

NRG ENERGY, INC.
Form 424B3
September 13, 2006

**Filed Pursuant to Rule 424(b)(3)
Registration No. 333-123677**

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The table of selling stockholders contained in the Prospectus is hereby superseded by the following table.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

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|--|--------|---------|--------|---------|---|---|---|
| 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 | * |

2

| 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) |
| | | | | | | | * |
| 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 | * |
| | 10,000 | 250,000 | 10,000 | 250,000 | 0 | 0 | * |

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|---|-----|--------|-----|--------|-----|---|---|
| Highbridge International LLC | | | | | | | |
| 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 Industriens Pensionsforsikring(6) | 623 | 15,575 | 623 | 15,575 | 0 | 0 | * |
| | 325 | 8,125 | 175 | 4,375 | 150 | 0 | * |

3

| Name | Securities Offered by the | | | | | | |
|---|---------------------------|------------|----------------|-------------|------------------------------|---------|-----------------|
| | Ownership Before Offering | | Prospectus (1) | | Ownership After Offering (2) | | % of Common (4) |
| | Preferred | Common (3) | Preferred | Commons (3) | Preferred | Common | |
| ING Convertible Fund | 1,920 | 48,000 | 1,920 | 48,000 | 0 | 0 | * |
| ING CP Convertible Portfolio | 80 | 2,000 | 80 | 2000 | 0 | 0 | * |
| ING MFS Utilities Portfolio | 40 | 79,520 | 40 | 1,000 | 0 | 78,520 | * |
| ING Investors Trust | 8,600 | 215,000 | 8,600 | 215,000 | 0 | 0 | * |
| ING T. RowePrice Capital Appreciation Portfolio(6) | | | | | | | |
| 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 | 200 | 10,300 | 200 | 5,000 | 0 | 4,100 | * |

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|---|-------|---------|-------|---------|---|---|---|
| Pension FD of Ohio(6) | | | | | | | |
| 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 | * |

4

| Name | Securities Offered by the | | | | | | |
|--|------------------------------|------------|----------------|----------------|------------------------------|-----------|-----------------------|
| | Ownership Before Offering | | Prospectus (1) | | Ownership After Offering (2) | | |
| | Preferred | Common (3) | Preferred | Commons (3) | Preferred | Common | % of Common (4) |
| 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 MFS/Sun Life Series Trust: | 820 | 874,400 | 820 | 20,500 | 0 | 853,900 | * |
| 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 | 20 | 500 | 20 | 500 | 0 | 0 | * |

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|--|-------|---------|-------|---------|---|---|---|
| Eaton Vance Management High Yield Fund | | | | | | | |
| 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 | * |
| | | | 5 | | | | |

| Name | Securities Offered by the | | | | | | |
|---|---------------------------|------------|----------------|-------------|------------------------------|-----------|-----------------|
| | Ownership Before Offering | | Prospectus (1) | | Ownership After Offering (2) | | |
| | Preferred | Common (3) | Preferred | Commons (3) | Preferred | Common | % of Common (4) |
| 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 | * |

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|--|--------|---------|--------|---------|---|---|---|
| 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 | * |

6

| Name | Securities Offered by the | | | | | | |
|--|---------------------------|------------|----------------|-------------|------------------------------|--------|-----------------|
| | Ownership Before Offering | | Prospectus (1) | | Ownership After Offering (2) | | |
| | Preferred | Common (3) | Preferred | Commons (3) | Preferred | Common | % of Common (4) |
| 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).