

Prospectus Supplement No. 6 dated September 13, 2006
(To Prospectus dated June 2, 2005)



NRG Energy, Inc.

**420,000 Shares of 4% Convertible Perpetual Preferred Stock
10,500,000 Shares of Common Stock issuable upon conversion of the Preferred Stock**

This Prospectus Supplement supplements the prospectus dated June 2, 2005 (the "Prospectus") of NRG Energy, Inc., relating to the sale by certain of our stockholders (including their pledgees, donees, assignees, transferees, successors and others who later hold any of the selling stockholders' interests) of up to 420,000 shares of preferred stock, or 10,500,000 shares of our common stock issuable upon conversion of the preferred stock. You should read this Prospectus Supplement in conjunction with the Prospectus, and this Prospectus Supplement is qualified by reference to the Prospectus, except to the extent that the information in this Prospectus Supplement supersedes the information contained in the Prospectus.

Investing in our preferred stock or common stock involves risks that are described in the "Risk Factors" section beginning on page 6 of the Prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this Prospectus Supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this Prospectus Supplement is September 13, 2006

The table of selling stockholders contained in the Prospectus is hereby superseded by the following table.

Name	Ownership Before Offering		Securities Offered by the Prospectus (1)		Ownership After Offering (2)		
	Preferred	Common (3)	Preferred	Commons (3)	Preferred	Common	% of Common (4)
1976 Distribution Trust FBO A.R. Lauder/Zinterhofer	6	150	6	150	0	0	*
2000 Revocable Trust FBO A.R. Lauder/Zinterhofer	5	125	5	125	0	0	*
Advent Claymore Enhance Growth & Income Fund	2,435	60,875	2,435	60,875	0	0	*
Advent Convertible Master (Cayman), L.P.	6,723	168,075	6,723	168,075	0	0	*
Alcon Laboratories	641	16,025	641	16,025	0	0	*
AM International EMAC 63 Ltd.	790	19,750	790	19,750	0	0	*
AM Master Fund I, LP	6,916	172,900	6,916	172,900	0	0	*
Anthony Munk	607	15,175	607	15,175	0	0	*
Arlington County Employees Retirement Systems	1,032	25,800	1,032	25,800	0	0	*
Asante Health Systems	205	5,125	205	5,125	0	0	*
BBT Fund, L.P.	8,850	221,250	8,850	221,250	0	0	*
Boston Income Portfolio c/o Eaton Vance Management High Yield Group	1,255	31,375	1,255	31,375	0	0	*
Citigroup Global Markets, Inc.(5)	5,000	125,000	5,000	125,000	0	0	*
City of New York Fire Dept Pension Fund High Yield(6)	225	5,625	125	3,125	100	0	*
City of New York Teachers Retirement System High Yield(6)	700	17,500	375	9,375	325	0	*
City University of New York	215	5,375	215	5,375	0	0	*
CNHCA Master Account, LP	5,500	137,500	5,500	137,500	0	0	*
Coastal Convertibles Ltd.	1,500	37,500	1,500	37,500	0	0	*
Concentrated Alpha Partners LP	6,750	168,750	6,750	168,750	0	0	*
DBAG London	11,000	275,000	11,000	275,000	0	0	*
Delaware Dividend Income Fund	1,500	37,500	1,500	37,500	0	0	*
Delaware Public Employees Retirement Systems	1,857	46,425	1,857	46,425	0	0	*
Deutsche Bank Securities Inc.	1,500	37,500	1,500	37,500	0	0	*

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Diversified High Yield Bond Fund c/o Eaton Vance Management High Yield Group	245	6,125	245	6,125	0	0	*
Drawbridge Convertible I Ltd.	489	12,225	489	12,225	0	0	*
Drawbridge Convertible II Ltd.	156	3,900	156	3,900	0	0	*
Drawbridge Global Macro Masterfund Ltd.	3,310	82,750	3,310	82,750	0	0	*
ELCA Unscreened — High Yield(6)	525	13,125	275	6,875	250	0	*
FIST Convertible Secs FD	10,000	250,000	10,000	250,000	0	0	*
Fidelity Financial Trust: Fidelity Strategic Dividend & Income Fund(7) (8)	4,900	122,500	3,900	97,500	0	0	*
Fore Convertible Master Fund, Ltd.	25,220	630,500	25,220	630,500	0	0	*
Fore Erisa Fund, Ltd.	2,790	69,750	2,790	69,750	0	0	*
Frontpoint Convertible Arbitrage Fund LP	5,000	125,000	5,000	125,000	0	0	*
GLG Market Neutral Fund	22,000	550,000	22,000	550,000	0	0	*
Grace Convertible Arbitrage Fund, Ltd.	7,000	175,000	7,000	175,000	0	0	*
Grady Hospital	201	5,025	201	5,025	0	0	*
Guggenheim Portfolio Company VIII (Cayman) Ltd.	2,511	62,775	2,511	62,775	0	0	*
Guggenheim Portfolio Company XXXI, LLC	5,000	125,000	5,000	125,000	0	0	*
Hallmark Master Trust High Yield Fund c/o Eaton Vance Management High Yield Group	70	1,750	70	1,750	0	0	*
HFR CA Opportunity Mgt. Trst.	340	8,500	340	8,500	0	0	*
HFR CA Select Fund	750	18,750	750	18,750	0	0	*
HFR RVA Combined Master Trust	2,000	50,000	2,000	50,000	0	0	*
Highbridge International LLC	10,000	250,000	10,000	250,000	0	0	*
High Income Portfolio c/o Eaton Vance Management High Yield Group	865	21,625	865	21,625	0	0	*
IAM National Pension Fund(6)	350	8,750	175	4,375	175	0	*
Independence Blue Cross	623	15,575	623	15,575	0	0	*
Industriens Pensionsforsikring(6)	325	8,125	175	4,375	150	0	*

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ING Convertible Fund	1,920	48,000	1,920	48,000	0	0	*
ING CP Convertible Portfolio	80	2,000	80	2,000	0	0	*
ING MFS Utilities Portfolio	40	79,520	40	1,000	0	78,520	*
ING Investors Trust — ING T. RowePrice Capital Appreciation Portfolio(6)	8,600	215,000	8,600	215,000	0	0	*
Institutional Benchmarks Master Fund, Ltd.	1,500	37,500	1,500	37,500	0	0	*
Intl Union of Operating Engineers (ENG) c/o Eaton Vance Management High Yield Group	15	375	15	375	0	0	*
JMG Capital Partners, Inc	34,500	862,500	34,500	862,500	0	0	*
JMG Triton Offshore Ltd.	2,850	71,250	2,850	71,250	0	0	*
John Hancock Funds II — Spectrum Income Fund(6)	250	6,250	100	2,500	150	0	*
John Hancock Trust — Spectrum Income Trust(6)	225	5,625	100	2,500	125	0	*
John Hancock Trust Utilities Trust	100	133,640	100	2,500	0	131,140	*
John Hancock Trust — Mid Value Trust	200	18,800	200	5,000	0	9,100	*
JP Morgan Securities, Inc.	2,500	62,500	2,500	62,500	0	0	*
Kamunting Street Master Fund, Ltd.	15,000	375,000	15,000	375,000	0	0	*
KBC Financial Products USA, Inc.	8,955	223,875	8,955	223,875	0	0	*
KDC Convertible Arbitrage Fund LP	3,000	75,000	3,000	75,000	0	0	*
Laborers District Council & Contractors Pension FD of Ohio(6)	200	10,300	200	5,000	0	4,100	*
Lydian Overseas Partners Master Fund L.P.	5,000	125,000	5,000	125,000	0	0	*
Lyxor	465	11,625	465	11,625	0	0	*
Lyxor/AM Investment Fund Ltd.	988	24,700	988	24,700	0	0	*
Lyxor/Silverado Fund LTD	1,550	38,750	1,550	38,750	0	0	*
Man Mac I, Ltd.	9,390	234,750	9,390	234,750	0	0	*
McMahan Securities Co. LP	45	1,125	45	1,125	0	0	*

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MFS Utilities Fund, a Series of MFS Series Trust VI	1,355	1,614,875	1,355	33,875	0	1,581,000	1.17%
MFS Variable Insurance Trust - MFS Utilities Series	820	874,400	820	20,500	0	853,900	*
MFS/Sun Life Series Trust: Utilities Series	324	363,800	324	8,100	0	355,700	*
National Bank of Canada	1,186	29,650	1,186	29,650	0	0	*
New Orleans Firefighters Pension/Relief Fund	126	3,150	126	3,150	0	0	*
New York City Employees Retirement Systems Enhanced Fund(6)	875	21,875	475	11,875	400	0	*
Newport Alternative Income Fund	2,972	74,300	2,972	74,300	0	0	*
NMS Services (Cayman) Inc.	752	18,800	752	18,800	0	0	*
Northern Income Equity Fund	2,460	61,500	2,460	61,500	0	0	*
Occidental Petroleum Corporation	114	2,850	114	2,850	0	0	*
Pebble Limited Partnership	2,083	52,075	2,083	52,075	0	0	*
PensionsInvest — Global High Yield(6)	250	6,250	250	6,250	0	0	*
PFA Invest — Global High Yield(6)	800	20,000	450	11,250	350	0	*
PIMCO Convertible Fund	500	12,500	500	12,500	0	0	*
Policeman and Fireman Retirement System of the City of Detroit	500	12,500	500	12,500	0	0	*
Pro-Mutual	1,357	33,925	1,357	33,925	0	0	*
RWDSU Local 338 High Yield Fund c/o Eaton Vance Management High Yield Fund	20	500	20	500	0	0	*
S.A.C. Arbitrage Fund, LLC	8,000	200,000	8,000	200,000	0	0	*
Sage Capital Management LLC	3,000	75,000	3,000	75,000	0	0	*
Salomon Brothers Asset Management, Inc.(9)	6,600	165,000	6,600	165,000	0	0	*
SEPTA High Yield Fund c/o Eaton Vance Management High Yield Group	20	500	20	500	0	0	*

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Severn River Master Fund c/o Morgan Stanley	1,000	25,000	1,000	25,000	0	0	*
Silver Point Capital Fund LP	1,365	1,042,333	1,365	34,125	0	1,008,208	*
Silver Point Capital Offshore Fund, Ltd.	2,135	1,654,740	2,135	53,375	0	1,601,365	1.19%
Silverado Arbitrage Trading, Ltd.	500	22,500	500	12,500	0	10,000	*
Sphinx Fund	140	3,500	140	3,500	0	0	*
SRI Fund, L.P.	1,500	37,500	1,500	37,500	0	0	*
T. RowePrice Capital Appreciation Fund(6)	23,400	585,000	23,400	585,000	0	0	*
T. RowePrice High Yield Fund(6)	8,550	213,750	4,350	108,750	4,200	0	*
T. RowePrice Capital Appreciation Trust(6)	300	7,500	300	7,500	0	0	*
T. RowePrice Mid-Cap Value Fund(6)	12,000	640,800	12,000	300,000	0	165,800	*
TRP Invest — Global High Yield(6)	1,950	48,750	350	8,750	1,600	0	*
Trustmark Insurance	393	9,825	393	9,825	0	0	*
UBS AG London FBO HFS	5,000	125,000	5,000	125,000	0	0	*
UBS AG London FBO PFEL	18,500	462,500	18,500	462,500	0	0	*
UBS AG London FBO WCBP	20,000	500,000	20,000	500,000	0	0	*
UBS O'Connor LLC FBO O'Connor Global Convertible Arbitrage Master Ltd.	4,561	114,025	4,561	114,025	0	0	*
Volkswagen High Yield Bond Fund c/o Eaton Vance Management High Yield Group	10	250	10	250	0	0	*
Whitebox Convertible Arbitrage Partners LP	26,000	650,000	26,000	650,000	0	0	*
Whitebox Diversified Convertible Arbitrage Partners LP	5,000	125,000	5,000	125,000	0	0	*

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Xavex – Convertible Arbitrage 7 Fund	150	3,750	150	3,750	0	0	*
Zazove Convertible Arbitrage Fund, LP	4,000	100,000	4,000	100,000	0	0	*
Zazove Hedged Convertible Fund, LP	2,000	50,000	2,000	50,000	0	0	*
Zurich Institutional Benchmarks Master Fund Ltd. c/o Forest Investment LLC	2,061	51,525	2,061	51,525	0	0	*

* Less than 1%.

- (1) Amounts indicated may be in excess of the total amount registered due to sales or transfers exempt from the registration requirements of the Securities Act of 1933, as amended, since the date upon which the selling stockholders provided to us the information regarding their preferred stock.
- (2) The information regarding the beneficial ownership after resale of shares is based on the assumption that each selling stockholder will sell all of the shares of preferred stock and common stock owned by the selling stockholder and covered by the Prospectus.
- (3) Unless otherwise indicated, includes all shares of common stock issuable upon conversion of the preferred stock and assumes a conversion price of \$40.00 per share, which is equal to an approximate conversion rate of 25 shares per share of preferred stock. However, this conversion price will be subject to adjustment as described under "Description of the Preferred Stock — Conversion Rights" in the Prospectus. As a result, the number of shares of common stock beneficially owned prior to this offering and the number of shares of common stock offered hereby may increase or decrease in the future.
- (4) Based on 134,580,642 shares of common stock outstanding as of September 11, 2006.
- (5) Citigroup Global Markets Inc. was a co-placement agent on the issuance of the preferred stock.
- (6) T. Rowe Price Associates, Inc. serves as investment adviser with power to direct investments and/or sole power to vote the shares owned by certain funds and accounts subject this footnote, as well as shares owned by certain other individual and institutional investors. For purposes of reporting requirements of the Securities and Exchange Act of 1934, T. Rowe Price Associates, Inc. may be deemed to be the beneficial owner of all of the shares listed above that are subject to this footnote; however, T. Rowe Price Associates, Inc. expressly disclaims that it is in fact the beneficial owner of such securities. T. Rowe Price Associates, Inc. is the wholly owned subsidiary of T. Rowe Price Group, Inc., which is a publicly traded financial services holding company.
- (7) The entity is a registered investment fund advised by Fidelity Management & Research Company ("FMR Co."), a registered investment adviser under the Investment Advisers Act of 1940, as amended. FMR Co., 82 Devonshire Street, Boston, Massachusetts 02190, a wholly-owned subsidiary of FMR Corp. and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, is the beneficial owner of 2,402,699 shares of our outstanding common stock as a result of acting as investment adviser to various investment companies registered under Section 8 of the Investment Company Act of 1940.
- (8) Based on information provided by the selling stockholder and, in addition to the preferred stock and common stock covered by this prospectus, includes beneficial ownership of our 5.75% Mandatory Convertible Preferred Stock, as well as the common stock to be issued upon conversion of such preferred stock.
- (9) Salomon Brothers Asset Management, Inc. acts as discretionary investment advisor with respect to certain accounts that hold the preferred stock. Accordingly, Salomon Brothers Asset Management, Inc. may be deemed to be the beneficial owner of such preferred stock. Salomon Brothers Asset Management, Inc. is the beneficial owner and, therefore, the Selling Stockholder of the following accounts: General Motors Investment Corp. (5,000 shares), General Motors Broad Mandate (600 shares) and Smith Barney Convertible Fund (1,000 shares).