duly authorized the execution and delivery of this Indenture to provide for the issuance from time to time of its debentures, notes or other evidences of indebtedness ("Securities") to be issued in one or more series as herein provided.

For and in consideration of the premises and the purchase of the Securities by the Holders thereof, it is mutually covenanted and agreed as follows for the equal and ratable benefit of the Holders of the Securities or of series thereof:

ARTICLE I

DEFINITIONS AND OTHER PROVISIONS OF GENERAL APPLICATION

SECTION 1.1. DEFINITIONS. (a) For all purposes of this Indenture, except as otherwise expressly provided or unless the context otherwise requires:

- (1) the terms defined in this Article have the meanings assigned to them in this Article and include the plural as well as the singular;
- (2) all other terms used herein which are defined in the Trust Indenture Act, either directly or by reference therein, have the meanings assigned to them therein;
- (3) all accounting terms not otherwise defined herein have the meanings assigned to them in accordance with generally accepted accounting principles; and
- (4) the words "herein," "hereof" and "hereunder" and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other subdivision.

"Affiliate" of any specified Person means any other Person directly or indirectly controlling or controlled by, or under direct or indirect common control with, such specified Person. For purposes of this definition, "control" when used with respect to any specified Person means the power to direct the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms "controlling" and "controlled" have meanings correlative to the foregoing.

"Agent" means any Paying Agent or Registrar.

"Authenticating Agent" means any authenticating agent appointed by the Trustee pursuant to Section 6.13.

"Authorized Newspaper" means a newspaper of general circulation, in the official language of the country of publication or in the English language, customarily published on each Business Day whether or not published on Saturdays, Sundays or holidays. Whenever successive publications in an Authorized Newspaper are required hereunder they may be made (unless otherwise expressly provided herein) on the same or different days of the week and in the same or different Authorized Newspapers.

"Bearer Security" means any Security issued hereunder which is payable to bearer.

"Board" or "Board of Directors" means the Board of Directors of the Company or any duly authorized committee thereof..

"Board Resolution" means a copy of one or more resolutions of the Board of Directors, certified by the Corporate Secretary or an Assistant Secretary of the Company to have been duly adopted by the Board of Directors and to be in full force and effect on the date of the certificate.

"Business Day," when used with respect to any Place of Payment or any other particular location referred to in this Indenture or in the Securities, means, unless otherwise specified with respect to any Securities pursuant to Section 3.1, each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in that Place of Payment or particular location are authorized or obligated by law or executive order to close, except as may otherwise be provided in the form of Security of any particular series pursuant to the provisions of this Indenture.

"Commission" means the Securities and Exchange Commission, as from time to time constituted, created under the Securities Exchange Act of 1934, or, if at any time after the execution of this Indenture such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body performing such duties at such time.

"Common Stock" means the common shares, \$0.01 par value per share, of the Company.

"Company" means the party named as the Company in the first paragraph of this Indenture until a successor shall have become such pursuant to the applicable provisions of this Indenture, and thereafter means such successors.

"Company Order" and "Company Request" mean, respectively, a written order or request signed in the name of the Company by the President, the Chief Executive Officer, the Chief Financial Officer, any Vice President, the Treasurer or the Corporate Secretary of the Company.

"Corporate Trust Office" means the corporate trust office of the Trustee at which at any particular time this Indenture shall be principally administered, which office at the date hereof is located at _____.

"Currency unit," for all purposes of this Indenture, shall include any composite currency.

"Default" means any event which is, or after notice or passage of time, or both, would be, an Event of Default.

"Depository," when used with respect to the Securities of or within any series issuable or issued in whole or in part in global form, means the Person designated as Depository by the Company pursuant to Section 3.1 until a successor Depository shall have become such pursuant to the applicable provisions of this Indenture, and thereafter shall mean or include each Person which is then a Depository hereunder, and if at any time there is more than one such Person, shall be a collective reference to such Persons.

"Dollar" or "\$" means the coin or currency of the United States as at the time of payment is legal tender for the payment of public and private debts.

"Euro" means the lawful currency of the participating member states of the European Union that adopt a single currency in accordance with the Treaty establishing the European Community, as amended by the Treaty on European Union signed February 7, 1992.

"Foreign Currency" shall mean any currency issued by the government or governments of one or more countries other than the United States or by any recognized confederation or association of such governments and shall include the Euro.

"Government Obligations" means securities which are (i) direct obligations of the United States or, if specified as contemplated by Section 3.1, the government which issued the currency in which the Securities of a particular series are payable, for the payment of which its full faith and credit is pledged or (ii) obligations of a Person controlled or supervised by and acting as an agency or instrumentality of the United States or, if specified as contemplated by Section 3.1, such government which issued the foreign currency in which the Securities of such series are payable, for the payment of which the full faith and credit of the United States or such other government is pledged (whether by guaranty or otherwise), which, in either case, are not callable or redeemable at the option of the issuer thereof, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such Government Obligation or a specific payment of interest on or principal of any such Government Obligation held by such custodian for the account of the holder of a depository receipt, provided that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depository receipt from any amount received by the custodian in respect of the Government Obligation evidenced by such depository receipt.

"Holder" means, with respect to a Bearer Security, a bearer thereof or of a coupon appertaining thereto and, with respect to a Registered Security, a person in whose name such Registered Security is registered on the Register.

"Indenture" means this instrument as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into pursuant to the applicable provisions hereof, including, for all purposes of this instrument and any such supplemental indenture, the provisions of the Trust Indenture Act that are deemed to be a part of and govern this instrument and any such supplemental indenture, respectively. The term "Indenture" shall also include the terms of the particular series of Securities established as contemplated by Section 3.1; provided, however, that if at any time more than one Person is acting as Trustee under this Indenture due to the appointment of one or more separate Trustees for any one or more separate series of Securities, "Indenture" shall mean, with respect to such series of Securities for which any such Person is Trustee, this instrument as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into pursuant to the applicable provisions hereof and shall include the terms of particular series of Securities for which such Person is Trustee established as contemplated by Section 3.1, exclusive, however, of any provisions or terms which relate solely to other series of Securities for which such Person is not Trustee, regardless of when such terms or provisions were adopted, and exclusive of any provisions or terms adopted by means of one or more indentures supplemental hereto executed and delivered after such Person had become such Trustee, but to which such Person, as such Trustee, was not a party; provided further that in the event that this indenture is supplemented or amended by one or more indentures supplemental hereto which are only applicable to certain series of Securities, the term "Indenture" for a particular series of Securities shall only include the supplemental indentures applicable thereto.

"Indexed Security" means a Security the terms of which provide that the principal amount thereof payable at Stated Maturity may be more or less than the principal face amount thereof at original issuance.

"Interest," when used with respect to an Original Issue Discount Security which by its terms bears interest only after Maturity, means interest payable after Maturity.

"Interest Payment Date," when used with respect to any Security, means the Stated Maturity of an installment of interest on such Security.

"Maturity," when used with respect to any Security, means the date on which the principal of such Security or an installment of principal becomes due and payable as therein or herein provided, whether at the Stated Maturity or by declaration of acceleration, call for redemption or otherwise.

"Officer" means the President, the Chief Executive Officer, the Chief Financial Officer, any Vice President, the Treasurer or the Corporate Secretary of the Company.

"Officers' Certificate" means a certificate signed by the President, the Chief Executive Officer, the Chief Financial Officer, any Vice President, the Corporate Secretary or the Treasurer of the Company.

"Opinion of Counsel" means a written opinion of legal counsel, who may be, without limitation, (a) an employee of the Company, or (b) outside counsel designated by the Company.

"Original Issue Discount Security" means any Security which provides for an amount less than the stated principal amount thereof to be due and payable upon declaration of acceleration of the Maturity thereof pursuant to Section 5.2.

"Outstanding," when used with respect to Securities, means, as of the date of determination, all Securities theretofore authenticated and delivered under this Indenture, except:

- (i) Securities theretofore cancelled by the Trustee or delivered to the Trustee for cancellation;
- (ii) Securities, or portions thereof, for whose payment or redemption money or Government Obligations in the necessary amount has been theretofore deposited with the Trustee or any Paying Agent (other than the Company) in trust or set aside and segregated in trust by the Company (if the Company shall act as its own Paying Agent) for the Holders of such Securities and any coupons appertaining thereto, provided that, if such Securities are to be redeemed, notice of such redemption has been duly given pursuant to this Indenture or provisions therefor satisfactory to the Trustee have been made;
- (iii) Securities, except to the extent provided in Sections 4.4 and 4.5, with respect to which the Company has effected defeasance and/or covenant defeasance as provided in Article IV; and
- (iv) Securities which have been paid pursuant to Section 3.6 or in exchange for or in lieu of which other Securities have been authenticated and delivered pursuant to this Indenture, other than any such Securities in respect of which there shall have been presented to the Trustee proof satisfactory to it that such Securities are held by a bona fide purchaser in whose hands such Securities are valid obligations of the Company;

provided, however, that unless otherwise provided with respect to any Securities of any series pursuant to Section 3.1, in determining whether the Holders of the requisite principal amount of the Outstanding Securities have given any request, demand, authorization, direction, notice, consent or waiver hereunder, or whether sufficient funds are available for redemption or for any other purpose, and for the purpose of making the calculations required by section 313 of the Trust Indenture Act or are present at a meeting of Holders for quorum purposes,

(w) the principal amount of any Original Issue Discount Securities that may be counted in making such determination or calculation and that shall be deemed to be Outstanding for such purpose shall be equal to the amount of principal thereof that would be (or shall have been declared to be) due and payable, at the time of such determination, upon a declaration of acceleration of the maturity thereof pursuant to Section 5.2, (x) the principal amount of any Security denominated in one or more Foreign Currencies or currency units that may be counted in making such determination or calculation and that shall be deemed Outstanding for such purpose shall be equal to the Dollar equivalent, determined as of the date such Security is originally issued by the Company as set forth in an Exchange Rate Officer's Certificate delivered to the Trustee, of the principal amount (or, in the case of an Original Issue Discount Security, the Dollar equivalent, determined as of such date of original issuance, of the amount determined as provided in clause (w) above) of such Security, (y) unless otherwise provided with respect to such Security pursuant to Section 3.1, the principal amount of any Indexed Security that may be counted in making such determination or calculation and that shall be deemed Outstanding for such purpose shall be equal to the principal face amount of such Indexed Security at original issuance, and (z) Securities owned by the Company or any other obligor upon the Securities or any Affiliate of the Company or of such other obligor shall be disregarded and deemed not to be Outstanding, except that, in determining whether the Trustee shall be protected in making such calculation or in relying upon any such request, demand, authorization, direction, notice, consent or waiver, or determination as to the presence of a quorum, only Securities which a Responsible Officer of the Trustee knows to be so owned shall be so disregarded. Securities so owned which have been pledged in good faith may be regarded as Outstanding if the pledgee establishes to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not the Company or any other obligor upon the Securities or any Affiliate of the Company or of such other obligor.

"Paying Agent" means any Person authorized by the Company to pay the principal of, premium, if any, or interest and any other payments on any Securities on behalf of the Company.

"Periodic Offering" means an offering of Securities of a series from time to time the specific terms of which Securities, including, without limitation, the rate or rates of interest or formula for determining the rate or rates of interest thereon, if any, the Maturity thereof and the redemption provisions, if any, with respect thereto, are to be determined by the Company upon the issuance of such Securities.

"Person" means any individual, corporation, limited liability company, partnership, joint venture, association, joint-stock company, trust, unincorporated organization or government or any agency or political subdivision thereof or any other entity.

"Place of Payment," when used with respect to the Securities of or within any series, means the place or places where the principal of, premium, if any, and interest and any other payments on such Securities are payable as specified as contemplated by Sections 3.1 and 9.2.

"Predecessor Security" of any particular Security means every previous Security evidencing all or a portion of the same debt as that evidenced by such particular Security; and, for the purposes of this definition, any Security authenticated and delivered under Section 3.6 in exchange for or in lieu of a mutilated, destroyed, lost or stolen Security shall be deemed to evidence the same debt as the mutilated, destroyed, lost or stolen Security.

"Preferred Stock" as applied to the capital stock of the Company means capital stock of any class or classes (however designated) which is preferred as to the payment of dividends, or as to the distribution of assets upon any voluntary or involuntary liquidation or dissolution of the Company, over shares of Common Stock of such corporation.

"Redemption Date," when used with respect to any Security to be redeemed, means the date fixed for such redemption by or pursuant to this Indenture.

"Redemption Price," when used with respect to any Security to be redeemed, in whole or in part, means the price at which it is to be redeemed pursuant to this Indenture.

"Registered Security" means any Security issued hereunder and registered as to principal and interest in the Register.

"Regular Record Date" for the interest payable on any Interest Payment Date on the Securities of or within any series means the date specified for that purpose as contemplated by Section 3.1, which date shall be, unless otherwise specified pursuant to Section 3.1, the fifteenth day preceding such Interest Payment Date, whether or not such day shall be a Business Day.

"Responsible Officer," when used with respect to the Trustee, shall mean any senior vice president, vice president, any assistant vice president or assistant secretary working in its corporate trust department and assigned responsibility for this engagement, or any other officer of the Trustee customarily performing functions similar to those performed by the persons who at the time shall be such officers, respectively, working in its corporate trust department and assigned responsibility for this engagement, or to whom any corporate trust matter relating to the Indenture or the Securities is referred because of his knowledge of and familiarity with a particular subject.

"Security" or "Securities" has the meaning stated in the first recital of this Indenture and more particularly means a Security or Securities of the Company issued, authenticated and delivered under this Indenture.

"Special Record Date" for the payment of any Defaulted Interest means a date fixed by the Trustee pursuant to Section 3.7.

"Stated Maturity," when used with respect to any Security or any installment of principal thereof or interest thereon, means the date specified in such Security or in a coupon representing such installment of interest as the fixed date on which the principal of such Security or such installment of principal or interest is due and payable.

"Subsidiary" means any Person of which the Company at the time owns or controls, directly or indirectly, more than 50% of the shares of outstanding stock or other equity interests having general voting power under ordinary circumstances to elect a majority of the Board of Directors, managers or trustees, as the case may be, of such Person (irrespective of whether or not at the time stock of any other class or classes or other equity interests of such corporation shall have or might have voting power by reason of the happening of any contingency).

"Trust Indenture Act" means the Trust Indenture Act of 1939 as in effect on the date of this Indenture, except as provided in Section 8.3.

"Trustee" means the party named as such in the first paragraph of this Indenture until a successor Trustee replaces it pursuant to the applicable provisions of this Indenture, and thereafter means such

successor Trustee and if, at any time, there is more than one Trustee, "Trustee" as used with respect to the Securities of any series shall mean the Trustee with respect to the Securities of that series.

"United States" means, unless otherwise specified with respect to the Securities of any series as contemplated by Section 3.1, the United States of America (including the States and the District of Columbia), its territories, its possessions and other areas subject to its jurisdiction.

"U.S. Person" means, unless otherwise specified with respect to the Securities of any series as contemplated by Section 3.1, an individual citizen or resident of the United States, a corporation created or organized in or under the laws of the United States, any State thereof or the District of Columbia, or a partnership, estate or trust treated as a domestic partnership, estate or trust for United States federal income tax purposes.

(b) The following terms shall have the meanings specified in the Sections referred to opposite such term below:

Term	Section
-----	-----
"Act "	1.4(a)
"Bankruptcy Law"	5.1
"Claims"	6.8(b)
"Component Currency"	3.11(h)
"Conversion Date"	3.11(d)
"Conversion Event"	3.11(h)
"Custodian"	5.1
"Defaulted Interest"	3.7(b)
"Election Date"	3.11(h)
"Event of Default"	5.1
"Exchange Rate Agent"	3.11(h)
"Exchange Rate Officer's Certificate"	3.11(h)
"Market Exchange Rate"	3.11(h)
"Register"	3.5
"Registrar"	3.5
"Specified Amount"	3.11(h)
"Valuation Date"	3.11(c)

SECTION 1.2. COMPLIANCE CERTIFICATES AND OPINIONS. Upon any application or request by the Company to the Trustee to take any action under any provision of this Indenture, the Company shall furnish to the Trustee an Officer's Certificate stating that all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with and an Opinion of Counsel stating that in the opinion of such counsel all such conditions precedent, if any, have been complied with, except that in the case of any application or request as to which the furnishing of such documents is specifically required by any provision of this Indenture relating to such particular application or request, no additional certificate or opinion need be furnished.

Every certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture (other than pursuant to Sections 2.3 and 9.7) shall include:

(1) a statement that the individual signing such certificate or opinion has read such condition or covenant and any definitions in this Indenture that are used in such certificate or opinion;

(2) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;

(3) a statement that, in the opinion of each such individual, he has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such condition or covenant has been complied with; and

(4) a statement as to whether, in the opinion of such individual, such condition or covenant has been complied with.

SECTION 1.3. FORM OF DOCUMENTS DELIVERED TO TRUSTEE. In any case where several matters are required to be certified by, or covered by an opinion of, any specified Person, it is not necessary that all such matters be certified by, or covered by the opinion of, only one such Person, or that they be so certified or covered by only one document, but one such Person may certify or give an opinion with respect to some matters and one or more other such Persons as to other matters, and any such Person may certify or give an opinion as to such matters in one or several documents.

Any certificate or opinion of an officer of the Company may be based, insofar as it relates to legal matters, upon a certificate or opinion of, or representations by, counsel, unless such officer knows that the certificate or opinion or representations with respect to the matters upon which his certificate or opinion is based are erroneous. Any such certificate or Opinion of Counsel may be based, insofar as it relates to factual matters, upon a certificate or opinion of, or representations by, an officer or officers of the Company stating that the information with respect to such factual matters is in the possession of the Company, unless such counsel knows that the certificate or opinion or representations as to such matters are erroneous.

Any certificate or opinion of an officer of the Company or of counsel may be based, insofar as it relates to accounting matters, upon a certificate or opinion of or representations by an accountant or firm of accountants in the employ of the Company, unless such officer or counsel, as the case may be, knows that the certificate or opinions or representations as to such accounting matters are erroneous.

Where any Person is required to make, give or execute two or more applications, requests, consents, certificates, statements, opinions or other instruments under this Indenture, they may, but need not, be consolidated and form one instrument.

SECTION 1.4. ACTS OF HOLDERS. (a) Any request, demand, authorization, direction, notice, consent, waiver or other action provided by this Indenture to be given or taken by Holders may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such Holders in person or by agent duly appointed in writing; and, except as herein otherwise expressly provided, such action shall become effective when such instrument or instruments are delivered to the Trustee and, where it is hereby expressly required, to the Company. Such instrument or instruments (and the action embodied therein and evidenced thereby) are herein sometimes referred to as the "Act" of the Holders signing such instrument or instruments. Proof of execution of any such instrument or of a writing appointing any such agent shall be sufficient for any purpose of this Indenture and conclusive in favor of the Trustee and the Company, if made in the manner provided in this Section.

(b) The fact and date of the execution by any Person of any such instrument or writing may be proved by the affidavit of a witness of such execution or by a certificate of a notary public or other officer authorized by law to take acknowledgments of deeds, certifying that the individual signing such

instrument or writing acknowledged to him the execution thereof. Where such execution is by a signer acting in a capacity other than his individual capacity, such certificate or affidavit shall also constitute sufficient proof of his authority. The fact and date of the execution of any such instrument or writing, or the authority of the Person executing the same, may also be proved in any other manner which the Trustee deems sufficient.

(c) The ownership of Bearer Securities may be proved by the production of such Bearer Securities or by a certificate executed by any trust company, bank, banker or other depository, wherever situated, if such certificate shall be deemed by the Trustee to be satisfactory, showing that at the date therein mentioned such Person had on deposit with such depository, or exhibited to it, the Bearer Securities therein described; or such facts may be proved by the certificate or affidavit of the Person holding such Bearer Securities, if such certificate or affidavit is deemed by the Trustee to be satisfactory. The Trustee and the Company may assume that such ownership of any Bearer Security continues until (i) another such certificate or affidavit bearing a later date issued in respect of the same Bearer Security is produced, (ii) such Bearer Security is produced to the Trustee by some other Person, (iii) such Bearer Security is surrendered in exchange for a Registered Security or (iv) such Bearer Security is no longer Outstanding. The ownership of Bearer Securities may also be proved in any other manner which the Trustee deems sufficient.

(d) The ownership of Registered Securities shall be proved by the Register (as defined in Section 3.5 below).

(e) Any request, demand, authorization, direction, notice, consent, waiver or other Act of the Holder of any Security shall bind every future Holder of the same Security and the Holder of every Security issued upon the registration of transfer thereof or in exchange therefor or in lieu thereof in respect of anything done, omitted or suffered to be done by the Trustee or the Company in reliance thereon, whether or not notation of such action is made upon such Security.

(f) If the Company shall solicit from the Holders of any series any request, demand, authorization, direction, notice, consent, waiver or other Act, the Company may, at its option, fix in advance a record date for the determination of Holders of such series entitled to give such request, demand, authorization, direction, notice, consent, waiver or other Act, but the Company shall have no obligation to do so. If such a record date is fixed, such request, demand, authorization, direction, notice, consent, waiver or other Act may be given before or after such record date, but only the Holders of such series of record at the close of business on such record date shall be deemed to be Holders for the purposes of determining whether Holders of the requisite proportion of Outstanding Securities of such series have authorized or agreed or consented to such request, demand, authorization, direction, notice, consent, waiver or other Act, and for that purpose the Outstanding Securities of such series shall be computed as of such record date; provided that no such authorization, agreement or consent by the Holders on such record date shall be deemed effective unless taken on or prior to the applicable Expiration Date (as defined below) by Holders of the requisite amount of Outstanding Securities of such series on such record date. Nothing in this paragraph shall be construed to prevent the Company from setting a new record date for any action for which a record date has previously been set pursuant to this paragraph (whereupon the record date previously set shall automatically and with no action by any Person be cancelled and of no effect), and nothing in this paragraph shall be construed to render ineffective any action taken by Holders of the requisite amount of Outstanding Securities on the date such action is taken. Promptly after any record date is set pursuant to this paragraph, the Company, at its own expense, shall cause notice of such record date, the proposed action by Holders and the applicable Expiration Date to be given to the Trustee in writing and to each Holder of Notes in the manner set forth in Section 1.6.

With respect to any record date set pursuant to this Section 1.4, the Company may designate any date as the "Expiration Date" and from time to time may change the Expiration Date to any earlier or later day; provided that no such change shall be effective unless notice of the proposed new Expiration Date is given to the Trustee, and to each Holder of Securities of the applicable series in the manner set forth in Section 1.6 on or prior to the existing Expiration Date. If an Expiration Date is not designated with respect to any record date pursuant to this Section, the Company shall be deemed to have initially designated the 180th day after such record date as the Expiration Date with respect thereto, subject to its right to change the Expiration Date as provided in this paragraph. Notwithstanding the foregoing, no Expiration Date shall be later than the 180th day after the applicable record date.

(g) Without limiting the foregoing, a Holder entitled hereunder to take any action hereunder with regard to any particular Security may do so with regard to all or any part of the principal amount of such Security or by one or more duly appointed agents, each of which may do so pursuant to such appointment with regard to all or any part of such principal amount.

(h) The Company and the Trustee may make reasonable rules for action by or at a meeting of Holders.

SECTION 1.5. NOTICES, ETC., TO TRUSTEE AND COMPANY. Any request, demand, authorization, direction, notice, consent, waiver or Act of Holders or other document provided or permitted by this Indenture to be made upon, given or furnished to, or filed with,

(1) the Trustee by any Holder or by the Company shall be sufficient for every purpose hereunder if made, given, furnished or filed in writing to or with the Trustee to the attention of its Corporate Trust Office, or

(2) the Company by the Trustee or by any Holder shall be sufficient for every purpose hereunder (unless otherwise herein expressly provided) if in writing and mailed, first-class postage prepaid, to the Company addressed to it at Advanced Energy Industries, Inc., 1625 Sharp Point Drive, Fort Collins, Colorado 80525 or at any other address previously furnished in writing to the Trustee by the Company.

SECTION 1.6. NOTICE TO HOLDERS; WAIVER. Where this Indenture provides for notice to Holders of any event, (i) if any of the Securities affected by such event are Registered Securities, such notice to the Holders thereof shall be sufficiently given (unless otherwise herein or in the terms of such Securities expressly provided) if in writing and mailed, first-class postage prepaid, to each such Holder affected by such event, at his address as it appears in the Register, within the time prescribed for the giving of such notice and, (ii) if any of the Securities affected by such event are Bearer Securities, notice to the Holders thereof shall be sufficiently given (unless otherwise herein or in the terms of such Bearer Securities expressly provided) if published once in an Authorized Newspaper in New York, New York, and in such other city or cities, if any, as may be specified as contemplated by Section 3.1.

In any case where notice to Holders is given by mail, neither the failure to mail such notice, nor any defect in any notice so mailed, to any particular Holder shall affect the sufficiency of such notice with respect to other Holders of Registered Securities or the sufficiency of any notice to Holders of Bearer Securities given as provided herein. In any case where notice is given to Holders by publication, neither the failure to publish such notice, nor any defect in any notice so published, shall affect the sufficiency of such notice with respect to other Holders of Bearer Securities or the sufficiency of any notice to Holders of Registered Securities given as provided herein. Any notice mailed to a Holder in the manner herein prescribed shall be conclusively deemed to have been received by such Holder, whether or not such Holder actually receives such notice.

If by reason of the suspension of regular mail service or by reason of any other cause it shall be impracticable to give such notice as provided above, then such notification as shall be made with the approval of the Trustee (such approval not to be unreasonably withheld) shall constitute a sufficient notification for every purpose hereunder. If it is impossible or, in the opinion of the Trustee, impracticable to give any notice by publication in the manner herein required, then such publication in lieu thereof as shall be made with the approval of the Trustee shall constitute a sufficient publication of such notice.

Any request, demand, authorization, direction, notice, consent or waiver required or permitted under this Indenture shall be in the English language, except that any published notice may be in an official language of the country of publication.

Where this Indenture provides for notice in any manner, such notice may be waived in writing by the Person entitled to receive such notice, either before or after the event, and such waiver shall be equivalent of such notice. Waivers of notice by Holders shall be filed with the Trustee, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

SECTION 1.7. HEADINGS AND TABLE OF CONTENTS. The Article and Section headings herein and the Table of Contents are for convenience only and shall not affect the construction hereof.

SECTION 1.8. SUCCESSOR AND ASSIGNS. All covenants and agreements in this Indenture by the Company shall bind its successor and assigns, whether so expressed or not.

Any act or proceeding that is required or permitted by any provision of this Indenture and that is authorized or required to be done or performed by any board, committee or officer of the Company shall and may be done and performed with like force and effect by the like board, committee or officer of any corporation that shall at the time be the successor or assign of the Company.

SECTION 1.9. SEPARABILITY. In case any provision of this Indenture or the Securities shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

SECTION 1.10. BENEFITS OF INDENTURE. Nothing in this Indenture or in the Securities, expressed or implied, shall give to any Person, other than the parties hereto and their successors hereunder, any Agent and the Holders, any benefit or any legal or equitable right, remedy or claim under this Indenture.

SECTION 1.11. GOVERNING LAW. UNLESS OTHERWISE PROVIDED WITH RESPECT TO ANY SECURITIES OF ANY SERIES PURSUANT TO SECTION 3.1, THIS INDENTURE, THE SECURITIES AND ANY COUPONS APPERTAINING THERETO SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, INCLUDING ALL MATTERS OF CONSTRUCTION, VALIDITY AND PERFORMANCE. This Indenture is subject to the Trust Indenture Act and if any provision hereof limits, qualifies or conflicts with a provision included in this Indenture which is required by the Trust Indenture Act, the latter provision shall control. If any provision of this Indenture modifies or excludes any provision of the Trust Indenture Act that may be so modified or excluded, the latter provision shall be deemed to apply to this Indenture as so modified, or to be excluded, as the case may be, whether or not such provision of this Indenture refers expressly to such provision of the Trust Indenture Act.

SECTION 1.12. LEGAL HOLIDAYS. Unless otherwise provided with respect to any Security or Securities pursuant to Section 3.1, in any case where any Interest Payment Date, Redemption Date, sinking fund payment date, Stated Maturity or Maturity or other payment date of any Security shall not be a

Business Day at any Place of Payment, then, notwithstanding any other provision of this Indenture or any Security or coupon, payment of principal, premium, if any or interest or other payments need not be made at such Place of Payment on such date, but may be made on the next succeeding Business Day at such Place of Payment with the same force and effect as if made on such date; provided that no interest shall accrue on the amount so payable for the period from and after such Interest Payment Date, Redemption Date, sinking fund payment date, Stated Maturity or Maturity or other payment date, as the case may be.

SECTION 1.13. NO RECOURSE AGAINST OTHERS. No past, present or future director, officer, employee, agent, member, manager, trustee or stockholder, as such, of the Company or any successor Person shall have any liability for any obligations of the Company or any successor Person, either directly or through the Company or any successor Person, under the Securities or this Indenture or for any claim based on, in respect of or by reason of such obligations or their creation, whether by virtue of any rule of law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise. By accepting a Security, each Holder agrees to the provisions of this Section 1.13 and waives and releases all such liability. Such waiver and release shall be part of the consideration for the issue of the Securities.

ARTICLE II

SECURITY FORMS

SECTION 2.1. FORMS GENERALLY. The Securities of each series and the coupons, if any, to be attached thereto shall be in substantially such form as shall be established by or pursuant to a Board Resolution or in one or more indentures supplemental hereto, in each case with such appropriate insertions, omissions, substitutions and other variations as are required or permitted by this Indenture, and may have such letters, numbers or other marks of identification and such legends or endorsements placed thereon as the Company may deem appropriate or as may be required to comply with any applicable law, rule or regulation or with the rules or usage of any securities exchange or Depository therefor or as may, consistently herewith, be determined by the officers executing such Securities and coupons, if any, as evidenced by their execution of the Securities and coupons, if any. If temporary Securities of any series are issued as permitted by Section 3.4, the form thereof also shall be established as provided in the preceding sentence. If the forms of Securities and coupons, if any, of any series are established by, or by action taken pursuant to, a Board Resolution, a copy of the Board Resolution, and, if such Board Resolution delegates a particular action to another Person, an appropriate record of any such action taken pursuant thereto, including a copy of the approved form of Securities or coupons, if any, shall be certified by the Corporate Secretary or an Assistant Secretary of the Company and delivered to the Trustee at or prior to the delivery of the Company Order contemplated by Section 3.3 for the authentication and delivery of such Securities.

Unless otherwise specified as contemplated by Section 3.1, Bearer Securities shall have interest coupons attached.

The definitive Securities and coupons, if any, shall be typeset, printed, lithographed or engraved on steel engraved borders or may be produced in any other manner or medium, all as determined by the officers executing such Securities and coupons, if any, as evidenced by their execution of such Securities and coupons, if any.

SECTION 2.2. FORM OF TRUSTEE'S CERTIFICATE OF AUTHENTICATION. Subject to Section 6.13 (as applicable to any Authenticating Agent), the Trustee's certificate of authentication shall be in substantially the following form:

This is one of the [Securities] [of the series designated herein and] referred to in the within-mentioned Indenture.

Dated:

_____, as Trustee

By: _____
AUTHORIZED SIGNATORY

SECTION 2.3. SECURITIES IN GLOBAL FORM. If Securities of or within a

series are issuable in whole or in part in global form, any such Security may provide that it shall represent the aggregate or specified amount of Outstanding Securities from time to time endorsed thereon and may also provide that the aggregate amount of Outstanding Securities represented thereby may from time to time be reduced or increased to reflect exchanges. Any endorsement of a Security in global form to reflect the amount, or any increase or decrease in the amount, or changes in the rights of Holders, of Outstanding Securities represented thereby, shall be made in such manner and by such Person or Persons as shall be specified therein or in the Company Order to be delivered to the Trustee pursuant to Section 3.3 or 3.4. Subject to the provisions of Section 3.3 and, if applicable, Section 3.4, the Trustee shall deliver and redeliver any security in permanent global form in the manner and upon instructions given by the Person or Persons specified therein or in the applicable Company Order. Any instructions by the Company with respect to endorsement or delivery or redelivery of a Security in global form shall be in writing but need not comply with Section 1.2 hereof and need not be accompanied by an Opinion of Counsel.

The provisions of the last paragraph of Section 3.3 shall apply to any Security in global form if such Security was never issued and sold by the Company and the Company delivers to the Trustee the Security in global form together with written instructions (which need not comply with Section 1.2 and need not be accompanied by an Opinion of Counsel) with regard to the reduction in the principal amount of Securities represented thereby, together with the written statement contemplated by the last paragraph of Section 3.3.

Notwithstanding the provisions of Section 2.1 and 3.7, unless otherwise specified as contemplated by Section 3.1, payment of principal of, premium, if any, and interest on any Security in permanent global form shall be made to the Person or Persons specified therein.

SECTION 2.4. FORM OF LEGEND FOR SECURITIES IN GLOBAL FORM. Unless otherwise provided with respect to any Securities of any series pursuant to Section 3.1 or required by the Depository, any Security of such series in global form authenticated and delivered hereunder shall bear a legend in substantially the following form:

This Security is in global form within the meaning of the Indenture hereinafter referred to and is registered in the name of a Depository or a nominee of a Depository. Unless and until it is exchanged in whole or in part for Securities in certificated form, this Security may not be transferred except as a whole by the Depository to a nominee of the Depository or by a nominee of the Depository to the Depository or another nominee of the Depository or by the Depository or any such nominee to a successor Depository or a nominee of such successor Depository. Every Security authenticated and delivered upon registration of, or in exchange for, or in lieu of, this Security will be in global form, subject to the foregoing.

ARTICLE III

THE SECURITIES

SECTION 3.1. AMOUNT UNLIMITED; ISSUABLE IN SERIES. (a) The aggregate principal amount of Securities which may be authenticated, delivered and outstanding under this Indenture is unlimited. The Securities may be issued from time to time in one or more series.

(b) The following matters shall be established, without the approval of any Holders, with respect to each series of Securities issued hereunder (i) by a Board Resolution, (ii) by action taken pursuant to a Board Resolution and (subject to Section 3.3) set forth, or determined in the manner provided, in an Officers' Certificate or (iii) in one or more indentures supplemental hereto (provided, however, that any changes to terms that are established by a Board Resolution shall, after their initial establishment, also be governed by the requirements of Sections 8.1 and 8.2):

(1) the title of the Securities of the series (which title shall distinguish the Securities of the series from all other series of Securities);

(2) any limit upon the aggregate principal amount of the Securities of the series which may be authenticated, delivered and outstanding under this Indenture (which limit shall not pertain to Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the series pursuant to Section 3.4, 3.5, 3.6, 8.6, or 10.7 and except for any Securities which, pursuant to Section 3.3, are deemed never to have been authenticated and delivered hereunder);

(3) the date or dates on which the principal of and premium, if any, on the Securities of the Series is payable or the method of determination and/or extension of such date or dates; and the amount or amounts of such principal and premium, if any, payments or the method of determination thereof;

(4) the rate or rates (which may be fixed or variable) at which the Securities of the series shall bear interest, if any, or the method of calculating and/or resetting such rate or rates of interest, the date or dates from which such interest shall accrue or the method by which such date or dates shall be determined, the Interest Payment Dates on which any such interest shall be payable or the method by which such dates will be determined, the terms of any deferral of interest and the additional interest, if any, thereon and, with respect to Registered Securities, the Regular Record Date, if any, for the interest payable on any Registered Security on any Interest Payment Date, the right, if any, of the Company to extend the Interest Payment Dates and the Regular Record Date, if any, and the duration of the extensions and the basis upon which interest shall be calculated if other than upon a 360-day year of twelve 30-day months;

(5) the place or places where the principal of, premium, if any, and interest, if any, on Securities of the series shall be payable;

(6) the period or periods within which, the price or prices at which, the currency or currencies (including currency units) in which, and the other

terms and conditions upon which, Securities of the series may be redeemed, in whole or in part, at the option of the Company or otherwise, and, if other than as provided in Section 10.3, the manner in which the particular Securities of such series (if less than all Securities of such series are to be redeemed) are to be selected for redemption;

(7) the obligation, if any, of the Company to redeem or purchase Securities of the series pursuant to any sinking fund or analogous provisions or upon the happening of a specified event or at the option of a Holder thereof and the period or periods within which, the price or prices at which, and the other terms and conditions upon which, Securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation and provisions for the remarketing of such series;

(8) if other than denominations of \$1,000 and any integral multiple thereof, for Registered Securities, and if other than denominations of \$5,000 and any integral multiple thereof, for Bearer Securities, the denominations in which Securities of the series shall be issuable;

(9) if other than Dollars, the currency or currencies (including currency unit or units) in which the principal of, premium, if any, and interest, if any, or other payments, if any, on the Securities of the series shall be payable, or in which the Securities of the series shall be denominated, and the particular provisions applicable thereto in accordance with, in addition to, or in lieu of the provisions of Section 3.11;

(10) the terms, if any, upon which Securities of the series may be convertible into or exchanged for other Securities, Common Stock, Preferred Stock, other debt securities, warrants to purchase any of the foregoing, or other securities of any kind of the Company or any other obligor and the terms and conditions upon which the conversion or exchange shall be effected, including the initial conversion or exchange price or rate, the conversion or exchange period, and any other additional provisions;

(11) if the payments of principal of, premium, if any, or interest, if any, or other payments, if any, on the Securities of the series are to be made, at the election of the Company or a Holder, in a currency or currencies (including currency unit or units) other than that in which such Securities are denominated or designated to be payable, the currency or currencies (including currency unit or units) in which such payments are to be made, the terms and conditions of such payments and the manner in which the exchange rate with respect to such payments shall be determined, and the particular provisions applicable thereto in accordance with, in addition to, or in lieu of the provisions of Section 3.11;

(12) if the amount of payments of principal of, premium, if any, and interest, if any, or other payments, if any, on the Securities of the series shall be determined with reference to an index, formula or other method (which index, formula or method may be based, without limitation, on the price of one or more commodities, derivatives or securities; one or more securities, derivatives or commodities exchange indices or other indices; a currency

or currencies (including currency unit or units) other than that in which the Securities of the series are denominated or designated to be payable; or any other variable or the relationship between any variables or combination of variables), the index, formula or other method by which such amounts shall be determined;

(13) if other than the principal amount thereof, the portion of the principal amount of such Securities of the series or other amount which shall be payable upon declaration of acceleration thereof pursuant to Section 5.2 or provable in bankruptcy or the method by which such portion or amount shall be determined;

(14) if other than as provided in Section 3.7, the Person to whom any interest on any Registered Security of the series shall be payable and the manner in which, or the Person to whom, any interest on any Bearer Securities of the series shall be payable;

(15) if the principal amount payable at the Maturity of any Securities of the series will not be determinable as of one or more dates prior to Maturity, the amount which shall be deemed to be the principal amount of such Securities as of any such date hereunder or thereunder, or, if other than as provided in the definition of the term "Outstanding," which shall be deemed to be Outstanding as of any date prior to the Stated Maturity (or, in any such case, the manner in which such amount deemed to be the principal amount shall be determined) and, if necessary, the manner of determining the equivalent thereof in U.S. currency;

(16) provisions, if any, granting special rights to the Holders of Securities of the series upon the occurrence of such events as may be specified;

(17) the applicability of or any deletions from, modifications of or additions to the Events of Default set forth in Section 5.1 or covenants of the Company set forth in Article IX pertaining to the Securities of the series;

(18) under what circumstances, if any, the Company will pay additional amounts on the Securities of that series held by a Person who is not a U.S. Person in respect of taxes or similar charges withheld or deducted and, if so, whether the Company will have the option to redeem such Securities rather than pay such additional amounts (and the terms of any such option);

(19) whether Securities of the series shall be issuable as Registered Securities or Bearer Securities (with or without interest coupons), or both, and any restrictions applicable to the offering, sale or delivery of Bearer Securities and, if other than as provided in Section 3.5, the terms upon which Bearer Securities of a series may be exchanged for Registered Securities of the same series and vice versa;

(20) the date as of which any Bearer Securities of the series and any temporary global Security representing Outstanding Securities of the series shall be

dated if other than the date of original issuance of the first Security of the series to be issued;

(21) the forms of the Securities and coupons, if any, of the series;

(22) any changes or additions to the provisions provided in Article Four of this Indenture pertaining to defeasance, including without limitation, the exclusion of Section 4.4 or 4.5, or both, with respect to the Securities of or within the series; or the applicability, if any, to the Securities of or within the series of such means of defeasance or covenant defeasance other than those provided in Sections 4.4 and 4.5 as may be specified for the Securities and coupons, if any, of such series, and whether, for the purpose of any defeasance or covenant defeasance pursuant to Section 4.4 or 4.5 or otherwise, the term "Government Obligations" shall include obligations referred to in the definition of such term which are not obligations of the United States or an agency or instrumentality of the United States;

(23) if other than the Trustee, the identity of the Registrar and any Paying Agent;

(24) any terms which may be related to warrants, options or other rights to purchase and sell securities issued by the Company in connection with, or for the purchase of, Securities of such series, including whether and under what circumstances the Securities of any series may be used toward the exercise price of any such warrants, options or other rights;

(25) the designation of the initial Exchange Rate Agent, if any;

(26) whether any of the Securities of the series shall be issued in whole or in part in global form, and if so (i) the Depository for such global Securities, (ii) the form of any legend in addition to or in lieu of that in Section 2.4 which shall be borne by such global Securities, (iii) whether beneficial owners of interests in any Securities of the series in global form may exchange such interests for certificated Securities of such series and of like tenor of any authorized form and denomination, and (iv) if other than as provided in Section 3.5, the circumstances under which any such exchange may occur;

(27) the subordination, if any, of the Securities of the series;

(28) if the Securities of the series will be governed by, and the extent to which such Securities will be governed by, any law other than the laws of the state of New York;

(29) the terms, if any, of any guarantee of the payment of principal, premium and interest with respect to Securities of the series and any corresponding changes to the provisions of this Indenture as then in effect;

(30) the terms, if any, of the transfer, mortgage, pledge or assignment as security for the Securities of the series of any properties, assets, moneys, proceeds, securities or other collateral, including whether certain

provisions in the Trust Indenture Act are applicable and any corresponding changes to provisions of this Indenture as then in effect; and

(31) any other terms of the series, including any terms which may be required by or advisable under United States laws or regulations or advisable (as determined by the Company) in connection with the marketing of Securities of the series.

(c) The terms applicable to the Securities of any one series and coupons, if any, appertaining to any Bearer Securities of such series need not be identical but may vary as may be provided (i) by a Board Resolution, (ii) by action taken pursuant to a Board Resolution and (subject to Section 3.3) set forth, or determined in the manner provided, in the related Officers' Certificate or (iii) in an indenture supplemental hereto. All Securities of any one series need not be issued at the same time and, unless otherwise provided, a series may be reopened, without the consent of the Holders, for issuances of additional Securities of such series.

(d) If any of the terms of the Securities of any series are established by action taken pursuant to a Board Resolution, a copy of such Board Resolution shall be certified by the Corporate Secretary or an Assistant Secretary of the Company and delivered to the Trustee at or prior to the delivery of the Officers' Certificate setting forth, or providing the manner for determining, the terms of the Securities of such series, and, if such Board Resolution delegates a particular action to another Person, an appropriate record of any such action taken pursuant thereto, shall be delivered to the Trustee prior to the authentication and delivery thereof.

(e) Except as may be otherwise expressly provided in the applicable Board Resolutions or supplemental indenture, as contemplated by this Section 3.1, the Securities of any Series shall rank PARI PASSU with the Securities of each other Series.

SECTION 3.2. DENOMINATIONS. Unless otherwise provided as contemplated by Section 3.1, any Registered Securities of a series shall be issuable in denominations of \$1,000 and any integral multiple thereof and any Bearer Securities of a series shall be issuable in the denomination of \$5,000 and any integral multiple thereof.

SECTION 3.3. EXECUTION, AUTHENTICATION, DELIVERY AND DATING. Securities shall be executed on behalf of the Company by the Chief Executive Officer, the Chief Financial Officer, the President, or any Vice President, the Treasurer or the Corporate Secretary of the Company. The seal of the Company, if any, may be in the form of a facsimile thereof and may be impressed, affixed, imprinted or otherwise reproduced on the Securities. The signatures of any of these officers on the Securities may be manual or facsimile. The coupons, if any, of Bearer Securities shall bear the facsimile signature of the Chief Executive Officer, the Chief Financial Officer, the President, any Vice President, the Treasurer the Corporate Secretary of the Company.

Securities and coupons bearing the manual or facsimile signatures of individuals who were at any time the proper officers of the Company shall bind the Company, notwithstanding that such individuals or any of them have ceased to hold such offices prior to the authentication and delivery of such Securities or did not hold such offices at the date of such Securities.

At any time and from time to time, the Company may deliver Securities, together with any coupons appertaining thereto, of any series executed by the Company to the Trustee for authentication, together with a Company Order for the authentication and delivery of such Securities, and the Trustee in accordance with

the Company Order shall authenticate and deliver such Securities; provided, however, that in the case of Securities offered in a Periodic Offering, the Trustee shall authenticate and deliver such Securities from time to time in accordance with such other procedures (including, without limitation, the receipt by the Trustee of oral or electronic instructions from the Company or its duly authorized agents, promptly confirmed in writing) acceptable to the Trustee as may be specified by or pursuant to a Company Order delivered to the Trustee prior to the time of the first authentication of Securities of such series.

If the form or terms of the Securities of a series have been established by or pursuant to one or more Board Resolutions as permitted by Sections 2.1 and 3.1, in authenticating such Securities and accepting the additional responsibilities under this Indenture in relation to such Securities, the Trustee shall be entitled to receive, and (subject to section 315(a) through

(d) of the Trust Indenture Act) shall be fully protected in relying upon, an Opinion of Counsel substantially to the effect that,

(1) the form of such Securities and any coupons have been established in conformity with the provisions of this Indenture;

(2) the terms of such Securities and any coupons have been, or in the case of Securities of a series offered in a Periodic Offering will be, established in conformity with the provisions of this Indenture, subject in the case of Securities offered in a Periodic Offering, to any conditions specified in such Opinion of Counsel; and

(3) such Securities together with any coupons appertaining thereto, when authenticated and delivered by the Trustee, issued by the Company in accordance with the provisions of this Indenture, and delivered to and duly paid for by the purchasers thereof, and subject to any conditions specified in such Opinion of Counsel, will constitute legal, valid and binding obligations of the Company, enforceable in accordance with their terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and other similar laws of general applicability relating to or affecting the enforcement of creditors' rights and to general equity principles and except further as enforcement thereof may be limited by or subject to certain exceptions and qualifications specified in such Opinion of Counsel, including in the case of any Securities denominated in a Foreign Currency, (A) requirements that a claim with respect to any Securities denominated other than in Dollars (or a foreign currency or foreign currency unit judgment in respect of such claim) be converted into Dollars at a rate of exchange prevailing on a date determined pursuant to applicable law or (B) governmental authority to limit, delay or prohibit the making of payments in foreign currency or currency units or payments outside the United States.

Such Opinion of Counsel need express no opinion as to the enforceability of Section 6.8 or as to whether a court in the United States would render a money judgment in a currency other than that of the United States. Such counsel may rely on opinions of other counsel (copies of which shall be delivered to the Trustee), and, to the extent such opinion involves factual matters, such counsel may rely upon certificates of officers of the Company and certificates of public officials.

Notwithstanding that such form or terms have been so established, the Trustee shall have the right to decline to authenticate such Securities if, in the written opinion of counsel to the Trustee (which counsel may be an employee of the Trustee), such action may not lawfully be taken or if the Trustee in good faith by its board of directors or trustees, executive committee or a trust committee of directors, trustees or vice presidents shall determine that such action would expose the Trustee to personal liability.

Notwithstanding the provisions of Section 3.1 and of the two preceding paragraphs, if all of the Securities of any series are not to be issued at one time, it shall not be necessary to deliver the Officers' Certificate otherwise required pursuant to Section 3.1 or the Company Order and Opinion of Counsel otherwise required pursuant to the two preceding paragraphs in connection with the authentication of each Security of such series if such documents, with appropriate modifications to cover such future issuances, are delivered at or prior to the authentication upon original issuance of the first Security of such series to be issued.

With respect to Securities of a series offered in a Periodic Offering, the Trustee may rely, as to the authorization by the Company of any of such Securities, the form and terms thereof and the legality, validity, binding effect and enforceability thereof, upon the Opinion of Counsel and the other documents delivered pursuant to Sections 2.1 and 3.1 and this Section, as applicable, in connection with the first authentication of Securities of such series.

If the Company shall establish pursuant to Section 3.1 that the Securities of a series are to be issued in whole or in part in global form, then, unless otherwise provided with respect to such Securities pursuant to Section 3.1, the Company shall execute and the Trustee shall, in accordance with this Section and the Company Order with respect to such series, authenticate and deliver one or more Securities in global form that (i) shall represent and shall be denominated in an amount equal to the aggregate principal amount of the Outstanding Securities of such series to be represented by such Security or Securities in global form, (ii) shall be registered, if a Registered Security, in the name of the Depository for such Security or Securities in global form or the nominee of such Depository, (iii) shall be delivered by the Trustee to such Depository or pursuant to such Depository's instruction and (iv) shall bear the legend set forth in Section 2.4.

Unless otherwise established pursuant to Section 3.1, each Depository designated pursuant to Section 3.1 for a Registered Security in global form must, at the time of its designation and at all times while it serves as Depository, be a clearing agency registered under the Securities Exchange Act of 1934 and any other applicable statute or regulation. Neither the Company nor the Trustee shall have any responsibility to determine if the Depository is so registered.

Each Depository shall enter into an agreement with the Company and the Trustee, as agent, governing the respective duties and rights of such Depository, the Company and the Trustee, as agent, with regard to Securities issued in global form.

Each Registered Security shall be dated the date of its authentication and each Bearer Security shall be dated as of the date specified as contemplated by Section 3.1.

No Security or coupon appertaining thereto shall be entitled to any benefits under this Indenture or be valid or obligatory for any purpose until authenticated by the manual signature of one of the authorized signatories of the Trustee or an Authenticating Agent and no coupon shall be valid until the Security to which it appertains has been so authenticated. Such signature upon any Security shall be conclusive evidence, and the only evidence, that such Security has been duly authenticated and delivered under this Indenture and is entitled to the benefits of this Indenture. Except as permitted by Section 3.6 or 3.7, the Trustee shall not authenticate and deliver any Bearer Security unless all appurtenant coupons for interest then matured have been detached and cancelled.

Notwithstanding the foregoing, if any Security shall have been authenticated and delivered hereunder but never issued and sold by the Company, and the Company shall deliver such Security to the Trustee for cancellation as provided in Section 3.9 together with a written statement (which need not

comply with Section 1.2 and need not be accompanied by an Opinion of Counsel) stating that such Security has never been issued and sold by the Company, for all purposes of this Indenture such Security shall be deemed never to have been authenticated and delivered hereunder and shall not be entitled to the benefits of this Indenture.

SECTION 3.4. TEMPORARY SECURITIES. Pending the preparation of definitive Securities of any series, the Company may execute and, upon Company Order, the Trustee shall authenticate and deliver temporary Securities of such series which are printed, lithographed, typewritten, mimeographed or otherwise produced, in any authorized denomination, substantially of the tenor and form, with or without coupons, of the definitive Securities in lieu of which they are issued and with such appropriate insertions, omissions, substitutions and other variations as the officers executing such Securities may determine, as conclusively evidenced by their execution of such Securities and coupons, if any. In the case of Securities of any series, all or a portion of such temporary Securities may be in global form.

Except in the case of temporary Securities in global form, each of which shall be exchanged in accordance with the provisions thereof, if temporary Securities of any series are issued, the Company will cause definitive Securities of such series to be prepared without unreasonable delay. After preparation of definitive Securities of such series, the temporary Securities of such series shall be exchangeable for definitive Securities of such series upon surrender of the temporary Securities of such series at the office or agency of the Company pursuant to Section 9.2 in a Place of Payment for such series, without charge to the Holder. Upon surrender for cancellation of any one or more temporary Securities of any series (accompanied by any unmatured coupons appertaining thereto), the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor a like principal amount of definitive Securities of the same series of authorized denominations and of like tenor; provided, however, that no definitive Bearer Security shall be delivered in exchange for a temporary Registered Security; and provided further that no definitive Bearer Security shall be delivered in exchange for a temporary Bearer Security unless the Trustee shall have received from the person entitled to receive the definitive Bearer Security a certificate substantially in the form approved in or pursuant to the Board Resolutions relating thereto and such delivery shall occur only outside the United States. Until so exchanged, the temporary Securities of any series shall in all respects be entitled to the same benefits under this Indenture as definitive Securities of such series except as otherwise specified as contemplated by Section 3.1.

SECTION 3.5. REGISTRATION, TRANSFER AND EXCHANGE. The Company shall cause to be kept at the Corporate Trust Office of the Trustee or in any office or agency to be maintained by the Company in accordance with Section 9.2 in a Place of Payment or in such other place or medium as may be specified pursuant to Section 3.1 a register for each series of Securities (the registers maintained in such office or in any such office or agency of the Company in a Place of Payment being herein sometimes referred to collectively as the "Register") in which, subject to such reasonable regulations as it may prescribe, the Company shall provide for the registration of Registered Securities and the registration of transfers of Registered Securities. The Register shall be in written form or any other form capable of being converted into written form within a reasonable time. Unless otherwise provided as contemplated by Section 3.1, the Trustee is hereby appointed "Registrar" for the purpose of registering Registered Securities and transfers of Registered Securities, and for the purpose of maintaining the Register in respect thereof, as herein provided.

Upon surrender for registration of transfer of any Registered Security of any series at the office or agency maintained pursuant to Section 9.2 in a Place of Payment for that series, the Company shall execute, and the Trustee shall authenticate and deliver, in the name of the designated transferee or transferees, one or more new Registered Securities of the same series, of any authorized denominations and of a like aggregate principal amount.

Unless otherwise provided as contemplated by Section 3.1, Bearer Securities (except for any temporary global Bearer Securities) or any coupons appertaining thereto (except for coupons attached to any temporary global Bearer Security) shall be transferable by delivery.

Unless otherwise provided as contemplated by Section 3.1, at the option of the Holder, Registered Securities of any series (except a Registered Security in global form) may be exchanged for other Registered Securities of the same series, of any authorized denominations and of a like aggregate principal amount containing identical terms and provisions, upon surrender of the Registered Securities to be exchanged at such office or agency. Whenever any Registered Securities are so surrendered for exchange, the Company shall execute, and the Trustee shall authenticate and deliver, the Registered Securities which the Holder making the exchange is entitled to receive. Unless otherwise specified as contemplated by Section 3.1, Bearer Securities may not be issued in exchange for Registered Securities.

Unless otherwise specified as contemplated by Section 3.1, at the option of the Holder, Bearer Securities of such series may be exchanged for Registered Securities (if the Securities of such series are issuable in registered form) or Bearer Securities (if Bearer Securities of such series are issuable in more than one denomination and such exchanges are permitted by such series) of the same series, of any authorized denominations and of like tenor and aggregate principal amount, upon surrender of the Bearer Securities to be exchanged at any such office or agency, with all unmatured coupons and all matured coupons in default thereto appertaining. If the Holder of a Bearer Security is unable to produce any such unmatured coupon or coupons or matured coupon or coupons in default, such exchange may be effected if the Bearer Securities are accompanied by payment in funds acceptable to the Company and the Trustee in an amount equal to the face amount of such missing coupon or coupons, or the surrender of such missing coupon or coupons may be waived by the Company and the Trustee if there be furnished to them such security or indemnity as they may require to save each of them and any Paying Agent harmless. If thereafter the Holder of such Security shall surrender to any Paying Agent any such missing coupon in respect of which such a payment shall have been made, such Holder shall be entitled to receive the amount of such payment; provided, however, that, except as otherwise provided in Section 9.2, interest represented by coupons shall be payable only upon presentation and surrender of those coupons at an office or agency located outside the United States. Notwithstanding the foregoing, in case any Bearer Security of any series is surrendered at any such office or agency in exchange for a Registered Security of the same series after the close of business at such office or agency on (i) any Regular Record Date and before the opening of business at such office or agency on the relevant Interest Payment Date, or (ii) any Special Record Date and before the opening of business at such office or agency on the related date for payment of Defaulted Interest, such Bearer Security shall be surrendered without the coupon relating to such Interest Payment Date or proposed date of payment, as the case may be (or, if such coupon is so surrendered with such Bearer Security, such coupon shall be returned to the person so surrendering the Bearer Security), and interest or Defaulted Interest, as the case may be, will not be payable on such Interest Payment Date or proposed date for payment, as the case may be, in respect of the Registered Security issued in exchange for such Bearer Security, but will be payable only to the Holder of such coupon, when due in accordance with the provisions of this Indenture.

Unless otherwise specified pursuant to Section 3.1 with respect to a series of Securities or as otherwise provided below in this Section 3.5, owners of beneficial interests in Securities of such series represented by a Security issued in global form will not be entitled to have Securities of such series registered in their names, will not receive or be entitled to receive physical delivery of Securities of such series in certificated form and will not be considered the Holders or owners thereof for any purposes hereunder. Notwithstanding any other provision of this Section, unless and until it is exchanged in whole or in part for Securities in certificated form in the circumstances described below, a Security in global form representing all or a portion of the Securities of a series may not be transferred or exchanged except as a whole by the Depository for such series to a nominee of such Depository or by a nominee of such

Depository to such Depository or another nominee of such Depository or by such Depository or any such nominee to a successor Depository for such series or a nominee of such successor Depository.

If at any time the Depository for the Securities of a series notifies the Company that it is unwilling or unable to continue as Depository for the Securities of such series or if at any time the Depository for the Securities of such series notifies the Company that it shall no longer be eligible under

Section 3.3, the Company shall appoint a successor Depository with respect to the Securities of such series. Unless otherwise provided as contemplated by

Section 3.1, if a successor Depository for the Securities of such series is not appointed by the Company within 90 days after the Company receives such notice or becomes aware of such ineligibility, the Company's election pursuant to

Section 3.1(b) (26) shall no longer be effective with respect to the Securities of such series and the Company shall execute, and the Trustee, upon receipt of a Company Order for the authentication and delivery of certificated Securities of such series of like tenor, shall authenticate and deliver, Securities of such series of like tenor in certificated form, in authorized denominations and in an aggregate principal amount equal to the principal amount of the Security or Securities of such series of like tenor in global form in exchange for such Security or Securities in global form.

The Company may at any time in its sole discretion determine that Securities of a series issued in global form shall no longer be represented by such a Security or Securities in global form. In such event the Company shall execute, and the Trustee, upon receipt of a Company Order for the authentication and delivery of certificated Securities of such series of like tenor, shall authenticate and deliver, Securities of such series of like tenor in certificated form, in authorized denominations and in an aggregate principal amount equal to the principal amount of the Security or Securities of such series of like tenor in global form in exchange for such Security or Securities in global form.

If specified by the Company pursuant to Section 3.1 with respect to a series of Securities, the Depository for such series may surrender a Security in global form of such series in exchange in whole or in part for Securities of such series in certificated form on such terms as are acceptable to the Company and such Depository. Thereupon, the Company shall execute, and the Trustee shall authenticate and deliver, without service charge,

(i) to each Person specified by such Depository a new certificated Security or Securities of the same series of like tenor, of any authorized denomination as requested by such Person in aggregate principal amount equal to and in exchange for such Person's beneficial interest in the Security in global form; and

(ii) to such Depository a new Security in global form of like tenor in a denomination equal to the difference, if any, between the principal amount of the surrendered Security in global form and the aggregate principal amount of certificated Securities delivered to Holders thereof.

(iii) Upon the exchange of a Security in global form for Securities in certificated form, such Security in global form shall be cancelled by the Trustee. Unless expressly provided with respect to the Securities of any series that such Security may be exchanged for Bearer Securities, Securities in certificated form issued in exchange for a Security in global form pursuant to this Section shall be registered in such names and in such authorized denominations as the Depository for such Security in global form, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. The Trustee shall deliver such Securities to the Persons in whose names such Securities are so registered.

Whenever any Securities are surrendered for exchange, the Company shall execute, and the Trustee shall authenticate and deliver, the Securities which the Holder making the exchange is entitled to receive.

All Securities issued upon any registration of transfer or upon any exchange of Securities shall be the valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Securities surrendered upon such registration of transfer or exchange.

Every Registered Security presented or surrendered for registration of transfer or for exchange shall (if so required by the Company, the Registrar or the Trustee) be duly endorsed, or be accompanied by a written instrument of transfer in form satisfactory to the Company, the Registrar and the Trustee duly executed by the Holder thereof or his attorney duly authorized in writing.

Unless otherwise provided as contemplated by Section 3.1, no service charge shall be made for any registration of transfer or for any exchange of Securities, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in connection with any registration or transfer or exchange of Securities, other than exchanges pursuant to Section 3.4 or 10.7 not involving any transfer.

Unless otherwise provided as contemplated by Section 3.1, none of the Company, the Registrar or the Trustee shall be required (i) to issue, register the transfer of, or exchange any Securities for a period beginning at the opening of 15 Business Days before any selection for redemption of Securities of like tenor and of the series of which such Security is a part and ending at the close of business on the earliest date on which the relevant notice of redemption is deemed to have been given to all Holders of Securities of like tenor and of such series to be redeemed; (ii) to register the transfer of or exchange any Registered Security so selected for redemption, in whole or in part, except the unredeemed portion of any Security being redeemed in part; or (iii) to exchange any Bearer Security so selected for redemption, except that such a Bearer Security may be exchanged for a Registered Security of that series and like tenor; provided that such Registered Security shall be simultaneously surrendered for redemption.

SECTION 3.6. REPLACEMENT SECURITIES. If a mutilated Security or a Security with a mutilated coupon appertaining to it is surrendered to the Trustee, together with, in proper cases, such security or indemnity as may be required by the Company or the Trustee to save each of them harmless, the Company shall execute and the Trustee shall authenticate and deliver a replacement Registered Security, if such surrendered Security was a Registered Security, or a replacement Bearer Security with coupons corresponding to the coupons appertaining to the surrendered Security, if such surrendered Security was a Bearer Security, of the same series and date of maturity.

If there shall be delivered to the Company and the Trustee (i) evidence to their satisfaction of the destruction, loss or theft of any Security or Security with a destroyed, lost or stolen coupon and (ii) such security or indemnity as may be required by them to save each of them and any agent of either of them harmless, then, in the absence of notice to the Company or the Trustee that such Security or coupon has been acquired by a bona fide purchaser, the Company shall execute and the Trustee shall authenticate and deliver in lieu of any such destroyed, lost or stolen Security or in exchange for the Security to which a destroyed, lost or stolen coupon appertains (with all appurtenant coupons not destroyed, lost or stolen), a replacement Registered Security, if such Holder's claim appertains to a Registered Security, or a replacement Bearer Security with coupons corresponding to the coupons appertaining to the destroyed, lost or stolen Bearer Security or the Bearer Security to which such lost, destroyed or stolen coupon appertains, if such Holder's claim appertains to a Bearer Security, of the same series and principal amount, containing identical terms and provisions and bearing a number not contemporaneously outstanding with coupons corresponding to the coupons, if any, appertaining to the destroyed, lost or stolen Security.

In case any such mutilated, destroyed, lost or stolen Security or coupon has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new Security or coupon, pay such Security or coupon; provided, however, that payment of principal of and any premium or interest on Bearer Securities shall, except as otherwise provided in Section 9.2, be payable only at an office or agency located outside the United States and, unless otherwise specified as contemplated by Section 3.1, any interest on Bearer Securities shall be payable only upon presentation and surrender of the coupons appertaining thereto.

Upon the issuance of any new Security under this Section, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee, its agents and counsel) connected therewith.

Every new Security of any series with its coupons, if any, issued pursuant to this Section in lieu of any destroyed, lost or stolen Security, or in exchange for a Security to which a destroyed, lost or stolen coupon appertains, shall constitute an original additional contractual obligation of the Company, whether or not the destroyed, lost or stolen Security and its coupon, if any, or the destroyed, lost or stolen coupon, shall be at any time enforceable by anyone, and shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of that series and their coupons, if any, duly issued hereunder.

The provisions of this Section are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities or coupons.

SECTION 3.7. PAYMENT OF INTEREST; INTEREST RIGHTS PRESERVED. (a) Unless otherwise provided as contemplated by Section 3.1, interest, if any, on any Registered Security which is payable, and is punctually paid or duly provided for, on any Interest Payment Date shall be paid to the Person in whose name that Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest at the office or agency maintained for such purpose pursuant to 9.2; provided, however, that at the option of the Company, interest on any series of Registered Securities that bear interest may be paid (i) by check mailed to the address of the Person entitled thereto as it shall appear on the Register of Holders of Securities of such series or (ii) by wire transfer to an account maintained by the Person entitled thereto as specified in the Register of Holders of Securities of such series.

Unless otherwise provided as contemplated by Section 3.1, (A) (i) interest, if any, on Bearer Securities shall be paid only against presentation and surrender of the coupons for such interest installments as are evidenced thereby as they mature and (ii) principal, original issue discount, if any, and premium, if any, on Bearer Securities shall be paid only against presentation and surrender of such Securities; in either case at the office of a Paying Agent located outside the United States, unless the Company shall have otherwise instructed the Trustee in writing provided that any such instruction for payment in the United States does not cause any Bearer Security to be treated as a "registration-required obligation" under United States laws and regulations; (B) the interest, if any, on any temporary Bearer Security shall be paid, as to any installment of interest evidenced by a coupon attached thereto only upon presentation and surrender of such coupon as provided in clause (A) above and, as to other installments of interest, only upon presentation of such Security for notation thereon of the payment of such interest; and (C) if at the time a payment of principal of premium, if any, or interest, if any, on a Bearer Security or coupon shall become due, the payment of the full amount so payable at the office or offices of all the Paying Agents outside the United States is illegal or effectively precluded because of the imposition of exchange controls or other similar restrictions on the payment of such amount in Dollars, then the Company may instruct the Trustee to make such payment at a Paying Agent located in the United States, provided that provision for such payment in

the United States would not cause such Bearer Security to be treated as a "registration-required obligation" under United States laws and regulations.

(b) Unless otherwise provided as contemplated by Section 3.1, any interest on any Registered Security of any series which is payable, but is not punctually paid or duly provided for, on any interest payment date (herein called "Defaulted Interest") shall forthwith cease to be payable to the Holder on the relevant Regular Record Date by virtue of having been such Holder, and such Defaulted Interest may be paid by the Company, at its election in each case, as provided in clause (1) or (2) below:

(1) The Company may elect to make payment of any Defaulted Interest to the Persons in whose names such Registered Securities of such series (or their respective Predecessor Securities) are registered at the close of business on a Special Record Date for the payment of such Defaulted Interest, which shall be fixed in the following manner. The Company shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as in this clause (1) provided. Thereupon the Trustee shall fix a Special Record Date for the payment of such Defaulted Interest which shall be not more than 15 days and not less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Company of such Special Record Date and, in the name and at the expense of the Company, shall cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be mailed, first-class postage prepaid, to each Holder of such Registered Securities of such series at his address as it appears in the Register, not less than 10 days prior to such Special Record Date. Notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor having been so mailed, such Defaulted Interest shall be paid to the Persons in whose names such Registered Securities of such series (or their respective Predecessor Securities) are registered at the close of business on such Special Record Date and shall no longer be payable pursuant to the following clause (2).

(2) The Company may make payment of any Defaulted Interest to the Persons in whose names such Registered Securities of such series (or their respective Predecessor Securities) are registered at the close of business on a specified date in any other lawful manner not inconsistent with the requirements of any securities exchange on which such Registered Securities may be listed, and upon such notice as may be required by such exchange, if, after notice given by the Company to the Trustee of the proposed payment pursuant to this clause (2), such manner of payment shall be deemed practicable by the Trustee.

(c) Subject to the foregoing provisions of this Section and Section 3.5, each Security delivered under this Indenture upon registration of transfer of or in exchange for or in lieu of any other Security shall carry the rights to interest accrued and unpaid, and to accrue, which were carried by such other Security.

SECTION 3.8. PERSONS DEEMED OWNERS. Prior to due presentment of any Registered Security for registration of transfer, the Company, the Trustee and any agent of the Company or the Trustee may treat the Person in whose name such Registered Security is registered as the owner of such Registered Security for the purpose of receiving payment of principal of, premium, if any, and (subject to Section 3.7) interest and any other payments on such Registered Security and for all other purposes whatsoever, whether or not such Registered Security shall be overdue, and neither the Company, the Trustee nor any agent of the Company or the Trustee shall be affected by notice to the contrary.

The Company, the Trustee and any agent of the Company or the Trustee may treat the bearer of any Bearer Security and the bearer of any coupon as the absolute owner of such Bearer Security or coupon for the purpose of receiving payment thereof or on account thereof and for all other purposes whatsoever, whether or not such Bearer Security or coupon be overdue, and neither the Company, the Trustee nor any agent of the Company or the Trustee shall be affected by notice to the contrary.

None of the Company, the Trustee or any agent of the Company or the Trustee shall have any responsibility or liability for any aspect of the records relating to or payments made on account of beneficial ownership interests of a Security in global form, or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests. Notwithstanding the foregoing, with respect to any Security in global form, nothing herein shall prevent the Company or the Trustee, or any agent of the Company or the Trustee, from giving effect to any written certification, proxy or other authorization furnished by any Depository (or its nominee), as a Holder, with respect to such Security in global form or impair, as between such Depository and owners of beneficial interests in such Security in global form, the operation of customary practices governing the exercise of the rights of such Depository (or its nominee) as Holder of such Security in global form.

SECTION 3.9. CANCELLATION. The Company at any time may deliver Securities and coupons to the Trustee for cancellation. The Registrar and any Paying Agent shall forward to the Trustee any Securities and coupons surrendered to them for replacement, for registration of transfer, or for exchange or payment. The Trustee shall cancel all Securities and coupons surrendered for replacement, for registration of transfer, or for exchange, payment, redemption or cancellation and may destroy cancelled Securities and coupons and, if so destroyed, shall issue a certificate of destruction to the Company. The Company may not issue new Securities to replace Securities that it has paid or delivered to the Trustee for cancellation.

SECTION 3.10. COMPUTATION OF INTEREST. Except as otherwise specified as contemplated by Section 3.1, interest on the Securities of each series shall be computed on the basis of a 360-day year of twelve 30-day months.

SECTION 3.11. CURRENCY AND MANNER OF PAYMENT IN RESPECT OF SECURITIES.

(a) Unless otherwise specified with respect to any Securities pursuant to Section 3.1, with respect to Registered Securities of any series and with respect to Bearer Securities of any series payment of the principal of, premium, if any, interest, if any, and other amounts, if any, on any Registered or Bearer Security of such series will be made in the currency or currencies or currency unit or units in which such Registered Security or Bearer Security, as the case may be, is payable. The provisions of this Section 3.11, including without limitation any defined terms specified herein, may be modified or superseded in whole or in part pursuant to Section 3.1 with respect to any Securities.

(b) If expressly specified pursuant to Section 3.1, with respect to Registered Securities of any series, Holders shall have the option, subject to paragraphs (d) and (e) below, to receive payments of principal of, premium, if any, or interest, if any, on such Registered Securities in any of the currencies or currency units which may be designated for such election by delivering to the Trustee (or the applicable

Paying Agent) a written election with signature guarantees and in the applicable form established pursuant to Section 3.1, not later than the close of business on the Election Date immediately preceding the applicable payment date. If a Holder so elects to receive such payments in any such currency or currency unit, such election will remain in effect for such Holder or any transferee of such Holder until changed by such Holder or such transferee by written notice to the Trustee (or any applicable Paying Agent) for such series of Registered Securities (but any such change must be made not later than the close of business on the Election Date immediately preceding the next payment date to be effective for the payment to be made on such payment date, and no such change of election may be made with respect to payments to be made on any Registered Security of such series with respect to which an Event of Default has occurred or with respect to which the Company has deposited funds pursuant to Article IV or with respect to which a notice of redemption has been given by or on behalf of the Company). Any Holder of any such Registered Security who shall not have delivered any such election to the Trustee (or any applicable Paying Agent) not later than the close of business on the applicable Election Date will be paid the amount due on the applicable payment date in the relevant currency or currency unit as provided in Section 3.11(a). The Trustee (or the applicable Paying Agent) shall notify the Company and the Exchange Rate Agent as soon as practicable after the Election Date of the aggregate principal amount of Registered Securities for which Holders have made such written election.

(c) If the election referred to in paragraph (b) above has been provided for with respect to any Registered Securities of a series pursuant to Section 3.1, then, unless otherwise specified pursuant to Section 3.1 with respect to any such Registered Securities, not later than the fourth Business Day after the Election Date for each payment date for such Registered Securities, the Exchange Rate Agent will deliver to the Company a written notice specifying, in the currency or currencies or currency unit or units in which Registered Securities of such series are payable, the respective aggregate amounts of principal of, premium, if any, and interest, if any, on such Registered Securities to be paid on such payment date, and specifying the amounts in such currency or currencies or currency unit or units so payable in respect of such Registered Securities as to which the Holders of Registered Securities denominated in any currency or currencies or currency unit or units shall have elected to be paid in another currency or currency unit as provided in paragraph (b) above. If the election referred to in paragraph (b) above has been provided for with respect to any Registered Securities of a series pursuant to Section 3.1, and if at least one Holder has made such election, then, unless otherwise specified pursuant to Section 3.1, on the second Business Day preceding such payment date the Company will deliver to the Trustee (or the applicable Paying Agent) an Exchange Rate Officers' Certificate in respect of the Dollar, Foreign Currency or Currencies or other currency unit payments to be made on such payment date. Unless otherwise specified pursuant to Section 3.1, the Dollar, Foreign Currency or Currencies or other currency unit amount receivable by Holders of Registered Securities who have elected payment in a currency or currency unit as provided in paragraph (b) above shall be determined by the Company on the basis of the applicable Market Exchange Rate in effect on the second Business Day (the "Valuation Date") immediately preceding each payment date, and such determination shall be conclusive and binding for all purposes, absent manifest error.

(d) If a Conversion Event occurs with respect to a Foreign Currency or any other currency unit in which any of the Securities are denominated or payable otherwise than pursuant to an election provided for pursuant to paragraph (b) above, then, unless otherwise specified pursuant to Section 3.1, with respect to each date for the payment of principal of, premium, if any, and interest, if any, on the applicable Securities denominated or payable in such Foreign Currency or such other currency unit occurring after the last date on which such Foreign Currency or such other currency unit was used (the "Conversion Date"), the Dollar shall be the currency of payment for use on each such payment date (but such Foreign Currency or such other currency unit that was previously the currency of payment shall, at the Company's election, resume being the currency of payment on the first such payment date preceded by 15 Business Days during which the circumstances which gave rise to the Dollar becoming such currency of payment no longer prevail). Unless otherwise specified pursuant to Section 3.1, the Dollar amount to be

paid by the Company to the Trustee or any applicable Paying Agent and by the Trustee or any applicable Paying Agent to the Holders of such Securities with respect to such payment date shall be, in the case of a Foreign Currency other than a currency unit, the Dollar Equivalent of the Foreign Currency or, in the case of a Foreign Currency that is a currency unit, the Dollar Equivalent of the Currency Unit, in each case as determined by the Exchange Rate Agent in the manner provided in paragraph (f) or (g) below.

(e) Unless otherwise specified pursuant to Section 3.1, if the Holder of a Registered Security denominated in any currency or currency unit shall have elected to be paid in another currency or currency unit or in other currencies as provided in paragraph (b) above, and (i) a Conversion Event occurs with respect to any such elected currency or currency unit, such Holder shall receive payment in the currency or currency unit in which payment would have been made in the absence of such election and (ii) if a Conversion Event occurs with respect to the currency or currency unit in which payment would have been made in the absence of such election, such Holder shall receive payment in Dollars as provided in paragraph (d) of this Section 3.11 (but, subject to any contravening valid election pursuant to paragraph (b) above, the elected payment currency or currency unit, in the case of the circumstances described in clause (i) above, or the payment currency or currency unit in the absence of such election, in the case of the circumstances described in clause (ii) above, shall, at the Company's election, resume being the currency or currency unit of payment with respect to Holders who have so elected, but only with respect to payments on payment dates preceded by 15 Business Days during which the circumstances which gave rise to such currency or currency unit, in the case of the circumstances described in clause (i) above, or the Dollar, in the case of the circumstances described in clause (ii) above, becoming the currency or currency unit, as applicable, of payment, no longer prevail).

(f) The "Dollar Equivalent of the Foreign Currency" shall be determined by the Exchange Rate Agent and shall be obtained for each subsequent payment date by the Exchange Rate Agent by converting the specified Foreign Currency into Dollars at the Market Exchange Rate on the Conversion Date.

(g) The "Dollar Equivalent of the Currency Unit" shall be determined by the Exchange Rate Agent and, subject to the provisions of paragraph (h) below, shall be the sum of each amount obtained by converting the Specified Amount of each Component Currency (as each such term is defined in paragraph (h) below) into Dollars at the Market Exchange Rate for such Component Currency on the Valuation Date with respect to each payment.

(h) For purposes of this Section 3.11, the following terms shall have the following meanings:

A "Component Currency" shall mean any currency which, on the Conversion Date, was a component currency of the relevant currency unit.

"Conversion Event" shall mean the cessation of use of (i) a Foreign Currency both by the government of the country which issued such currency and for the settlement of transactions by a central bank or other public institutions of or within the international banking community, or (ii) any currency unit for the purposes for which it was established.

"Election Date" shall mean the Regular Record Date for the applicable series of Registered Securities as specified pursuant to Section 3.1 by which the written election referred to in Section 3.11(b) may be made.

"Exchange Rate Agent," when used with respect to Securities of or within any series, shall mean, unless otherwise specified with respect to any Securities pursuant to Section 3.1, a New York Clearing House bank designated pursuant to Section 3.1 or Section 3.12.

"Exchange Rate Officer's Certificate" shall mean a certificate setting forth (i) the applicable Market Exchange Rate or the applicable bid quotation and (ii) the Dollar or Foreign Currency amounts of principal (and premium, if any) and interest, if any (on an aggregate basis and on the basis of a Security having the lowest denomination principal amount in the relevant currency or currency unit), payable with respect to a Security of any series on the basis of such Market Exchange Rate or the applicable bid quotation, signed by the President, the Chief Executive Officer, the Chief Financial Officer, any Vice President, the Treasurer, or any Assistant Treasurer of the Company.

"Market Exchange Rate" shall mean, unless otherwise specified with respect to any Securities pursuant to Section 3.1, as of any date of determination, (i) for any conversion involving a currency unit on the one hand and Dollars or any Foreign Currency on the other, the exchange rate between the relevant currency unit and Dollars or such Foreign Currency calculated by the method specified pursuant to Section 3.1 for the Securities of the relevant series, (ii) for any conversion of Dollars into any Foreign Currency, the noon buying rate for such Foreign Currency for cable transfers quoted in New York City as certified for customs purposes by the Federal Reserve Bank of New York and (iii) for any conversion of one Foreign Currency into Dollars or another Foreign Currency, the spot rate at noon local time in the relevant market at which, in accordance with normal banking procedures, the Dollars or Foreign Currency into which conversion is being made could be purchased with the Foreign Currency from which conversion is being made from major banks located in New York City, London or any other principal market for Dollars or such purchased Foreign Currency, in each case determined by the Exchange Rate Agent. Unless otherwise specified with respect to any Securities pursuant to Section 3.1, in the event of the unavailability of any of the exchange rates provided for in the foregoing clauses (i), (ii) and (iii), the Exchange Rate Agent shall use, in its sole discretion and without liability on its part, such quotation of the Federal Reserve Bank of New York as of the most recent available date, or quotations from one or more major banks in New York City, London or other principal market for such currency or currency unit in question (which may include any such bank acting as Trustee under this Indenture), or such other quotations as the Exchange Rate Agent shall deem appropriate. Unless otherwise specified by the Exchange Rate Agent, if there is more than one market for dealing in any currency or currency unit by reason of foreign exchange regulations or otherwise, the market to be used in respect of such currency or currency unit shall be that upon which a nonresident issuer of securities designated in such currency or currency unit would purchase such currency or currency unit in order to make payments in respect of such securities.

A "Specified Amount" of a Component Currency shall mean the number of units of such Component Currency or fractions thereof which such Component Currency represented in the relevant currency unit on the Conversion Date. If after the Conversion Date the official unit of any Component Currency is altered by way of combination or subdivision, the Specified Amount of such Component Currency shall be divided or multiplied in the same proportion. If after the Conversion Date two or more Component Currencies are consolidated into a single currency, the respective Specified Amounts of such Component Currencies shall be replaced by an amount in such single currency equal to the sum of the respective Specified Amounts of such consolidated Component Currencies expressed in such single currency, and such amount shall thereafter be a Specified Amount and such single currency shall thereafter be a Component Currency. If after the Conversion Date any Component Currency shall be divided into two or more currencies, the Specified Amount of such Component Currency shall be replaced by specified amounts of such two or more currencies, the sum of which, at the Market Exchange Rate of such two or more currencies on the date of such replacement, shall be equal to the Specified Amount of such former Component Currency and such amounts shall thereafter be Specified Amounts and such currencies shall thereafter be Component Currencies. If, after the Conversion Date of the relevant currency unit, a

Conversion Event (other than any event referred to above in this definition of "Specified Amount") occurs with respect to any Component Currency of such currency unit and is continuing on the applicable Valuation Date, the Specified Amount of such Component Currency shall, for purposes of calculating the Dollar Equivalent of the Currency Unit, be converted into Dollars at the Market Exchange Rate in effect on the Conversion Date of such Component Currency.

All decisions and determinations of the Exchange Rate Agent regarding the Dollar Equivalent of the Foreign Currency, the Dollar Equivalent of the Currency Unit, the Market Exchange Rate and changes in the Specified Amounts as specified above shall be in its sole discretion and shall, in the absence of manifest error, be conclusive for all purposes and irrevocably binding upon the Company, the Trustee (and any applicable Paying Agent) and all Holders of Securities denominated or payable in the relevant currency, currencies or currency units. The Exchange Rate Agent shall promptly give written notice to the Company and the Trustee of any such decision or determination.

In the event that the Company determines in good faith that a Conversion Event has occurred with respect to a Foreign Currency, the Company will promptly give written notice thereof to the Trustee (or any applicable Paying Agent) and to the Exchange Rate Agent (and the Trustee (or such Paying Agent) will promptly thereafter give notice in the manner provided in Section 1.6 to the affected Holders) specifying the Conversion Date. In the event the Company so determines that a Conversion Event has occurred with respect to any currency unit in which Securities are denominated or payable, the Company will promptly give written notice thereof to the Trustee (or any applicable Paying Agent) and to the Exchange Rate Agent (and the Trustee (or such Paying Agent) will promptly thereafter give notice in the manner provided in Section 1.6 to the affected Holders) specifying the Conversion Date and the Specified Amount of each Component Currency on the Conversion Date. In the event the Company determines in good faith that any subsequent change in any Component Currency as set forth in the definition of Specified Amount above has occurred, the Company will similarly give written notice to the Trustee (or any applicable Paying Agent) and to the Exchange Rate Agent.

The Trustee of the appropriate series of Securities shall be fully justified and protected in relying and acting upon information received by it from the Company and the Exchange Rate Agent and shall not otherwise have any duty or obligation to determine the accuracy or validity of such information independent of the Company or the Exchange Rate Agent.

SECTION 3.12. APPOINTMENT AND RESIGNATION OF EXCHANGE RATE AGENT. (a) Unless otherwise specified pursuant to Section 3.1, if and so long as the Securities of any series (i) are denominated in a currency or currency unit other than Dollars or (ii) may be payable in a currency or currency unit other than Dollars, or so long as it is required under any other provision of this Indenture, then the Company will maintain with respect to each such series of Securities, or as so required, at least one Exchange Rate Agent. The Company will cause the Exchange Rate Agent to make the necessary foreign exchange determinations at the time and in the manner specified pursuant to Section 3.11 for the purpose of determining the applicable rate of exchange and, if applicable, for the purpose of converting the issued currency or currencies or currency unit or units into the applicable payment currency or currency unit for the payment of principal, premium, if any, and interest, if any, pursuant to Section 3.11.

(b) No resignation of the Exchange Rate Agent and no appointment of a successor Exchange Rate Agent pursuant to this Section shall become effective until the acceptance of appointment by the successor Exchange Rate Agent as evidenced by a written instrument delivered to the Company and the Trustee of the appropriate series of Securities accepting such appointment executed by the successor Exchange Rate Agent.

(c) If the Exchange Rate Agent shall resign, be removed or become incapable of acting, or if a vacancy shall occur in the office of the Exchange Rate Agent for any cause, with respect to the Securities of one or more series, the Company shall promptly appoint a successor Exchange Rate Agent or Exchange Rate Agents with respect to the Securities of that or those series (it being understood that any such successor Exchange Rate Agent may be appointed with respect to the Securities of one or more or all of such series and that, unless otherwise specified pursuant to Section 3.1, at any time there shall only be one Exchange Rate Agent with respect to the Securities of any particular series that are originally issued by the Company on the same date and that are initially denominated and/or payable in the same currency or currencies or currency unit or units).

SECTION 3.13. WIRE TRANSFERS. Notwithstanding any other provisions to the contrary in this Indenture, the Company may make any payment of monies required to be deposited with the Trustee on account of principal of, or premium, if any, or interest on, the Securities (whether pursuant to optional or mandatory redemption payments, interest payment or otherwise) by wire transfer and immediately available funds to an account designated by the Trustee on or before the date and time such monies are to be paid to the Holders of the Security in accordance with the terms hereof.

SECTION 3.14. CUSIP NUMBERS. The Company in issuing Securities may use "CUSIP" numbers (if then generally in use), and if so, the Trustee may use the CUSIP numbers in notices of redemption or exchange as a convenience to Holders; provided, however, that any such notice may state that no representation is made as to the correctness or accuracy of the CUSIP number printed in the notice or on the Securities, that reliance may be placed only on the other identification numbers printed on the Securities, and any such redemption or exchange shall not be affected by any defect or omission of such CUSIP numbers. The Company will promptly notify the Trustee of any change in CUSIP numbers known to an Officer of the Company.

ARTICLE IV

SATISFACTION, DISCHARGE AND DEFEASANCE

SECTION 4.1. TERMINATION OF COMPANY'S OBLIGATIONS UNDER THE INDENTURE.

(a) This Indenture shall upon Company Request cease to be of further effect with respect to Securities of or within any series and any coupons appertaining thereto (except as to any surviving rights of registration of transfer or exchange of such Securities and replacement of such Securities which may have been lost, stolen or mutilated as herein expressly provided for) and the Trustee, at the expense of the Company, shall execute proper instruments acknowledging satisfaction and discharge of this Indenture with respect to such Securities and any coupons appertaining thereto when

(1) either

(A) all such Securities previously authenticated and delivered and all coupons appertaining thereto (other than (i) such coupons appertaining to Bearer Securities surrendered in exchange for Registered Securities and maturing after such exchange, surrender of which is not required or has been waived as provided in Section 3.5, (ii) such Securities and coupons which have been destroyed, lost or stolen and which have been replaced or paid as provided in Section 3.6, (iii) such coupons appertaining to Bearer Securities called for redemption and maturing after the relevant Redemption Date, surrender of which has been waived as provided in Section 10.6 and (iv) such Securities and coupons for whose payment money has theretofore been deposited in trust or segregated and held in trust by the Company

and thereafter repaid to the Company or discharged from such trust, as provided in Section 9.3) have been delivered to the Trustee for cancellation; or

(B) all Securities of such series and, in the case of (i) or (ii) below, any coupons appertaining thereto not theretofore delivered to the Trustee for cancellation

(i) have become due and payable, or

(ii) will become due and payable at their Stated Maturity within one year, or

(iii) if redeemable at the option of the Company, are to be called for redemption within one year under arrangements satisfactory to the Trustee for giving of notice of redemption, and the Company, in the case of (i), (ii) or (iii) above, has irrevocably deposited or caused to be deposited with the Trustee as trust funds in trust for the purpose an amount in the currency or currencies or currency unit or units in which the Securities of such series are payable, sufficient to pay and discharge the entire indebtedness on such Securities and such coupons not theretofore delivered to the Trustee for cancellation, for principal, premium, if any, and interest, with respect thereto, to the date of such deposit (in the case of Securities which have become due and payable) or to the Stated Maturity or Redemption Date, as the case may be;

(2) the Company has paid or caused to be paid all other sums then payable hereunder by the Company; and

(3) the Company has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent herein provided for relating to the satisfaction and discharge of this Indenture as to such series have been complied with.

Notwithstanding the satisfaction and discharge of this Indenture, the obligation of the Company to the Trustee and any predecessor Trustee under

Section 6.8 and the obligations of the Company to any Authenticating Agent under

Section 6.13 shall survive until the Securities of the discharged series have been paid in full, and, if money shall have been deposited with the Trustee pursuant to subclause (B) of clause (1) of this Section, the obligations of the Trustee under Section 4.2 and the last paragraph of Section 9.3 shall survive in accordance with the terms of such Sections.

SECTION 4.2. APPLICATION OF TRUST FUNDS. Subject to the provisions of the last paragraph of Section 9.3, all money deposited with the Trustee pursuant to Section 4.1 shall be held in trust and applied by it, in accordance with the provisions of the Securities, the coupons and this Indenture, to the payment, either directly or through any Paying Agent (including the Company acting as its own Paying Agent) as the Trustee may determine, to the Persons entitled thereto, of the principal, premium, if any and any interest for whose payment such money has been deposited with or received by the Trustee, but such money need not be segregated from other funds except to the extent required by law.

SECTION 4.3. APPLICABILITY OF DEFEASANCE PROVISIONS; COMPANY'S OPTION TO EFFECT DEFEASANCE OR COVENANT DEFEASANCE. Unless pursuant to Section 3.1 provision is made to exclude with respect to the Securities of a particular series either or both of (i) defeasance of the Securities of or within such series under Section 4.4 or (ii) covenant defeasance of the Securities of or

within such series under Section 4.5, then, in addition to the rights of the Company pursuant to Section 4.1 above, the provisions of such Section or Sections, as the case may be, together with the provisions of Sections 4.6 through 4.9 inclusive, with such modifications thereto as may be specified pursuant to Section 3.1 with respect to any Securities of such series, shall be applicable to such Securities and any coupons appertaining thereto, and the Company may at its option, at any time, with respect to such Securities and any coupons appertaining thereto, elect to have Section 4.4 (if applicable) or Section 4.5 (if applicable) be applied to such Outstanding Securities and any coupons appertaining thereto upon compliance with the conditions set forth below in this Article.

SECTION 4.4. DEFEASANCE AND DISCHARGE. Upon the Company's exercise of the option specified in Section 4.3 applicable to this Section with respect to the Securities of or within a series, the Company shall be deemed to have been discharged from its obligations with respect to such Securities and any coupons appertaining thereto on the date the conditions set forth in Section 4.6 are satisfied (hereinafter, a "defeasance"). For this purpose, such defeasance means that the Company shall be deemed to have paid and discharged the entire indebtedness represented by such Securities and any coupons appertaining thereto, which Securities and coupons appertaining thereto shall thereafter be deemed to be "Outstanding" only for the purposes of Section 4.7 and the other Sections of this Indenture referred to in clause (ii) of this Section, and to have satisfied all its other obligations under such Securities and any coupons appertaining thereto and this Indenture insofar as such Securities and any coupons appertaining thereto are concerned (and the Trustee, at the expense of the Company, shall on Company Order execute proper instruments acknowledging the same), except the following which shall survive until otherwise terminated or discharged hereunder: (i) the rights of Holders of such Securities and any coupons appertaining thereto to receive, solely from the trust funds described in Section 4.6(a) and as more fully set forth in such Section, payments in respect of the principal of, premium, if any, and interest, if any, on such Securities or any coupons appertaining thereto when such payments are due; (ii) the Company's obligations with respect to such Securities under Sections 3.5, 3.6, 9.2 and 9.3 and with respect to the payment of additional amounts, if any, payable with respect to such Securities as specified pursuant to Section 3.1(b) (18); (iii) the rights, powers, trusts, duties, immunities and indemnities of the Trustee hereunder and (iv) this Article IV. Subject to compliance with this Article IV, the Company may exercise its option under this Section notwithstanding the prior exercise of its option under Section 4.5 with respect to such Securities and any coupons appertaining thereto. Following a defeasance, payment of such Securities may not be accelerated because of an Event of Default.

SECTION 4.5. COVENANT DEFEASANCE. Upon the Company's exercise of the option specified in Section 4.3 applicable to this Section with respect to any Securities of or within a series, the Company shall be released from its obligations under Sections 7.1, 9.4 and 9.5, and, if specified pursuant to Section 3.1, its obligations under any other covenant, with respect to such Securities and any coupons appertaining thereto on and after the date the conditions set forth in Section 4.6 are satisfied (hereinafter, "covenant defeasance"), and such Securities and any coupons appertaining thereto shall thereafter be deemed to be not "Outstanding" for the purposes of any direction, waiver, consent or declaration or Act of Holders (and the consequences of any thereof) in connection with Sections 7.1, 9.4 and 9.5, or such other specified covenant, and the operation of Sections 5.1(3) and 5.1(6), but shall continue to be deemed "Outstanding" for all other purposes hereunder. For this purpose, such covenant defeasance means that, with respect to such Securities and any coupons appertaining thereto, the Company may omit to comply with and shall have no liability in respect of any term, condition or limitation set forth in any such Section or such other covenant, whether directly or indirectly, by reason of any reference elsewhere herein to any such Section or such other covenant or by reason of reference in any such Section or such other covenant to any other provision herein or in any other document and such omission to comply shall not constitute a Default or an Event of Default under Section 5.1(3) or 5.1(6) or otherwise, as the case may be, but, except as specified above, the remainder of this Indenture and such Securities and any coupons appertaining thereto shall be unaffected thereby.

SECTION 4.6. CONDITIONS TO DEFEASANCE OR COVENANT DEFEASANCE. The following shall be the conditions to application of Section 4.4 or Section 4.5 to any Securities of or within a series and any coupons appertaining thereto:

(a) The Company shall have deposited or caused to be deposited irrevocably with the Trustee (or another trustee satisfying the requirements of Section 6.11 who shall agree to comply with, and shall be entitled to the benefits of, the provisions of Sections 4.3 through 4.9 inclusive and the last paragraph of Section 9.3 applicable to the Trustee, for purposes of such Sections also a "Trustee") as trust funds in trust for the purpose of making the payments referred to in clauses (x) and (y) of this

Section 4.6(a), with instructions to the Trustee as to the application thereof, (A) money in an amount (in such currency, currencies or currency unit in which such Securities and any coupons appertaining thereto are then specified as payable at Maturity), or (B) Government Obligations which through the payment of interest and principal in respect thereof in accordance with their terms will provide, not later than one day before the due date of any payment referred to in clause (x) or (y) of this Section 4.6(a), money in an amount or (C) a combination thereof in an amount, sufficient, in the determination of a nationally recognized independent accounting or investment banking firm expressed in a written certification thereof delivered to the Trustee in the case of clauses (B) or (C), to pay and discharge, and which shall be applied by the Trustee to pay and discharge, (x) the principal of, premium, if any, and interest, if any, on such Securities and any coupons appertaining thereto on the Maturity of such principal or installment of principal or interest and (y) any mandatory sinking fund payments applicable to such Securities on the day on which such payments are due and payable in accordance with the terms of this Indenture and such Securities and any coupons appertaining thereto.

Before such a deposit the Company may make arrangements satisfactory to the Trustee for the redemption of Securities at a future date or dates in accordance with Article X which shall be given effect in applying the foregoing.

(b) The deposit pursuant to subsection (a) above shall not result in or constitute a Default or Event of Default under this Indenture or result in a breach or violation of, or constitute a default under, any other material agreement or instrument to which the Company is a party or by which it is bound.

(c) In the case of an election under Section 4.4, no Default or Event of Default under Section 5.1(4) or 5.1(5) with respect to such Securities and any coupons appertaining thereto shall have occurred and be continuing during the period commencing on the date of such deposit and ending on the 91st day after such date (it being understood that this condition shall not be deemed satisfied until the expiration of such period).

(d) In the case of an election under Section 4.4, the Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel to the effect that (i) the Company has received from, or there has been published by, the Internal Revenue Service a ruling, or (ii) since the date of execution of this Indenture, there has been a change in the applicable Federal income tax law, in either case to the effect that, and based thereon such opinion shall confirm that, the Holders of such Securities and any coupons appertaining thereto will not recognize income, gain or loss for Federal income tax purposes as a result of such defeasance and will be subject to Federal income tax on the same amounts and in the same manner and at the same times, as would have been the case if such deposit, defeasance and discharge had not occurred.

(e) In the case of an election under Section 4.5, the Company shall have delivered to the Trustee an Opinion of Counsel to the effect that the Holders of such Securities and any coupons appertaining thereto will not recognize income, gain or loss for Federal income tax purposes as a result of

such covenant defeasance and will be subject to Federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such covenant defeasance had not occurred.

(f) The Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent to the defeasance under Section 4.4 or the covenant defeasance under Section 4.5 (as the case may be) have been complied with and an Opinion of Counsel to the effect that either (i) as a result of a deposit pursuant to subsection (a) above and the related exercise of the Company's option under Section 4.4 or Section 4.5 (as the case may be), registration is not required under the Investment Company Act of 1940, as amended, by the Company, with respect to the trust funds representing such deposit or by the trustee for such trust funds or (ii) all necessary registrations under said act have been effected.

(g) Such defeasance or covenant defeasance shall be effected in compliance with any additional or substitute terms, conditions or limitations which may be imposed on the Company in connection therewith as contemplated by Section 3.1.

SECTION 4.7. DEPOSITED MONEY AND GOVERNMENT OBLIGATIONS TO BE HELD IN TRUST. Subject to the provisions of the last paragraph of Section 9.3, all money and Government Obligations (or other property as may be provided pursuant to Section 3.1) (including the proceeds thereof) deposited with the Trustee pursuant to Section 4.6 in respect of any Securities of any series and any coupons appertaining thereto shall be held in trust and applied by the Trustee, in accordance with the provisions of such Securities and any coupons appertaining thereto and this Indenture, to the payment, either directly or through any Paying Agent (including the Company acting as its own Paying Agent) as the Trustee may determine, to the Holders of such Securities and any coupons appertaining thereto of all sums due and to become due thereon in respect of principal, premium, if any, and interest, if any, but such money need not be segregated from other funds except to the extent required by law.

If specified with respect to any Security pursuant to Section 3.1, if, after a deposit referred to in Section 4.6(a) has been made, (i) the Holder of a Security in respect of which such deposit was made is entitled to, and does, elect pursuant to Section 3.11(b) or the terms of such Security to receive payment in a currency or currency unit other than that in which the deposit pursuant to Section 4.6(a) has been made in respect of such Security, or (ii) a Conversion Event occurs as contemplated in Section 3.11(d) or 3.11(e) or by the terms of any Security in respect of which the deposit pursuant to Section 4.6(a) has been made, the indebtedness represented by such Security and any coupons appertaining thereto shall be deemed to have been, and will be, fully discharged and satisfied through the payment of the principal of, premium, if any, and interest, if any, on such Security as the same becomes due out of the proceeds yielded by converting (from time to time as specified below in the case of any such election) the amount or other property deposited in respect of such Security into the currency or currency unit in which such Security becomes payable as a result of such election or Conversion Event based on the applicable Market Exchange Rate for such currency or currency unit in effect on the second Business Day prior to each payment date, except, with respect to a Conversion Event, for such currency or currency unit in effect (as nearly as feasible) at the time of the Conversion Event.

SECTION 4.8. REPAYMENT TO COMPANY. The Trustee (and any Paying Agent) shall promptly pay to the Company upon Company Request any excess money or securities held by them at any time.

SECTION 4.9. INDEMNITY FOR GOVERNMENT OBLIGATIONS. The Company shall pay, and shall indemnify the Trustee against, any tax, fee or other charge imposed on or assessed against Government Obligations deposited pursuant to this Article or the principal and interest received on such

Government Obligations, other than any such tax, fee or other charge that by law is for the account of the Holders of the Securities subject to defeasance or covenant defeasance pursuant to this Article.

ARTICLE V

DEFAULTS AND REMEDIES

SECTION 5.1. EVENTS OF DEFAULT. An "Event of Default" occurs with respect to the Securities of any series, except to the extent such event is specifically deleted or modified by the applicable Board Resolutions or supplemental indenture as contemplated by Section 3.1 for the Securities of such series, if (whatever the reason for such Event of Default and whether it shall be voluntary or involuntary or be effected by operation of law or pursuant to any judgment, decree or order of any court or any order, rule or regulation of any administrative or governmental body):

(1) the Company defaults in the payment of interest on any Security of that series or any coupon appertaining thereto or any additional amount payable with respect to any Security of that series as specified pursuant to Section 3.1(b)(17) when the same becomes due and payable and such default continues for a period of 30 days;

(2) the Company defaults in the payment of the principal of or any premium on any Security of that series when the same becomes due and payable at its Maturity or on redemption or otherwise, or in the payment of a mandatory sinking fund payment when and as due by the terms of the Securities of that series;

(3) the Company defaults in the performance of, or breaches, any covenant or warranty of the Company in this Indenture with respect to any Security of that series (other than a covenant or warranty a default in whose performance or whose breach is elsewhere in this Section specifically dealt with), and such default or breach continues for a period of 90 days after there has been given, by registered or certified mail, to the Company by the Trustee or to the Company and the Trustee by the Holders of at least 25% in principal amount of the Outstanding Securities of that series, a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a "Notice of Default" hereunder;

(4) the Company, pursuant to or within the meaning of any Bankruptcy Law, (A) commences a voluntary case, (B) consents to the entry of an order for relief against it in an involuntary case, (C) consents to the appointment of a Custodian of it or for all or substantially all of its property, or (D) makes a general assignment for the benefit of its creditors;

(5) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that (A) is for relief against the Company in an involuntary case, (B) appoints a Custodian of the Company or for all or substantially all of its property, or (C) orders the liquidation of the Company; and the order or decree remains unstayed and in effect for 90 days; or

(6) any other Event of Default provided as contemplated by Section 3.1 with respect to Securities of that series. The term "Bankruptcy Law" means Title 11, U.S. Code, or any similar federal or state law for the relief of debtors. The term "Custodian" means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

SECTION 5.2. ACCELERATION; RESCISSION AND ANNULMENT. If an Event of Default with respect to the Securities of any series at the time Outstanding occurs and is continuing, the Trustee or the Holders of at least 25% in aggregate principal amount of all of the Outstanding Securities of that series, by written notice to the Company (and, if given by the Holders, to the Trustee), may declare the principal (or, if the Securities of that series are Original Issue Discount Securities or Indexed Securities, such portion of the principal amount or other amount as may be specified in the terms of that series) of all the Securities of that series to be due and payable and upon any such declaration such principal (or, in the case of Original Issue Discount Securities or Indexed Securities, such specified amount) shall be immediately due and payable.

At any time after such a declaration of acceleration with respect to Securities of any series has been made and before a judgment or decree for payment of the money due has been obtained by the Trustee as hereinafter in this Article provided, the Holders of a majority in aggregate principal amount of the Outstanding Securities of that series, by written notice to the Trustee, may rescind and annul such declaration and its consequences if all existing Defaults and Events of Default with respect to Securities of that series, other than the non-payment of the principal of Securities of that series which have become due solely by such declaration of acceleration, have been cured or waived as provided in Section 5.7. Upon any such rescission, the parties hereto shall be restored respectively to their several positions and rights hereunder, and all rights, remedies and powers of the parties hereto shall continue as though no acceleration had occurred.

SECTION 5.3. COLLECTION OF INDEBTEDNESS AND SUITS FOR ENFORCEMENT BY TRUSTEE. The Company covenants that if

(1) default is made in the payment of any interest on or coupon of any Security of any series, when such interest becomes due and payable and such default continues for a period of 30 days, or

(2) default is made in the payment of the principal of (or premium, if any, on) any Security of any series at the Maturity thereof and such default continues for a period of 10 days,

the Company will, upon demand of the Trustee, pay to it, for the benefit of the Holders of such Securities or coupons, if any, the whole amount then due and payable on such Securities for principal, premium, if any, and interest and, to the extent that payment of such interest shall be legally enforceable, interest on any overdue principal, premium, if any, and on any overdue interest, at the rate or rates prescribed therefor in such Securities or coupons.

If the Company fails to pay such principal, premium, if any, and interest amounts forthwith upon such demand, the Trustee, in its own name and as trustee of an express trust, may institute a judicial proceeding for the collection of such principal, premium, if any, and interest amounts so due and unpaid, may prosecute such proceeding to judgment or final decree and may enforce the same against the Company.

In addition, if an Event of Default with respect to Securities of any series occurs and is continuing, the Trustee may in its discretion proceed, in its own name and as trustee of an express trust, to protect and enforce its rights and the rights of the Holders of Securities of such series by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any such rights, whether for the specific enforcement of any covenant or agreement in this Indenture or in aid of the exercise of any power granted herein, or to enforce any other proper remedy.

SECTION 5.4. TRUSTEE MAY FILE PROOFS OF CLAIM. The Trustee may file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee and the Holders of Securities allowed in any judicial proceedings relating to the Company, its creditors or its property.

SECTION 5.5. TRUSTEE MAY ENFORCE CLAIMS WITHOUT POSSESSION OF SECURITIES. All rights of action and claims under this Indenture or the Securities may be prosecuted and enforced by the Trustee, in its own name and as trustee of an express trust, without the possession of any of the Securities or the production thereof in any proceeding relating thereto.

SECTION 5.6. DELAY OR OMISSION NOT WAIVER. No delay or omission by the Trustee or any Holder of any Securities to exercise any right or remedy accruing upon an Event of Default shall impair any such right or remedy or constitute a waiver of or acquiescence in any such Event of Default.

SECTION 5.7. WAIVER OF PAST DEFAULTS. The Holders of a majority in aggregate principal amount of Outstanding Securities of any series by notice to the Trustee may waive on behalf of the Holders of all Securities of such series a past Default or Event of Default with respect to that series and its consequences except a Default or Event of Default (i) in the payment of the principal of, premium, if any, or interest on any Security of such series or any coupon appertaining thereto or (ii) in respect of a covenant or provision hereof which pursuant to Section 8.2 cannot be amended or modified without the consent of the Holder of each Outstanding Security of such series adversely affected. Upon any such waiver, such Default shall cease to exist, and any Event of Default arising therefrom shall be deemed to have been cured, for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other Default or Event of Default or impair any right consequent thereon. In case of any such waiver, the Company, the Trustee and the Holders shall be restored to their former positions and rights hereunder and under the Securities of such series, respectively.

SECTION 5.8. CONTROL BY MAJORITY. The Holders of a majority in aggregate principal amount of the Outstanding Securities of each series affected (with each such series voting as a class) shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on it with respect to Securities of that series; provided, however, that (i) the Trustee may refuse to follow any direction that conflicts with law or this Indenture, (ii) the Trustee may refuse to follow any direction that is unduly prejudicial to the rights of the Holders of Securities of such series not consenting, or that would in the good faith judgment of the Trustee have a substantial likelihood of involving the Trustee in personal liability and (iii) the Trustee may take any other action deemed proper by the Trustee which is not inconsistent with such direction.

SECTION 5.9. LIMITATION ON SUITS BY HOLDERS. No Holder of any Security of any series or any coupons appertaining thereto shall have any right to institute any proceeding, judicial or otherwise, with respect to this Indenture, or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless:

- (1) the Holder has previously given written notice to the Trustee of a continuing Event of Default with respect to the Securities of that series;
- (2) the Holders of at least 25% in aggregate principal amount of the Outstanding Securities of that series have made a written request to the Trustee to institute proceedings in respect of such Event of Default in its own name as Trustee hereunder;

(3) such Holder or Holders have offered to the Trustee indemnity satisfactory to the Trustee against any loss, liability or expense to be, or which may be, incurred by the Trustee in pursuing the remedy;

(4) the Trustee for 60 days after its receipt of such notice, request and the offer of indemnity has failed to institute any such proceedings; and

(5) during such 60-day period, the Holders of a majority in aggregate principal amount of the Outstanding Securities of that series have not given to the Trustee a direction inconsistent with such written request.

No one or more Holders shall have any right in any manner whatever by virtue of, or by availing of, any provision of this Indenture to affect, disturb or prejudice the rights of any other of such Holders, or to obtain or to seek to obtain priority or preference over any other of such Holders or to enforce any right under this Indenture, except in the manner herein provided and for the equal and ratable benefit of all of such Holders.

SECTION 5.10. RIGHTS OF HOLDERS TO RECEIVE PAYMENT. Notwithstanding any other provision of this Indenture, but subject to Section 9.2, the right of any Holder of a Security or coupon of any series to receive payment of principal of, premium, if any, and, subject to Sections 3.5 and 3.7, interest on the Security, on or after the respective due dates expressed in the Security (or, in case of redemption, on the redemption dates), and the right of any Holder of a coupon to receive payment of interest due as provided in such coupon, or to bring suit for the enforcement of any such payment on or after such respective dates, shall not be impaired or affected without the consent of such Holder.

SECTION 5.11. APPLICATION OF MONEY COLLECTED. If the Trustee collects any money pursuant to this Article, it shall pay out the money in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such money on account of principal, premium, if any, or interest, upon presentation of the Securities and the notation thereon of the payment if only partially paid and upon surrender thereof if fully paid:

First: to the Trustee for amounts due under Section 6.8 in connection with such series of Securities in respect of which money or other property is collected;

Second: Subject to the terms of any subordination entered into as contemplated by Section 3.1(b) (27) hereof, to Holders of Securities of such series and coupons in respect of which or for the benefit of which such money has been collected for amounts due and unpaid on such Securities for principal of, premium, if any, and interest, ratably, without preference or priority of any kind, according to the amounts due and payable on such Securities for principal, premium, if any, and interest, respectively; and Third: The balance, if any, to the Company.

The Trustee may fix a record date and payment date for any payment to Holders pursuant to this Section 5.11. At least 15 days before such record date, the Trustee shall mail to each Holder and the Company a notice that states the record date, the payment date and the amount to be paid.

Unless otherwise specified in a supplemental indenture with respect to a series of Securities, in any case where Securities are outstanding which are denominated in more than one currency, or in a composite currency and at least one other currency, and the Trustee is directed to make ratable payments under this Section to Holders of Securities, the Trustee shall calculate the amount of such payments as follows: as of the day the Trustee collects an amount under this Article, the Trustee shall, (i) as to each Holder of a

Security to whom an amount is due and payable under this Section which is denominated in a foreign currency or a composite currency, determine that amount of Dollars that would be obtained for the amount owing such Holder, using the rate of exchange at which in accordance with normal banking procedures the Trustee could purchase in Dollars as of such day with such amount owing, (ii) calculate the sum of all Dollar amounts determined under (i) and add thereto any amounts due and payable in Dollars; and (iii) using the individual amounts determined in (i) or any individual amounts due and payable in Dollars, as the case may be, as a numerator and the sum calculated in (ii) as a denominator, calculate as to each Holder of a Security to whom an amount is owed under this Section the fraction of the amount collected under this Article payable to such Holder. Any expenses incurred by the Trustee in actually converting amounts owing Holders of Securities denominated in a currency or composite currency other than that in which any amount is collected under this Article shall be likewise (in accordance with this paragraph) be borne ratably by all Holders of Securities to whom amounts are payable under this Section.

Unless otherwise specified in the supplemental indenture with respect to a series of Securities, to the fullest extent allowed under applicable law, if for the purpose of obtaining judgment against the Company in any court it is necessary to convert the sum due in respect of the principal of, or any premium or interest on the Securities of any series (the "Required Currency") into a currency in which judgment will be rendered (the "Judgment Currency"), the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Trustee could purchase in The City of New York the Required Currency with the Judgment Currency on the New York Business Day preceding that on which final judgment is given. The Company shall not be liable for any shortfall in payments to Holders of Securities under this Section caused by a change in exchange rates between the time the amount of a judgment against it is calculated as above and the time the Trustee converts the Judgment Currency into the Required Currency to make payments under this Section to Holders of Securities, but payment of such judgment shall discharge all amounts owed by the Company on the claim or claims underlying such judgment.

SECTION 5.12. RESTORATION OF RIGHTS AND REMEDIES. If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under this Indenture and such proceeding has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee or to such Holder, then and in every such case, subject to any determination in such proceeding, the Company, the Trustee and the Holders shall be restored severally and respectively to their former positions hereunder and thereafter all rights and remedies of the Trustee and the Holders shall continue as though no such proceeding had been instituted.

SECTION 5.13. RIGHTS AND REMEDIES CUMULATIVE. Except as otherwise provided in Section 5.9 or with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities in the last paragraph of Section 3.6, no right or remedy herein conferred upon or reserved to the Trustee or the Holders is intended to be exclusive of any other right or remedy, and every right and remedy shall, to the extent permitted by law, be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

ARTICLE VI

THE TRUSTEE

SECTION 6.1. RIGHTS OF TRUSTEE. Subject to the applicable provisions of the Trust Indenture Act:

- (a) The Trustee may conclusively rely and shall be protected in acting or refraining from acting upon any document believed by it to be genuine and to have been signed or presented by the proper party or parties. The Trustee need not investigate any fact or matter stated in the document, and may conclusively rely, in good faith, as to the truth of the statements and concerns of the opinions expressed therein.
- (b) Any request or direction of the Company mentioned herein shall be sufficiently evidenced by a Company Request or Company Order (other than delivery of any Security, together with any coupons appertaining thereto, to the Trustee for authentication and delivery pursuant to Section 3.3, which shall be sufficiently evidenced as provided therein) and any resolution of the Board of Directors may be sufficiently evidenced by a Board Resolution.
- (c) Before the Trustee acts or refrains from acting, it may consult with counsel or require an Officers' Certificate. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on a Board Resolution, the written advice of counsel acceptable to the Trustee, a certificate of an Officer or Officers delivered pursuant to Section 1.2, an Officers' Certificate or an Opinion of Counsel.
- (d) The Trustee may act through agents or attorneys and shall not be responsible for the misconduct or negligence of any agent or attorney appointed with due care.
- (e) The Trustee shall not be liable for any action it takes or omits to take in good faith which it believes to be authorized or within its discretion or rights or powers.
- (f) The Trustee shall not be required to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder, or in the exercise of its rights or powers, if it shall have reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.
- (g) Except during the continuance of an Event of Default, the Trustee undertakes to perform such duties and only such duties as are specifically set forth in this Indenture, and no implied covenants or obligations shall be read into this Indenture against the Trustee.
- (h) The Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer, unless it shall be proved that the Trustee was negligent in ascertaining the pertinent facts.
- (i) The Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the Holders of a majority in aggregate principal amount of the Outstanding Securities (pursuant to Section 5.8) relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee, under this Indenture.
- (j) The Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee shall determine to make such further inquiry or investigation, it shall be entitled to examine the books, records and premises of the Company, personally or by agent or attorney.
- (k) Any permissive right of the Trustee hereunder shall not be construed to be a duty.

(l) The Trustee shall not be charged with knowledge of any Event of Default, other than as described in Section 5.1(1) or (2), unless and except to the extent actually known by a Responsible Officer of the Trustee or written notice thereof is received by the Trustee at its Corporate Trust Office.

Notwithstanding anything contained herein to the contrary, in case an Event of Default with respect to the Securities of any series has occurred and is continuing, and is known to the Trustee, the Trustee shall exercise, with respect to Securities of such series, such of the rights and powers vested in it by this Indenture, and shall use the same degree of care and skill in their exercise, as a prudent individual would exercise or use under the circumstances in the conduct of his or her own affairs.

SECTION 6.2. TRUSTEE MAY HOLD SECURITIES. The Trustee, any Paying Agent, any Registrar or any other agent of the Company, in its individual or any other capacity, may become the owner or pledgee of Securities and coupons and, subject to Sections 310(b) and 311 of the Trust Indenture Act, may otherwise deal with the Company, an Affiliate or Subsidiary with the same rights it would have if it were not Trustee, Paying Agent, Registrar or such other agent.

SECTION 6.3. MONEY HELD IN TRUST. Subject to the provisions of Section 4.8 and the last paragraph of Section 9.3, all moneys received by the Trustee shall, until used or applied as herein provided, be held in trust for the purposes for which they were received, but need not be segregated from other funds except to the extent required by law. The Trustee shall be under no liability for investment of or interest on any money received by it hereunder except as otherwise agreed with the Company. Except for amounts deposited pursuant to Article Four, so long as no Event of Default shall have occurred and be continuing, all interest allowed on any such moneys shall be paid from time to time to the Company upon a Company Order. Money held by the Trustee in trust hereunder need not be segregated from other funds except to the extent required by law.

SECTION 6.4. TRUSTEE'S DISCLAIMER. The recitals contained herein and in the Securities, except the Trustee's certificate of authentication, shall be taken as the statements of the Company, and the Trustee assumes no responsibility for their correctness. The Trustee makes no representation as to the validity or adequacy of this Indenture or the Securities or any coupon, except that the Trustee represents and warrants that it is duly authorized to execute and deliver this Indenture, authenticate the Securities and perform its obligations hereunder and thereunder; that the statements made by it in a Statement of Eligibility and Qualification on Form T-1 supplied or to be supplied to the Company in connection with the registration of any Securities are and at the time of delivery will be true and accurate; and that such Statement complies and at the time of delivery will comply with the requirements of the Trust Indenture Act and the Securities Act, in each case, applicable to such Statement. The Trustee shall not be accountable for the Company's use of the proceeds from the Securities or for monies paid over to the Company pursuant to the Indenture.

SECTION 6.5. NOTICE OF DEFAULTS. If a Default occurs and is continuing with respect to the Securities of any series and if it is known to a Responsible Officer of the Trustee, the Trustee shall, within 90 days after it occurs, transmit, in the manner and to the extent provided in Section 313(c) of the Trust Indenture Act, notice of all uncured Defaults known to it; provided, however, that, except in the case of a Default in payment on the Securities of any series, the Trustee may withhold the notice if and so long as a Responsible Officer in good faith determines that withholding such notice is in the interests of Holders of Securities of that series; provided, further, that in the case of any default or breach of the character specified in Section 5.1(3) with respect to the Securities and coupons of such series, no such notice to Holders shall be given until at least 90 days after the occurrence thereof.

SECTION 6.6. REPORTS BY TRUSTEE TO HOLDERS. (a) Within 60 days after each May 15 of each year commencing with the first May 15 after the first issuance of Securities pursuant to this Indenture, the Trustee shall transmit by mail to all Holders of Securities as provided in Section 313(c) of the Trust Indenture Act a brief report dated as of such May 15 if required by and in compliance with Section 313(a) of the Trust Indenture Act. A copy of each report shall, at the time of such transmission to Holders, be filed by the Trustee with each stock exchange, if any, upon which the Securities are listed, with the Commission and with the Company. The Company will promptly notify the Trustee when the Securities are listed on any stock exchange and of any delisting thereof.

(b) The Trustee shall from time to time transmit by mail to all Holders of Securities as provided in Section 313(c) of the Trust Indenture Act, such reports as are required to be filed pursuant to Section 313(b) of the Trust Indenture Act.

SECTION 6.7. SECURITY HOLDER LISTS. The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Holders of Securities of each series. If the Trustee is not the Registrar, the Company shall furnish to the Trustee semiannually on or before the last day of June and December in each year, and at such other times as the Trustee may request in writing, a list, in such form and as of such date as the Trustee may reasonably require, containing all the information in the possession or control of the Registrar, the Company or any of its Paying Agents other than the Trustee as to the names and addresses of Holders of Securities of each such series. If there are Bearer Securities of any series Outstanding, even if the Trustee is the Registrar, the Company shall furnish to the Trustee such a list containing such information with respect to Holders of such Bearer Securities only.

SECTION 6.8. COMPENSATION AND INDEMNITY. (a) The Company shall pay to the Trustee from time to time such reasonable compensation for its services as the Company and the Trustee may agree in writing from time to time. The Trustee's compensation shall not be limited by any law on compensation of a trustee of an express trust. The Company shall reimburse the Trustee upon request for all reasonable expenses, disbursements and advances incurred by it in connection with the performance of its duties under this Indenture, except any such expense, disbursement or advance as may be attributable to its negligence or bad faith. Such expenses shall include the reasonable compensation and expenses of the Trustee's agents and counsel.

(b) The Company shall indemnify the Trustee for, and hold it harmless against, any and all loss, liability, damage, claim or expense (including attorneys fees and expenses, and including taxes other than taxes based upon, measured by or determined by the income of the Trustee), including without limitation the costs and expenses of defending itself against any third-party claim (whether asserted by any Holder or any other Person (other than the Company to the extent of any claim brought by it against the Trustee that establishes a breach by the Trustee in the observance or performance of its duties under this Indenture)), incurred by it without negligence, willful misconduct or bad faith arising out of or in connection with its acceptance or administration of the trust or trusts hereunder, including the performance of its duties or the exercise of its powers hereunder (collectively, "Claims"). The Trustee shall notify the Company promptly of any Claim (other than Claims made by the Company against the Trustee) for which it may seek indemnity. The Company may elect to defend the Claim and, in such case, the Trustee shall cooperate in the defense. The Trustee may have separate counsel and the Company shall pay the reasonable fees and expenses of such counsel. The Company need not pay for any settlement made without its consent.

(c) The Company need not reimburse any expense, disbursement or advance or indemnify against any Claim incurred by the Trustee through negligence, willful misconduct or bad faith on the part of the Trustee.

(d) To secure the payment obligations of the Company pursuant to this Section, the Trustee shall have a lien prior to the Securities of any series on all money or property held or collected by the Trustee, except that held in trust to pay principal, premium, if any, and interest on particular Securities.

(e) When the Trustee incurs expenses or renders services in connection with an Event of Default specified in Section 5.1(4) or Section 5.1(5), the expenses (including the reasonable charges and expenses of its counsel) and the compensation for the services are intended to constitute expenses of administration under any applicable federal or state bankruptcy, insolvency or other similar law.

(f) The provisions of this Section shall survive the termination of this Indenture.

(g) The protections, agreements and indemnities afforded to the Trustee under this Section shall include any other agency to which it may be appointed or with respect to which it may serve hereunder, or in respect of any Securities under any related Board Resolution or supplemental indenture, including but not limited to registrar, paying agent, conversion agent or calculation agent.

SECTION 6.9. SEPARATE TRUSTEE; REPLACEMENT OF TRUSTEE. (a) The Company may, but need not, appoint a separate Trustee for any one or more series of Securities. The resignation or removal of the Trustee and the appointment of a successor Trustee shall become effective only upon the successor Trustee's acceptance of appointment as provided in Section 6.10. In the event of an appointment of a separate Trustee for any one or more series of Securities, the allocation of responsibilities between the separate Trustees shall be determined at that time.

(b) The Trustee may resign at any time with respect to the Securities of any one or more series by giving written notice thereof to the Company. If the instrument of acceptance by a successor Trustee required by Section 6.10 shall not have been delivered to the Trustee within 30 days after the giving of such notice of resignation, the resigning Trustee may petition any court of competent jurisdiction for the appointment of a successor Trustee with respect to the Securities of such series.

(c) The Holders of a majority in aggregate principal amount of the Outstanding Securities of any series may remove the Trustee with respect to any one or more series by so notifying the Trustee and the Company in writing and may appoint a successor Trustee for such series with the Company's consent.

If an instrument of acceptance by a successor Trustee required by Section 6.10 shall not have been delivered to the Trustee within 30 days after the giving of such notice of removal, the Trustee being removed may petition any court of competent jurisdiction for the appointment of a successor Trustee with respect to the Securities of such series.

(d) If at any time:

(1) the Trustee fails to comply with Section 310(b) of the Trust Indenture Act after written request therefor by the Company or by any Holder who has been a bona fide Holder of a Security for at least six months, or

(2) the Trustee shall cease to be eligible under Section 6.11 hereof or Section 310(a) of the Trust Indenture Act and shall fail to resign after written request therefor by the Company or by any Holder of a Security who has been a bona fide Holder of a Security for at least six months; or

(3) the Trustee becomes incapable of acting, is adjudged a bankrupt or an insolvent or a receiver or public officer takes charge of the Trustee or its property or affairs for the purpose of rehabilitation, conservation or liquidation,

then, in any such case, (i) the Company may remove the Trustee with respect to all Securities, or (ii) subject to Section 315(e) of the Trust Indenture Act, any Holder who has been a bona fide Holder of a Security for at least six months may, on behalf of himself and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee with respect to all Securities and the appointment of a successor Trustee or Trustees.

(e) If the Trustee resigns or is removed or becomes incapable of acting or if a vacancy exists in the office of Trustee for any reason, with respect to Securities of one or more series, the Company shall promptly appoint a successor Trustee with respect to the Securities of that or those series (it being understood that any such successor Trustee may be appointed with respect to the Securities of one or more or all of such series and that at any time there shall be only one Trustee with respect to the Securities of any particular series) and shall comply with the applicable requirements of Section 6.10. If, within one year after such resignation, removal or incapability, or the occurrence of such vacancy, a successor Trustee with respect to the Securities of any series shall be appointed by Act of the Holders of a majority in principal amount of the Outstanding Securities of such series delivered to the Company and the retiring Trustee, the successor Trustee so appointed shall, forthwith upon its acceptance of such appointment in accordance with the applicable requirements of Section 6.10, become the successor Trustee with respect to the Securities of such series and to that extent supersede the successor Trustee appointed by the Company. If no successor Trustee with respect to the Securities of any series shall have been so appointed by the Company or the Holders and accepted appointment in the manner required by Section 6.10, then, subject to Section 315(e) of the Trust Indenture Act, any Holder who has been a bona fide Holder of a Security of such series for at least six months may, on behalf of himself and all others similarly situated, petition any court of competent jurisdiction for the appointment of a successor Trustee with respect to the Securities of such series.

SECTION 6.10. ACCEPTANCE OF APPOINTMENT BY SUCCESSOR. (a) In case of the appointment hereunder of a successor Trustee with respect to all Securities, every such successor Trustee shall execute, acknowledge and deliver to the Company and to the retiring Trustee an instrument accepting such appointment. Thereupon, the resignation or removal of the retiring Trustee shall become effective, and the successor Trustee, without further act, deed or conveyance, shall become vested with all the rights, powers and duties of the retiring Trustee; but, on the request of the Company or the successor Trustee, such retiring Trustee shall, upon payment of its charges, execute and deliver an instrument transferring to such successor Trustee all the rights, powers and trusts of the retiring Trustee and shall duly assign, transfer and deliver to such successor Trustee all property and money held by such retiring Trustee hereunder.

(b) In case of the appointment hereunder of a successor Trustee with respect to the Securities of one or more (but not all) series, the Company, the retiring Trustee and such successor Trustee shall execute and deliver an indenture supplemental hereto wherein such successor Trustee shall accept such appointment and which (i) shall contain such provisions as shall be necessary or desirable to transfer and confirm to, and to vest in, such successor Trustee all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor Trustee relates, (ii) if the retiring Trustee is not retiring with respect to all Securities, shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series as to which the retiring Trustee is not retiring shall continue to be vested in the retiring Trustee, and (iii) shall add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee, it being understood that nothing herein or in such supplemental

indenture shall constitute such Trustees co-trustees of the same trust and that each such Trustee shall be trustee of a trust or trusts hereunder separate and apart from any trust or trusts hereunder administered by any other such Trustee and upon the execution and delivery of such supplemental indenture the resignation or removal of the retiring Trustee shall become effective to the extent provided therein and each such successor Trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor Trustee relates; but, on request of the Company or any successor Trustee, such retiring Trustee shall duly assign, transfer and deliver to such successor Trustee all property and money held by such retiring Trustee hereunder with respect to the Securities of that or those series to which the appointment of such successor Trustee relates.

(c) No successor Trustee shall accept its appointment unless at the time of such acceptance such successor Trustee shall be qualified and eligible under the Trust Indenture Act.

(d) The Company shall give, or cause to be given, notice of each resignation and each removal of the Trustee with respect to the Securities of any series and each appointment of a successor Trustee with respect to the Securities of any series in the manner provided for notices to the Holders of Securities in Section 1.6. Each notice shall include the name of the successor Trustee with respect to the Securities of such series and the address of its Corporate Trust Office.

SECTION 6.11. ELIGIBILITY; DISQUALIFICATION. There shall at all times be a Trustee hereunder with respect to each series of Securities (which need not be the same Trustee for all series). Each Trustee hereunder shall be eligible to act as trustee under Section 310(a)(1) of the Trust Indenture Act and shall have a combined capital and surplus of at least \$100,000,000. If such corporation publishes reports of condition at least annually, pursuant to law or the requirements of federal, state, territorial or District of Columbia supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such corporation shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section, it shall resign immediately in the manner and with the effect hereinafter specified in this Article.

If the Trustee has or shall acquire a conflicting interest within the meaning of the Trust Indenture Act, the Trustee shall either eliminate such interest or resign, to the extent and in the manner provided by, and subject to the provisions of, the Trust Indenture Act and this Indenture.

SECTION 6.12. MERGER, CONVERSION, CONSOLIDATION OR SUCCESSION TO BUSINESS. Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to or acquiring all or substantially all of the corporate trust business of the Trustee, shall be the successor of the Trustee hereunder, provided such corporation shall be otherwise qualified and eligible under this Article, without the execution or filing of any paper or any further act on the part of any of the parties hereto. In case any Securities shall have been authenticated, but not delivered, by the Trustee then in office, any successor by merger, conversion or consolidation to, or by succession to or acquisition of all or substantially all of the corporate trust business of, such authenticating Trustee may adopt such authentication and deliver the Securities so authenticated with the same effect as if such successor Trustee had itself authenticated such Securities.

SECTION 6.13. APPOINTMENT OF AUTHENTICATING AGENT. The Trustee may appoint an Authenticating Agent or Agents with respect to one or more series of Securities which shall be authorized to act on behalf of the Trustee to authenticate Securities of such series issued upon original issue exchange, registration of transfer or partial redemption thereof, and Securities so authenticated shall be

entitled to the benefits of this Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee hereunder. Any such appointment shall be evidenced by an instrument in writing signed by a Responsible Officer of the Trustee, a copy of which instrument shall be promptly furnished to the Company. Wherever reference is made in this Indenture to the authentication and delivery of Securities by the Trustee or the Trustee's certificate of authentication, such reference shall be deemed to include authentication and delivery on behalf of the Trustee by an Authenticating Agent and a certificate of authentication executed on behalf of the Trustee by an Authenticating Agent. Each Authenticating Agent shall be acceptable to the Company and, except as may otherwise be provided pursuant to Section 3.1, shall at all times be a bank or trust company or corporation organized and doing business and in good standing under the laws of the United States of America or of any State or the District of Columbia, authorized under such laws to act as Authenticating Agent, having a combined capital and surplus of not less than \$1,500,000 and subject to supervision or examination by Federal or State authorities. If such Authenticating Agent publishes reports of condition at least annually, pursuant to law or the requirements of the aforesaid supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such Authenticating Agent shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. In case at any time an Authenticating Agent shall cease to be eligible in accordance with the provisions of this Section, such Authenticating Agent shall resign immediately in the manner and with the effect specified in this Section.

Any corporation into which an Authenticating Agent may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which such Authenticating Agent shall be a party, or any corporation succeeding to or acquiring the corporate agency or corporate trust business of an Authenticating Agent, shall continue to be an Authenticating Agent, provided such corporation shall be otherwise eligible under this Section, without the execution or filing of any paper or further act on the part of the Trustee or the Authenticating Agent.

An Authenticating Agent for any series of Securities may at any time resign by giving written notice of resignation to the Trustee for such series and to the Company. The Trustee for any series of Securities may at any time terminate the agency of an Authenticating Agent by giving written notice of termination to such Authenticating Agent and to the Company. Upon receiving such a notice of resignation or upon such a termination, or in case at any time such Authenticating Agent shall cease to be eligible in accordance with the provisions of this Section, the Trustee for such series may appoint a successor Authenticating Agent which shall be acceptable to the Company and shall give notice of such appointment to all Holders of Securities of the series with respect to which such Authenticating Agent will serve in the manner set forth in Section 1.6. Any successor Authenticating Agent upon acceptance of its appointment hereunder shall become vested with all the rights, powers and duties of its predecessor hereunder, with like effect as if originally named as an Authenticating Agent herein. No successor Authenticating Agent shall be appointed unless eligible under the provisions of this Section.

The Company agrees to pay to each Authenticating Agent from time to time such reasonable compensation as the Company and such Authenticating Agent agree in writing from time to time including reimbursement of its reasonable expenses for its services under this Section.

If an appointment with respect to one or more series is made pursuant to this Section, the Securities of such series may have endorsed thereon, in addition to or in lieu of the Trustee's certificate of authentication, an alternate certificate of authentication substantially in the following form:

This is one of the [Securities] [of the series designated herein and] referred to in the within-mentioned Indenture.

_____, as Trustee

By _____
as Authenticating Agent

By _____
Authorized Signatory

ARTICLE VII

CONSOLIDATION, MERGER OR SALE BY THE COMPANY

SECTION 7.1. CONSOLIDATION, MERGER OR SALE OF ASSETS. The Company may not merge or consolidate with or into any other Person, in a transaction in which it is not the surviving corporation, or sell, convey, transfer or otherwise dispose of all or substantially all of its assets to any Person, unless (i) surviving or transferee Person is organized and existing under the laws of the United States or a State thereof and such Person expressly assumes by supplemental indenture all the obligations of the Company under the Securities and any coupons appertaining thereto and under this Indenture, (ii) immediately thereafter, giving effect to such merger or consolidation, or such sale, conveyance, transfer or other disposition, no Default or Event of Default shall have occurred and be continuing and (iii) the Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel each stating that such merger, consolidation, sale, conveyance, transfer or other disposition complies with this Article and that all conditions precedent herein provided for relating to such transaction have been complied with. In the event of the assumption by a successor Person of the obligations of the Company, such successor Person shall succeed to and be substituted for the Company hereunder and under the Securities and any coupons appertaining thereto and all such obligations of the Company shall terminate.

ARTICLE VIII

SUPPLEMENTAL INDENTURES

SECTION 8.1. SUPPLEMENTAL INDENTURES WITHOUT CONSENT OF HOLDERS. Without the consent of any Holders, the Company and the Trustee, at any time and from time to time, may enter into indentures supplemental hereto for any of the following purposes:

- (1) to evidence the succession of another Person to the Company and the assumption by any such successor of the covenants and obligations of the Company herein and in the Securities (with such changes herein and therein as may be necessary or advisable to reflect such Person's legal status, if such Person is not a corporation); or
- (2) to add to the covenants of the Company for the benefit of the Holders of all or any series of Securities (and if such covenants are to be for the benefit of less than all series of Securities, stating that such covenants are expressly being included solely for the benefit of such series) or to surrender any right or power herein conferred upon the Company or to comply with any requirement of the Commission or

otherwise in connection with the qualification of this Indenture under the Trust Indenture Act or otherwise; or

(3) to add any additional Events of Default with respect to all or any series of Securities; or

(4) to add to or change any of the provisions of this Indenture to such extent as shall be necessary to facilitate the issuance of Bearer Securities (including, without limitation, to provide that Bearer Securities may be registrable as to principal only) or to facilitate or provide for the issuance of Securities in global form in addition to or in place of Securities in certificated form; or

(5) to change or eliminate any of the provisions of this Indenture, provided that any such change or elimination shall become effective only with respect to Securities which have not been issued as of the execution of such supplemental indenture or when there is no Security Outstanding of any series created prior to the execution of such supplemental indenture which is entitled to the benefit of such provision; or

(6) to add guarantees with respect to any or all of the Securities; or

(7) to convey, transfer, assign, mortgage or pledge any property to or with the Trustee; or

(8) to supplement any of the provisions of this Indenture to such extent as shall be necessary to permit or facilitate the defeasance and discharge of any series of Securities pursuant to Sections 4.1, 4.4, and 4.5; provided that any such action shall not adversely affect the interests of the Holders of Securities of such series and any related coupons or any other series of Securities in any material respect; or

(9) to establish the form or terms of Securities of any series as permitted by Sections 2.1 and 3.1; or

(10) to provide for the delivery of indentures supplemental hereto or the Securities of any series in or by means of any computerized, electronic or other medium, including without limitation by computer diskette; or

(11) to evidence and provide for the acceptance of appointment hereunder by a successor or separate Trustee with respect to the Securities of one or more series and/or to add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee, pursuant to the requirements of Article VI; or

(12) if allowed without penalty under applicable laws and regulations, to permit payment in the United States (including any of the states and the District of Columbia), its territories, its possessions and other areas subject to its jurisdiction of principal, premium, if any, or interest, if any, on Bearer Securities or coupons, if any; or

(13) to correct or supplement any provision herein which may be inconsistent with any other provision herein or to cure any ambiguity or omission or to correct any mistake; or

(14) to make any other provisions with respect to matters or questions arising under this Indenture, provided such action shall not adversely affect the interests of the Holders of Securities of any series in any material respect.

SECTION 8.2. WITH CONSENT OF HOLDERS. Without prior notice to any Holder but with the written consent of the Holders of a majority of the aggregate principal amount of the Outstanding Securities of each series adversely affected by such supplemental indenture (with the Securities of each series voting as a class), the Company and the Trustee may enter into an indenture or indentures supplemental hereto to add any provisions to or to change or eliminate any provisions of this Indenture or of any other indenture supplemental hereto or to modify the rights of the Holders of Securities of each such series; provided, however, that without the consent of the Holder of each Outstanding Security adversely affected thereby, a supplemental indenture under this Section may not:

(1) change the Stated Maturity of the principal of, or any installment of principal of or interest on, any Security, or reduce the principal amount thereof or the rate of interest thereon or any premium payable upon the redemption thereof, or reduce the amount of the principal of an Original Issue Discount Security or Indexed Security that would be due and payable upon a declaration of acceleration of the Maturity thereof pursuant to Section 5.2, or change any Place of Payment where, or the coin or currency in which any Securities or any premium or the interest thereon is payable, or impair the right to institute suit for the enforcement of any such payment on or after the Stated Maturity thereof (or, in the case of redemption, on or after the Redemption Date);

(2) reduce the percentage in principal amount of the Outstanding Securities of any series, the consent of whose Holders is required for any such supplemental indenture, or the consent of whose Holders is required for any waiver of compliance with certain provisions of this Indenture or certain defaults hereunder and their consequences provided for in this Indenture;

(3) except to the extent provided in Section 8.1(11), make any change in Section 5.7 or this 8.2 except to increase any percentage or to provide that certain other provisions of this Indenture cannot be modified or waived except with the consent of the Holders of each Outstanding Security affected thereby, provided, however, that this clause shall not be deemed to require the consent of any Holders with respect to changes in the references to the "Trustee" and concomitant changes in this Section, in accordance with the requirements of Sections 6.10(b) and 8.1(11);

(4) release any guarantors from their guarantees of the Securities, or, except as contemplated in any supplemental indenture, make any change in a guarantee of a Security that would adversely affect the interests of the Holders; or

(5) modify the ranking or priority of the Securities.

For the purposes of this Section 8.2, if the Securities of any series are issuable upon the exercise of warrants, any holder of an unexercised and unexpired warrant with respect to such series shall not be

deemed to be a Holder of Outstanding Securities of such series in the amount issuable upon the exercise of such warrants.

A supplemental indenture which changes or eliminates any covenant or other provision of this Indenture which has expressly been included solely for the benefit of one or more particular series of Securities, or which modifies the rights of the Holders of Securities of such series with respect to such covenant or other provision, shall be deemed not to affect the rights under this Indenture of the Holders of Securities of any other series.

It is not necessary under this Section 8.2 for the Holders to consent to the particular form of any proposed supplemental indenture, but it is sufficient if they consent to the substance thereof.

SECTION 8.3. COMPLIANCE WITH TRUST INDENTURE ACT. Every amendment to this Indenture or the Securities of one or more series shall be set forth in a supplemental indenture that complies with the Trust Indenture Act as then in effect.

SECTION 8.4. EXECUTION OF SUPPLEMENTAL INDENTURES. In executing, or accepting the additional trusts created by, any supplemental indenture permitted by this Article or the modification thereby of the trusts created by this Indenture, the Trustee shall be entitled to receive, and shall be fully protected in relying upon, an Opinion of Counsel stating that the execution of such supplemental indenture is authorized or permitted by this Indenture. The Trustee may, but shall not be obligated to, enter into any such supplemental indenture which adversely affects the Trustee's own rights, duties or immunities under this Indenture or otherwise. The Trustee shall enter into any such supplemental indenture presented to it by the Company in compliance with this Article 8 if such supplemental indenture does not adversely affect the Trustee's own rights, duties or immunities under this Indenture or otherwise. In formulating its opinion on such matters the Trustee shall be entitled to rely on such evidence as it deems appropriate, which may be or include, without limitation, reliance solely on an opinion or advice of its counsel.

SECTION 8.5. EFFECT OF SUPPLEMENTAL INDENTURES. Upon the execution of any supplemental indenture under this Article, this Indenture shall be modified in accordance therewith, and such supplemental indenture shall form a part of this Indenture for all purposes; and every Holder of Securities theretofore or thereafter authenticated and delivered hereunder and of any coupon appertaining thereto shall be bound thereby; provided that if such supplemental indenture makes any of the changes described in clauses (1) through (4) of the first proviso to Section 8.2, such supplemental indenture shall bind each Holder of a Security who has consented to it and every subsequent Holder of such Security or any part thereof.

SECTION 8.6. REFERENCE IN SECURITIES TO SUPPLEMENTAL INDENTURES. Securities, including any coupons, of any series authenticated and delivered after the execution of any supplemental indenture pursuant to this Article may, and shall if required by the Trustee, bear a notation in form approved by the Trustee as to any matter provided for in such supplemental indenture. If the Company shall so determine, new Securities including any coupons of any series so modified as to conform, in the opinion of the Trustee and the Company, to any such supplemental indenture may be prepared and executed by the Company and authenticated and delivered by the Trustee in exchange for Outstanding Securities including any coupons of such series.

ARTICLE IX

COVENANTS

SECTION 9.1. PAYMENT OF PRINCIPAL, PREMIUM, IF ANY, AND INTEREST. The Company covenants and agrees for the benefit of the Holders of each series of Securities that it will duly and punctually pay the principal of, premium, if any, and interest on the Securities of that series in accordance with the terms of the Securities of such series, any coupons appertaining thereto and this Indenture. An installment of principal, premium, if any, or interest shall be considered paid on the date it is due if the Trustee or Paying Agent holds on that date money designated for and sufficient to pay the installment.

SECTION 9.2. MAINTENANCE OF OFFICE OR AGENCY. If Securities of a series are issued as Registered Securities, the Company will maintain in each Place of Payment for any series of Securities an office or agency where Securities of that series may be presented or surrendered for payment, where Securities of that series may be surrendered for registration of transfer or exchange and where notices and demands to or upon the Company in respect of the Securities of that series and this Indenture may be served. If Securities of a series are issuable as Bearer Securities, the Company will maintain, (i) subject to any laws or regulations applicable thereto, an office or agency in a Place of Payment for that series which is located outside the United States, where Securities of that series and related coupons may be presented and surrendered for payment; provided, however, that if the Securities of that series are listed on The International Stock Exchange of the United Kingdom and the Republic of Ireland Limited, the Luxembourg Stock Exchange or any other stock exchange located outside the United States and such stock exchange shall so require, the Company will maintain a Paying Agent for the Securities of that series in London, Luxembourg or any other required city located outside the United States, as the case may be, so long as the Securities of that series are listed on such exchange, and (ii) subject to any laws or regulations applicable thereto, an office or agency in a Place of Payment for that series which is located outside the United States where Securities of that series may be surrendered for exchange and where notices and demands to or upon the Company in respect of the Securities of that series and this Indenture may be served. The Company will give prompt written notice to the Trustee of the location, and any change in the location, of any such office or agency. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office of the Trustee, except that Bearer Securities of that series and the related coupons unless otherwise specified in the Supplemental Indenture for such Series, may be presented and surrendered for payment and conversion at the offices specified in the Security, in London, England, and the Company hereby appoints the Trustee as its agent to receive all such presentations, surrenders, notices and demands (provided, however, that the foregoing appointment shall not impose or imply any obligation on the part of the Trustee to maintain any office for any such purposes other than the Corporate Trust Office.)

Unless otherwise specified as contemplated by Section 3.1, no payment of principal, premium or interest on Bearer Securities shall be made at any office or agency of the Company in the United States, by check mailed to any address in the United States, by transfer to an account located in the United States or upon presentation or surrender in the United States of a Bearer Security or coupon for payment, even if the payment would be credited to an account located outside the United States; provided, however, that, if the Securities of a series are denominated and payable in Dollars, payment of principal of and any premium or interest on any such Bearer Security shall be made at an office of a Paying Agent of the Company in the Borough of Manhattan, The City of New York, if (but only if) payment in Dollars of the full amount of such principal, premium or interest, as the case may be, at all offices or agencies outside the United States maintained for the purpose by the Company in accordance with this Indenture is illegal or effectively precluded by exchange controls or other similar restrictions.

Subject to the preceding paragraphs, the Company may also from time to time designate one or more other offices or agencies where the Securities (including any coupons, if any) of one or more series may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency in each Place of Payment for Securities (including any coupons, if any) of any series for such purposes. The Company will give prompt written notice to the Trustee of any such designation or rescission and of any change in the location of any such other office or agency.

Unless otherwise specified as contemplated by Section 3.1, the Trustee shall initially serve as Paying Agent. The Paying Agent may make reasonable rules not inconsistent herewith for the performance of its functions.

SECTION 9.3. MONEY FOR SECURITIES TO BE HELD IN TRUST; UNCLAIMED MONEY. If the Company shall at any time act as its own Paying Agent with respect to any series of Securities, it will, on or before each due date of the principal of, premium, if any, or interest on any of the Securities of that series, segregate and hold in trust for the benefit of the Persons entitled thereto a sum sufficient to pay the principal, premium, if any, or interest so becoming due until such sums shall be paid to such Persons or otherwise disposed of as herein provided and will promptly notify the Trustee in writing of any failure so to act.

Whenever the Company shall have one or more Paying Agents for any series of Securities, it will, on or prior to each due date of the principal of or any premium or interest on any Securities of that series, deposit with a Paying Agent a sum sufficient to pay such amount, such sum to be held as provided by the Trust Indenture Act, and (unless such Paying Agent is the Trustee) the Company will promptly notify the Trustee of any failure so to act.

If the Company is not acting as its own Paying Agent, the Company will cause each Paying Agent for any series of Securities other than the Trustee to execute and deliver to the Trustee an instrument in which such Paying Agent shall agree with the Trustee, subject to the provisions of this Section, that such Paying Agent will:

- (1) hold all sums held by it for the payment of the principal of, premium, if any, or interest on Securities of that series in trust for the benefit of the Persons entitled thereto until such sums shall be paid to such Persons or otherwise disposed of as herein provided;
- (2) give the Trustee notice of any Default by the Company (or any other obligor upon the Securities of that series) in the making of any payment of principal, premium, if any, or interest on the Securities; and
- (3) at any time during the continuance of any such Default, upon the written request of the Trustee, forthwith pay to the Trustee all sums so held in trust by such Paying Agent. Notwithstanding anything in this Section 9.3 to the contrary, the Company may at any time, for the purpose of obtaining the satisfaction and discharge of this Indenture, or with respect to one or more series of Securities, or for any other purpose, pay, or by Company Order direct any Paying Agent to pay, to the Trustee all sums held in trust by the Company or such Paying Agent, such sums to be held by the Trustee upon the same trusts as those upon which such sums were held by the Company or such Paying Agent; and, upon such payment by any Paying Agent

to the Trustee, such Paying Agent shall be released from all further liability with respect to such money.

Subject to applicable abandoned property laws, any money deposited with the Trustee or any Paying Agent, or then held by the Company, in trust for the payment of any principal, premium or interest or other amounts on any Security of any series and remaining unclaimed for two years after such principal, premium, if any, or interest or other amounts has become due and payable shall be paid to the Company (including interest income on such funds, if any), or (if then held by the Company) shall be discharged from such trust; and the Holder of such Security and coupon, if any, shall thereafter, as an unsecured general creditor, look only to the Company for payment thereof, and all liability of the Trustee or such Paying Agent with respect to such trust money, and all liability of the Company as trustee thereof, shall thereupon cease.

SECTION 9.4. CORPORATE EXISTENCE. Subject to Article VII, the Company will at all times do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence.

SECTION 9.5. MAINTENANCE OF PROPERTIES. The Company will cause all material properties used or useful in the conduct of its business to be maintained and kept in good condition, repair and working order and supplied with all necessary equipment and will cause to be made all necessary repairs, renewals, replacements, betterments and improvements thereof, all as (and to the extent) in the judgment of the Company may be necessary or appropriate in connection with its business; provided, however, that nothing in this Section shall prevent the Company from discontinuing the operation or maintenance of any of such properties if such discontinuance is, in the judgment of the Company, desirable in the conduct of its business and not disadvantageous in any material respect to the Holders.

SECTION 9.6. REPORTS BY THE COMPANY. The Company covenants, at any time at which there are Outstanding Securities of any series issued under this Indenture:

(a) to file with the Trustee, within 30 days after the Company is required to file the same with the Commission, copies of the annual reports and of the information, documents and other reports (or copies of such portions of any of the foregoing as the Commission may from time to time by rules and regulations prescribe) which the Company may be required to file with the Commission pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934, as amended; or, if the Company is not required to file information, documents or reports pursuant to either of such sections, then to file with the Trustee and the Commission, in accordance with rules and regulations prescribed from time to time by the Commission, such of the supplementary and periodic information, documents and reports which may be required pursuant to section 13 of the Securities Exchange Act of 1934, as amended, in respect of a security listed and registered on a national securities exchange as may be prescribed from time to time in such rules and regulations;

(b) to file with the Trustee and the Commission, in accordance with the rules and regulations prescribed from time to time by the Commission, such additional information, documents and reports with respect to compliance by the Company with the conditions and covenants provided for in this Indenture, as may be required from time to time by such rules and regulations; and

(c) to transmit to all Holders of Securities within 30 days after the filing thereof with the Trustee, in the manner and to the extent provided in section 313(c) of the Trust Indenture Act, such summaries of any information, documents and reports required to be filed by the Company pursuant to subsections (a) and (b) of this Section 9.6, as may be required by rules and regulations prescribed from time to time by the Commission.

SECTION 9.7. ANNUAL REVIEW CERTIFICATE. At any time at which there are Outstanding Securities of any series issued under this Indenture, the Company covenants and agrees to deliver to the Trustee, within 120 days after the end of each fiscal year of the Company, a brief certificate from the principal executive officer, principal financial officer, or principal accounting officer as to his or her knowledge of whether the Company is in Default under this Indenture. For purposes of this Section 9.7, such compliance shall be determined without regard to any period of grace or requirement of notice provided under this Indenture.

SECTION 9.8. PAYMENT OF TAXES AND OTHER CLAIMS. At any time at which there are Outstanding Securities of any series issued under this Indenture, the Company will pay or discharge or cause to be paid or discharged, within 30 days after the Company shall have received notice that the same has become delinquent

(1) all material taxes, assessments and governmental charges levied or imposed upon the Company or any Subsidiary or upon the income, profits or property of the Company or any Subsidiary, and (2) all lawful claims for labor, materials and supplies which, if unpaid, might by law become a material lien upon the property of the Company or any Subsidiary; provided, however, that the Company shall not be required to pay or discharge or cause to be paid or discharged any such tax, assessment, charge or claim whose amount, applicability or validity is being contested in good faith by appropriate proceedings; provided, further, that the Company shall not be required to pay or discharge or cause to be paid or discharged any such tax, assessment, charge or claim unless the failure to pay or discharge such tax, assessment, charge or claim would, individually or in the aggregate with all such failures, have a material adverse effect on the Company and its Subsidiaries taken as a whole.

ARTICLE X

REDEMPTION

SECTION 10.1. APPLICABILITY OF ARTICLE. Securities (including coupons, if any) of or within any series which are redeemable in whole or in part before their Stated Maturity shall be redeemable in accordance with their terms and (except as otherwise specified in the applicable Board Resolution or supplemental indenture with respect to such Series of Securities, as contemplated by Section 3.1 for Securities of any series) in accordance with this Article.

SECTION 10.2. ELECTION TO REDEEM; NOTICE TO TRUSTEE. The election of the Company to redeem any Securities, including coupons, if any, shall be evidenced by a Board Resolution. In the case of any redemption at the election of the Company of less than all the Securities or coupons, if any, of any series of the same tenor, the Company shall, at least 60 days (45 days in the case of redemption of all Securities of any series or of any series with the same (i) Stated Maturity, (ii) period or periods within which, price or prices at which and terms and conditions upon which such Securities may or shall be redeemed or purchased, in whole or in part, at the option of the Company or pursuant to any sinking fund or analogous provision or repayable at the option of the Holder and (iii) rate or rates at which the Securities bear interest, if any, or formula pursuant to which such rate or rates accrue (collectively, the "Equivalent Principal Terms")) prior to the Redemption Date fixed by the Company (unless a shorter notice shall be satisfactory to the Trustee), notify the Trustee of such Redemption Date of the principal amount of Securities of such series to be redeemed and, if applicable, of the tenor of the Securities to be redeemed. In the case of any redemption of Securities (i) prior to the expiration of any restriction on such redemption provided in the terms of such Securities or elsewhere in this Indenture or (ii) pursuant to an election of the Company which is subject to a condition specified in the terms of such Securities, the Company shall furnish the Trustee with an Officers' Certificate evidencing compliance with such restriction or condition.

SECTION 10.3. SELECTION OF SECURITIES TO BE REDEEMED. If less than all the Securities with Equivalent Principal Terms of any series are to be redeemed (unless all of the Securities of such series and of a specified tenor are to be redeemed), the particular Securities to be redeemed shall be selected not more than 60 days prior to the Redemption Date by the Trustee, from the Outstanding Securities of such series not previously called for redemption, by such method as the Trustee shall deem fair and appropriate and which may provide for the selection for redemption of portions (equal to the minimum authorized denomination for Securities (including coupons, if any) of that series with Equivalent Principal Terms or any integral multiple thereof) of the principal amount of Securities (including coupons, if any) of such series with Equivalent Principal Terms of a denomination larger than the minimum authorized denomination for Securities of that series. Unless otherwise provided in the terms of a particular series of Securities, the portions of the principal of Securities so selected for partial redemption shall be equal to the minimum authorized denomination of the Securities of such series, or an integral multiple thereof, and the principal amount which remains outstanding shall not be less than the minimum authorized denomination for Securities of such series.

The Trustee shall promptly notify the Company in writing of the Securities selected for redemption and, in the case of any Securities selected for partial redemption, the principal amount thereof to be redeemed. If the Securities (including coupons, if any) of a series having different issue dates, interest rates and maturities (whether or not originally issued in a Periodic Offering) are to be redeemed, the Company in its discretion may select the particular Securities or portions thereof to be redeemed and shall notify the Trustee thereof by such time prior to the relevant redemption date or dates as the Company and the Trustee may agree.

For purposes of this Indenture, unless the context otherwise requires, all provisions relating to the redemption of Securities (including coupons, if any) shall relate, in the case of any Securities (including coupons, if any) redeemed or to be redeemed only in part, to the portion of the principal amount of such Securities (including coupons, if any) which has been or is to be redeemed.

SECTION 10.4. NOTICE OF REDEMPTION. Unless otherwise specified as contemplated by Section 3.1, notice of redemption shall be given by first-class mail, postage prepaid, mailed not less than 30 days nor more than 60 days prior to the Redemption Date, unless a shorter period is specified in the Securities to be redeemed, to each Holder of the Securities to be redeemed.

All notices of redemption shall state:

- (1) the Redemption Date;
- (2) the Redemption Price and the amount of accrued interest, if any, to be paid;
- (3) if less than all the Outstanding Securities of a series are to be redeemed, the identification (and, in the case of partial redemption of any Securities, the principal amounts) of the particular Security or Securities to be redeemed;
- (4) in case any Security is to be redeemed in part only, the notice which relates to such Security shall state that on and after the Redemption Date, upon surrender of such Security, the Holder of such Security will receive, without a charge, a new Security or Securities of authorized denominations for the principal amount thereof remaining unredeemed;
- (5) the Place or Places of Payment where such Securities are to be surrendered for payment for the Redemption Price;

(6) that Securities of the series called for redemption and all unmatured coupons, if any, appertaining thereto must be surrendered to the Paying Agent to collect the Redemption Price;

(7) that, on the Redemption Date, the Redemption Price will become due and payable upon each such Security, or the portion thereof, to be redeemed and, if applicable, that interest thereon will cease to accrue on and after said date;

(8) that the redemption is for a sinking fund, if such is the case;

(9) that, unless otherwise specified in such notice, Bearer Securities of any series, if any, surrendered for redemption must be accompanied by all coupons maturing subsequent to the Redemption Date or the amount of any such missing coupon or coupons will be deducted from the Redemption Price, unless security or indemnity satisfactory to the Company, the Trustee and any Paying Agent is furnished;

(10) if Bearer Securities of any series are to be redeemed and any Registered Securities of such series are not to be redeemed and if such Bearer Securities may be exchanged for Registered Securities not subject to redemption on this Redemption Date pursuant to Section 3.5 or otherwise, the last date, as determined by the Company, on which such exchanges may be made; and

(11) the CUSIP number, if any, of such Securities. Notice of redemption of Securities to be redeemed at the election of the Company shall be given by the Company or, at the Company's request, by the Trustee in the name and at the expense of the Company (provided that the Company prepare and provide to the Trustee the form of such notice, or, if acceptable to the Trustee, provides sufficient information to enable the Trustee to prepare such notice, in each case on a timely basis.)

SECTION 10.5. DEPOSIT OF REDEMPTION PRICE. On or prior to any Redemption Date, the Company shall deposit with the Trustee or with a Paying Agent (or, if the Company is acting as its own Paying Agent, segregate and hold in trust as provided in Section 9.3) an amount of money in the currency or currencies (including currency units or composite currencies) in which the Securities of such series are payable (except as otherwise specified pursuant to Section 3.1 for the Securities of such series) sufficient to pay on the Redemption Date the Redemption Price of, and (unless the Redemption Date shall be an Interest Payment Date) interest accrued to the Redemption Date on, all Securities or portions thereof which are to be redeemed on that date.

Unless any Security by its terms prohibits any sinking fund payment obligation from being satisfied by delivering and crediting Securities (including Securities redeemed otherwise than through a sinking fund), the Company may deliver such Securities to the Trustee for crediting against such payment obligation in accordance with the terms of such Securities and this Indenture.

SECTION 10.6. SECURITIES PAYABLE ON REDEMPTION DATE. Notice of redemption having been given as aforesaid, the Securities so to be redeemed shall, on the Redemption Date, become due and payable at the Redemption Price therein specified, and from and after such date (unless the Company shall default in the payment of the Redemption Price and accrued interest) such Securities shall cease to bear interest and the coupons for any such interest appertaining to any Bearer Security so to be redeemed, except to the extent provided below, shall be void and such Securities shall cease from and after the Redemption Date to be entitled to any benefit or security under this Indenture, and the Holders thereof

shall have no right in respect of such Securities except the right to receive the Redemption Price thereof and unpaid interest to the Redemption Date. Except as provided in the next succeeding paragraph, upon surrender of any such Security, including coupons, if any, for redemption in accordance with said notice, such Security shall be paid by the Company at the Redemption Price, together with accrued interest, if any, to the Redemption Date; provided, however, that unless otherwise specified as contemplated by Section 3.1, installments of interest on Bearer Securities whose Stated Maturity is on or prior to the Redemption Date and the principal of, and premium, if any, on such Bearer Securities shall be payable only at an office or agency located outside the United States and its possessions (except as otherwise provided in Section 9.2) and, unless otherwise specified as contemplated by Section 3.1, only upon presentation and surrender of coupons for such interest; and provided, further, that, unless otherwise specified as contemplated by Section 3.1, installments of interest on Registered Securities whose Stated Maturity is on or prior to the Redemption Date shall be payable to the Holders of such Securities, or one or more Predecessor Securities, registered as such at the close of business on the relevant Record Dates according to their terms and the provisions of Section 3.7.

If any Bearer Security surrendered for redemption shall not be accompanied by all appurtenant coupons maturing after the Redemption Date, such Bearer Security may be paid after deducting from the Redemption Price an amount equal to the face amount of all such missing coupons, or the surrender of such missing coupon or coupons may be waived by the Company and the Trustee if there be furnished to them such security or indemnity as they may require to save each of them and any Paying Agent harmless. If thereafter the Holder of such Bearer Security shall surrender to the Trustee or any Paying Agent any such missing coupon in respect of which a deduction shall have been made from the Redemption Price, such Holder shall be entitled to receive the amount so deducted; provided, however, that interest represented by coupons shall be payable only at an office or agency located outside of the United States (except as otherwise provided pursuant to Section 9.2) and, unless otherwise specified as contemplated by Section 3.1, only upon presentation and surrender of those coupons.

If any Security called for redemption shall not be so paid upon surrender thereof for redemption, the principal (and premium, if any) shall, until paid, bear interest from the Redemption Date at the rate prescribed therefor in the Security.

SECTION 10.7. SECURITIES REDEEMED IN PART. Upon surrender of a Security that is redeemed only in part at any Place of Payment therefor (with, if the Company or the Trustee so require, due endorsement by, or a written instrument of transfer in form satisfactory to the Company and the Trustee duly executed by, the Holder thereof or his attorney duly authorized in writing), the Company shall execute and the Trustee shall authenticate and deliver to the Holder of that Security, without service charge, a new Security or Securities of the same series, having the same form, terms and Stated Maturity, in any authorized denomination equal in aggregate principal amount to the unredeemed portion of the principal amount of the Security surrendered.

ARTICLE XI

SINKING FUNDS

SECTION 11.1. APPLICABILITY OF ARTICLE. The provisions of this Article shall be applicable to any sinking fund for the retirement of Securities of a series except as otherwise specified as contemplated by Section 3.1 for Securities of such series.

The minimum amount of any sinking fund payment provided for by the terms of Securities of any series is herein referred to as a "mandatory sinking fund payment," and any payment in excess of such minimum amount provided for by the terms of Securities of any series is herein referred to as an "optional

sinking fund payment." If provided for by the terms of Securities of any series, the cash amount of any sinking fund payment may be subject to reduction as provided in Section 11.2. Each sinking fund payment shall be applied to the redemption of Securities of any series as provided for by the terms of Securities of such series.

SECTION 11.2. SATISFACTION OF SINKING FUND PAYMENTS WITH SECURITIES. The Company (i) may deliver Outstanding Securities of a series (other than any previously called for redemption) together, in the case of Bearer Securities of such series, with all unmatured coupons appertaining thereto and (ii) may apply as a credit Securities of a series which have been redeemed either at the election of the Company pursuant to the terms of such Securities or through the application of permitted optional sinking fund payments pursuant to the terms of such Securities, in each case in satisfaction of all or any part of any sinking fund payment with respect to the Securities of such series required to be made pursuant to the terms of such Securities as provided for by the terms of such series; provided that such Securities have not been previously so credited. Such Securities shall be received and credited for such purpose by the Trustee at the Redemption Price specified in such Securities for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly.

SECTION 11.3. REDEMPTION OF SECURITIES FOR SINKING FUND. Not less than 60 days prior to each sinking fund payment date for any series of Securities, the Company will deliver to the Trustee an Officers' Certificate specifying the amount of the next ensuing sinking fund payment for that series pursuant to the terms of that series, the portion thereof, if any, which is to be satisfied by payment of cash and the portion thereof, if any, which is to be satisfied by delivering and crediting Securities of that series pursuant to Section 11.2 and will also deliver to the Trustee any Securities to be so delivered. Not less than 30 days before each such sinking fund payment date the Trustee shall select the Securities to be redeemed upon such sinking fund payment date in the manner specified in Section 10.3 and cause notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in Section 10.4. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Sections 10.6 and 10.7.

This Indenture may be executed in any number of counterparts, each of which shall be an original, but such counterparts shall together constitute but one instrument.

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed, and their respective corporate seals to be hereunto affixed and attested, all as of the day and year first above written.

ADVANCED ENERGY INDUSTRIES, INC.

By: _____
Title: _____

[Seal]

Attest: _____ Title: _____

_____, as Trustee

By: _____
Title: _____

[Seal]

Attest: _____ Title: _____

Exhibit 5.1

November 14, 2003

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

Ladies and Gentlemen:

We are acting as counsel to Advanced Energy Industries, Inc., a Delaware corporation (the "Company"), in connection with the Company's registration statement on Form S-3 (the "Registration Statement"), filed with the Securities and Exchange Commission relating to the proposed public offering of the following securities with an aggregate initial public offering price of up to \$250,000,000: (i) one or more series of senior or subordinated debt securities (the "Debt Securities") and (ii) shares of the Company's common stock, par value \$.001 per share (the "Common Stock"), including any shares of Common Stock that may be issued upon conversion of or in exchange for Debt Securities, all of which may be offered and sold from time to time as set forth in the prospectus which forms a part of the Registration Statement (the "Prospectus"), and as to be set forth in one or more supplements to the Prospectus (each, a "Prospectus Supplement"). The Debt Securities and the Common Stock are herein referred to as "Securities." This opinion letter is furnished to you at your request to enable you to fulfill the requirements of Item 601(b)(5) of Regulation S-K, 17 C.F.R. Section 229.601(b)(5), in connection with the Registration Statement.

For purposes of this opinion letter, we have examined copies of the following documents:

1. An executed copy of the Registration Statement.
2. The Restated Certificate of Incorporation of the Company, as certified by the Secretary of State of the State of Delaware on November 12, 2003 and by the Assistant Secretary of the Company on the date hereof as then being complete, accurate and in effect (the "Certificate of Incorporation").

3. The Bylaws of the Company, as certified by the Assistant Secretary of the Company on the date hereof as then being complete, accurate and in effect (the "Bylaws").

4. Resolutions of the Board of Directors of the Company adopted by unanimous written consent on November 14, 2003, as certified by the Assistant Secretary of the Company on the date hereof as then being complete, accurate and in effect, relating to the filing by the Company of the Registration Statement and related matters.

In our examination of the aforesaid documents, we have assumed the genuineness of all signatures, the legal capacity of all natural persons, the accuracy and completeness of all documents submitted to us, the authenticity of all original documents, and the conformity to authentic original documents of all documents submitted to us as copies (including telecopies). This opinion letter is given, and all statements herein are made, in the context of the foregoing.

For purposes of this opinion letter, we have assumed that

(i) the issuance, sale, amount, and terms of the Securities to be offered from time to time will be duly authorized and established by proper action of the Board of Directors of the Company, consistent with the procedures and terms described in the Registration Statement (each, a "Board Action") and in accordance with the Certificate of Incorporation, the Bylaws and applicable Delaware law, in a manner that does not violate any law, government or court-imposed order or restriction or agreement or instrument then binding on the Company or otherwise impair the legal or binding nature of the obligations represented by the applicable Securities;

(ii) the Registration Statement will have been declared effective under the Securities Act of 1933, as amended, and no stop order suspending its effectiveness will have been issued and remain in effect;

(iii) the Debt Securities will be issued pursuant to one or more indentures between the Company and a financial institution identified therein as trustee, in a form that will have been approved by the Board of Directors of the Company, for which the governing law shall be the laws of the State of New York (each, an "Indenture");

(iv) any Indenture under which any Debt Securities are issued will be qualified under the Trust Indenture Act of 1939, as amended;

(v) the Securities will be delivered against payment of valid consideration therefor and in accordance with the terms of the applicable Board Action authorizing such sale and any applicable underwriting agreement or purchase agreement and as contemplated by the Registration Statement and/or the applicable Prospectus Supplement; and

(vi) the Company will remain a Delaware corporation.

This opinion letter is based as to matters of law solely on applicable provisions of the following, as currently in effect: (i) the Delaware General Corporation Law, as amended, and (ii) as to the opinion given in paragraph (a), the laws of the State of New York. We express no opinion herein as to any other laws, statutes, ordinances, rules, or regulations. As used herein, the term "Delaware General Corporation Law, as amended" includes the statutory provisions contained therein, all applicable provisions of the Delaware Constitution and reported judicial decisions interpreting these laws.

Based upon, subject to and limited by the foregoing, we are of the opinion that:

(a) Following (i) due execution and delivery of an applicable Indenture by the Company and the Trustee named therein, (ii) final action of the Board of Directors duly authorizing the issuance of any series of Debt Securities, the terms of which have been duly established in accordance with the provisions of the Indenture, (iii) due authentication by the Trustee, and (iv) due execution and delivery of such Debt Securities on behalf of the Company against payment therefor in accordance with the terms of such Board Action, any applicable underwriting agreement or purchase agreement, the Indenture and any applicable supplemental indenture, and as contemplated by the Registration Statement and/or the applicable Prospectus Supplement, the Debt Securities will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

(b) Following (i) final action of the Board of Directors of the Company authorizing an issuance of Common Stock (including any shares of Common Stock issuable upon conversion of or exchange for any Debt Securities) and (ii) issuance and delivery of certificates for Common Stock against payment therefor in

accordance with the terms of the applicable Board Action and any applicable underwriting agreement or purchase agreement, and as contemplated by the Registration Statement and/or the applicable Prospectus Supplement, or upon conversion or exchange of Debt Securities that, by their terms, are convertible into or exchangeable for Common Stock, the Common Stock will be validly issued, fully paid, and nonassessable;

To the extent that the obligations of the Company under any Indenture may be dependent upon such matters, we assume for purposes of this opinion that the Trustee will be duly organized, validly existing and in good standing under the laws of its jurisdiction of organization; that the Trustee will be duly qualified to engage in the activities contemplated by the Indenture; that the Indenture will have been duly authorized, executed and delivered by the Trustee and will constitute the valid and binding obligation of the Trustee enforceable against the Trustee in accordance with its terms; that the Trustee will be in compliance, with respect to acting as a trustee under the Indenture, with all applicable laws and regulations; and that the Trustee will have the requisite organizational and legal power and authority to perform its obligations under the Indenture.

In addition to the qualifications, exceptions and limitations elsewhere set forth in this opinion letter, our opinions expressed above are also subject to the effect of: (i) bankruptcy, insolvency, reorganization, receivership, moratorium or other laws affecting creditors' rights (including, without limitation, the effect of statutory and other law regarding fraudulent conveyances, fraudulent transfers and preferential transfers); (ii) the exercise of judicial discretion and the application of principles of equity, good faith, fair dealing, reasonableness, conscionability and materiality (regardless of whether the applicable agreements are considered in a proceeding in equity or at law).

This opinion letter has been prepared for your use in connection with the Registration Statement and speaks as of the date hereof. We assume no obligation to advise you of any changes in the foregoing subsequent to the effective date of the Registration Statement.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the reference to this firm under the caption "Legal Matters" in the Prospectus constituting a part of the Registration Statement. In giving this consent, we do not thereby admit that we are an "expert" within the meaning of the Securities Act of 1933.

Very truly yours,

/s/ Hogan & Hartson L.L.P.

HOGAN & HARTSON L.L.P.

EXHIBIT 12.1

ADVANCED ENERGY INDUSTRIES, INC. RATIO OF EARNINGS TO FIXED CHARGES (\$THOUSANDS)

	1998	1999	2000	2001
	-----	-----	-----	-----
EARNINGS:				
Pretax income from continuing operations before adjustment for minority interests in consolidated subsidiaries or income or loss from investees	\$(14,547)	\$ 30,876	\$104,861	\$(48,965)
Fixed charges	539	1,653	7,915	7,636
	-----	-----	-----	-----
Subtotal	(14,008)	32,529	112,776	(41,329)
Less:				
Minority interest pretax income of subsidiaries not incurring fixed charges	0	69	20	(145)
	-----	-----	-----	-----
Total earnings	\$(14,008)	\$ 32,460	\$112,756	\$(41,184)
	-----	-----	-----	-----
FIXED CHARGES:				
Interest expensed, excluding amortization of deferred debt issuance cost	\$ 340	\$ 1,349	\$ 7,082	\$ 6,624
Amortization of deferred debt issuance cost	0	81	616	775
Interest within rental expense	199	223	217	237
	-----	-----	-----	-----
Total fixed charges	\$ 539	\$ 1,653	\$ 7,915	\$ 7,636
	-----	-----	-----	-----
RATIO OF EARNINGS TO FIXED CHARGES	NA	19.64	14.25	NA
	=====	=====	=====	=====
DEFICIT OF EARNINGS TO FIXED CHARGES	\$(14,547)	N/A	N/A	\$(48,820)
	=====	=====	=====	=====
		Nine Months Ended September 2003		
	2002	-----		

EARNINGS:				
Pretax income from continuing operations before adjustment for minority interests in consolidated subsidiaries or income or loss from investees	\$(63,692)	\$(30,802)		
Fixed charges	12,733	8,638		
	-----	-----		
Subtotal	(50,959)	(22,164)		
Less:				
Minority interest pretax income of subsidiaries not incurring fixed charges	0	0		
	-----	-----		
Total earnings	\$(50,959)	\$(22,164)		
	-----	-----		
FIXED CHARGES:				
Interest expensed, excluding amortization of deferred debt issuance cost	\$ 11,159	\$ 7,618		
Amortization of deferred debt issuance cost	1,301	825		
Interest within rental expense	273	195		
	-----	-----		
Total fixed charges	\$ 12,733	\$ 8,638		
	-----	-----		
RATIO OF EARNINGS TO FIXED CHARGES	NA	NA		
	=====	=====		
DEFICIT OF EARNINGS TO FIXED CHARGES	\$(63,692)	\$(30,802)		
	=====	=====		

EXHIBIT 23.1

INDEPENDENT AUDITORS' CONSENT

The Board of Directors
Advanced Energy Industries, Inc.:

We consent to the use of our report dated February 11, 2003 with respect to the consolidated balance sheet of Advanced Energy Industries, Inc. (the Company) as of December 31, 2002, the related consolidated statements of operations, stockholders' equity, and cash flows for the year then ended, and the related 2002 financial statement schedule, incorporated by reference herein and to the reference to our firm under the heading "Experts" in the prospectus.

Our report refers to the Company's adoption of Statements of Financial Accounting Standards (SFAS) No. 141, Business Combinations, and No. 142, Goodwill and Other Intangible Assets, effective January 1, 2002. Our report also includes a paragraph regarding our audit of the transitional disclosures, as required by SFAS No. 141 and SFAS No. 142, applied to the financial statements as of December 31, 2001, and for each of the two years in the period then ended, which financial statements were audited by other auditors who have ceased operations, as more fully described in Note 1 to the consolidated financial statements. However, we were not engaged to audit, review, or apply any procedures to the 2001 and 2000 financial statements of the Company other than with respect to such disclosures.

/s/ KPMG LLP

*KPMG LLP
Denver, Colorado
November 13, 2003*

End of Filing

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