NRG ENERGY, INC.
Form 10-K
February 28, 2012

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form 10-K

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Fiscal Year ended December 31, 2011.

o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Transition period from to .

Commission file No. 001-15891

NRG Energy, Inc.
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	41-1724239 (I.R.S. Employer Identification No.)
211 Carnegie Center Princeton, New Jersey (Address of principal executive offices)	08540 (Zip Code)

(609) 524-4500
(Registrant's telephone number, including area code)

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

Title of Each Class	Name of Exchange on Which Registered
Common Stock, par value $0.01	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes x No o

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes o No x

Indicate by check mark whether the registrant (1) has filed all reports to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer x	Accelerated filer o	Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes o No x

As of the last business day of the most recently completed second fiscal quarter, the aggregate market value of the common stock of the registrant held by non-affiliates was approximately $5,509,659,060 based on the closing sale price of $24.58 as reported on the New York Stock Exchange.

Indicate the number of shares outstanding of each of the registrant's classes of common stock as of the latest practicable date.

Class	Outstanding at February 22, 2012
Common Stock, par value $0.01 per share	227,685,120

Documents Incorporated by Reference:

Portions of the registrants definitive Proxy Statement relating to its 2012 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K

TABLE OF CONTENTS

Table of Contents

Glossary of Terms

When the following terms and abbreviations appear in the text of this report, they have the meanings indicated below:

2011 Form 10-K	NRG's Annual Report on Form 10-K for the year ended December 31, 2011
2011 Revolving Credit Facility	The Company's $2.3 billion revolving credit facility due 2016, a component of the 2011 Senior Credit Facility
2011 Senior Credit Facility	As of July 1, 2011, NRG's new senior secured facility, comprised of a $1.6 billion term loan facility and a $2.3 billion revolving credit facility, which replaces the Senior Credit Facility
2011 Term Loan Facility	The Company's $1.6 billion term loan facility due 2018, a component of the 2011 Senior Credit Facility
316(b) Rule	A section of the Clean Water Act regulating cooling water intake structures
AB32	Assembly Bill 32 — California Global Warming Solutions Act of 2006
ASC	The FASB Accounting Standards Codification, which the FASB established as the source of authoritative U.S. GAAP
ASR Agreement	Accelerated Share Repurchase Agreement
ASU	Accounting Standards Updates – updates to the ASC
Baseload Capacity	Coal and nuclear electric power generation capacity normally expected to serve loads on an around-the-clock basis throughout the calendar year
BACT	Best Available Control Technology
BTU	British Thermal Unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CAISO	California Independent System Operator
Capital Allocation Plan	Share repurchase program
Capital Allocation Program	NRG's plan of allocating capital between debt reduction, reinvestment in the business, and share repurchases through the Capital Allocation Plan
CDWR	California Department of Water Resources
C&I	Commercial, industrial and governmental/institutional
CFTC	U.S. Commodity Futures Trading Commission
CO2	Carbon dioxide
CPS	CPS Energy
CS	Credit Suisse Group
CSAPR	Cross-State Air Pollution Rule
CSF I	NRG Common Stock Finance I LLC
CSF II	NRG Common Stock Finance II LLC
CSF Debt	CSF I and CSF II issued notes and preferred interest, individually referred to as CSF I Debt and CSF II Debt
CSRA	Credit Sleeve Reimbursement Agreement with Merrill Lynch in connection with acquisition of Reliant Energy, as hereinafter defined
Distributed Solar	Solar power projects, typically less than 20 MW in size, that primarily sell power produced to customers for usage on site, or are interconnected to sell power into the local distribution grid
DNREC	Delaware Department of Natural Resources and Environmental Control
Energy Plus	Energy Plus Holdings LLC
EPC	Engineering, Procurement and Construction
ERCOT	Electric Reliability Council of Texas, the Independent System Operator and the regional reliability coordinator of the various electricity systems within Texas

ESPP	Employee Stock Purchase Plan
EWG	Exempt Wholesale Generator
Exchange Act	The Securities Exchange Act of 1934, as amended

Table of Contents

Expected Baseload Generation	The net baseload generation limited by economic factors (relationship between cost of generation and market price) and reliability factors (scheduled and unplanned outages)
FCM	Forward Capacity Market
FERC	Federal Energy Regulatory Commission
FFB	Federal Financing Bank
FPA	Federal Power Act
Fresh Start	Reporting requirements as defined by ASC-852, Reorganizations
Funded Letter of Credit Facility	Prior to July 1, 2011, NRG's $1.3 billion term loan-backed fully funded senior secured letter of credit facility, of which $500 million would have matured on February 1, 2013, and $800 million would have matured on August 31, 2015, and was a component of NRG's Senior Credit Facility. On July 1, 2011, NRG replaced its Senior Credit Facility, including the Funded Letter of Credit Facility, with the 2011 Senior Credit Facility.
GenOn	GenOn Energy, Inc. (formerly RRI Energy, Inc., formerly Reliant Energy, Inc.)
GHG	Greenhouse Gases
Green Mountain Energy	Green Mountain Energy Company
GWh	Gigawatt hour
Heat Rate	A measure of thermal efficiency computed by dividing the total BTU content of the fuel burned by the resulting kWh's generated. Heat rates can be expressed as either gross or net heat rates, depending whether the electricity output measured is gross or net generation and is generally expressed as BTU per net kWh
ISO	Independent System Operator, also referred to as Regional Transmission Organizations, or RTO
ISO-NE	ISO New England Inc.
kWh	Kilowatt-hours
LFRM	Locational Forward Reserve Market
LIBOR	London Inter-Bank Offer Rate
LTIP	Long-Term Incentive Plan
Mass	Residential and small business
MATS	Mercury and Air Toxics Standards
Merit Order	A term used for the ranking of power stations in order of ascending marginal cost
MIBRAG	Mitteldeutsche Braunkohlengesellschaft mbH
MMBtu	Million British Thermal Units
MW	Megawatts
MWh	Saleable megawatt hours net of internal/parasitic load megawatt-hours
MWt	Megawatts Thermal Equivalent
NAAQS	National Ambient Air Quality Standards
Net Baseload Capacity	Nominal summer net megawatt capacity of power generation adjusted for ownership and parasitic load, and excluding capacity from mothballed units as of December 31, 2010
Net Capacity Factor	The net amount of electricity that a generating unit produces over a period of time divided by the net amount of electricity it could have produced if it had run at full power over that time period. The net amount of electricity produced is the total amount of electricity generated minus the amount of electricity used during generation.
Net Exposure	Counterparty credit exposure to NRG, net of collateral
Net Generation	The net amount of electricity produced, expressed in kWhs or MWhs, that is the total amount of electricity generated (gross) minus the amount of electricity used during generation.

NINA	Nuclear Innovation North America LLC
NO_x	Nitrogen oxide
NOL	Net Operating Loss
NPNS	Normal Purchase Normal Sale
NRC	U.S. Nuclear Regulatory Commission
NSPS	New Source Performance Standards

Table of Contents

NSR	New Source Review
NYISO	New York Independent System Operator
OCI	Other comprehensive income
Phase II 316(b) Rule	A section of the Clean Water Act regulating cooling water intake structures
PJM	PJM Interconnection, LLC
PJM market	The wholesale and retail electric market operated by PJM primarily in all or parts of Delaware, the District of Columbia, Illinois, Maryland, New Jersey, Ohio, Pennsylvania, Virginia and West Virginia
PM 2.5	Particulate matter particles with a diameter of 2.5 micrometers or less
PPA	Power Purchase Agreement
PSD	Prevention of Significant Deterioration
PUCT	Public Utility Commission of Texas
PUHCA of 2005	Public Utility Holding Company Act of 2005
PURPA	Public Utility Regulatory Policy Act
QF	Qualifying Facility under PURPA
QSE	Qualified Scheduling Entities
Reliant Energy	NRG's retail business in Texas purchased on May 1, 2009, from Reliant Energy, Inc. which is now known as GenOn Energy, Inc., or GenOn
Repowering	Technologies utilized to replace, rebuild, or redevelop major portions of an existing electrical generating facility, not only to achieve a substantial emissions reduction, but also to increase facility capacity, and improve system efficiency
REP	Retail Electric Provider
RERH	RERH Holding, LLC and its subsidiaries
Revolving Credit Facility	Prior to July 1, 2011, NRG's $925 million senior secured revolving credit facility, which would have matured on August 31, 2015, and was a component of NRG's Senior Credit Facility. On July 1, 2011, NRG replaced the Senior Credit Facility, including the Revolving Credit Facility, with the 2011 Senior Credit Facility.
RGGI	Regional Greenhouse Gas Initiative
RMR	Reliability Must-Run
Schkopau	Kraftwerk Schkopau Betriebsgesellschaft mbH, an entity in which NRG has a 41.9% interest
SEC	United States Securities and Exchange Commission
Securities Act	The Securities Act of 1933, as amended
Senior Credit Facility	Prior to July 1, 2011, NRG's senior secured facility was comprised of a Term Loan Facility, an $925 million Revolving Credit Facility and a $1.3 billion Funded Letter of Credit Facility. On July 1, 2011, NRG replaced the Senior Credit Facility with the 2011 Senior Credit Facility.
SIFMA	Securities Industry and Financial Markets Association
Senior Notes	The Company's $6.1 billion outstanding unsecured senior notes consisting of $1.1 billion of 7.375% senior notes due 2017, $1.2 billion of 7.625% senior notes due 2018, $700 million of 8.5% senior notes due 2019, $800 million of 7.625% senior notes due 2019, $1.1 billion of 8.25% senior notes due 2020, and $1.2 billion of 7.875% senior notes due 2021
SERC	Southeastern Electric Reliability Council/Entergy
SO_2	Sulfur dioxide
STP	South Texas Project — nuclear generating facility located near Bay City, Texas in which NRG owns a 44% Interest
STPNOC	South Texas Project Nuclear Operating Company
TANE	Toshiba America Nuclear Energy Corporation

TANE Facility	NINA's $500 million credit facility with TANE
TEPCO	The Tokyo Electric Power Company of Japan, Inc.

Table of Contents

Term Loan Facility	Prior to July 1, 2011, a senior first priority secured term loan, of which approximately $608 million would have matured on February 1, 2013, and $990 million would have matured on August 31, 2015, and was a component of NRG's Senior Credit Facility. On July 1, 2011, NRG replaced its Senior Credit Facility, including the Term Loan Facility, with the 2011 Senior Credit Facility.
Texas Genco	Texas Genco LLC, now referred to as the Company's Texas Region
Tonnes	Metric tonnes, which are units of mass or weight in the metric system each equal to 2,205lbs and are the global measurement for GHG
TWh	Terawatt hour
U.S.	United States of America
U.S. DOE	United States Department of Energy
U.S. EPA	United States Environmental Protection Agency
U.S. GAAP	Accounting principles generally accepted in the United States
Utility Scale Solar	Solar power projects, typically 20 MW or greater in size, that are interconnected into the transmission or distribution grid to sell power at a wholesale level
VaR	Value at Risk
VIE	Variable Interest Entity
WCP	WCP (Generation) Holdings, Inc.

Table of Contents

PART I

Item 1 — Business

General

NRG Energy, Inc., or NRG or the Company, is an integrated wholesale power generation and retail electricity company that aspires to be a leader in the way the industry and consumers think about, use, produce and deliver energy and energy services in major competitive power markets in the United States. First, NRG is a wholesale power generator engaged in the ownership and operation of power generation facilities; the trading of energy, capacity and related products; and the transacting in and trading of fuel and transportation services. Second, NRG is a retail electricity company engaged in the supply of electricity, energy services, and cleaner energy products to retail electricity customers in deregulated markets through Reliant Energy, Green Mountain Energy, and Energy Plus (collectively, the Retail Businesses). Finally, NRG is focused on the deployment and commercialization of potential disruptive technologies, like electric vehicles, Distributed Solar and smart meter technology, which have the potential to change the nature of the power supply industry.

Wholesale Power Generation

NRG's generation facilities consist of intermittent, baseload, intermediate and peaking power generation facilities in the United States and two international locations. The sale of capacity and power from baseload generation facilities accounts for a majority of the Company's generation revenues. In addition, NRG's generation portfolio provides the Company with opportunities to capture additional revenues by selling power during periods of peak demand, offering capacity or similar products, and providing ancillary services to support system reliability.

Retail

NRG's Retail Businesses arrange for the transmission and delivery of energy-related products to customers, bill customers, collect payments for products sold, and maintain call centers to provide customer service. The Retail Businesses sell products that range from system power to bundled products, which combine system power with protection products, energy efficiency and renewable energy solutions, or other value added products and services, including customer rewards offered through exclusive loyalty and affinity program partnerships. Based on metered locations, as of December 31, 2011, NRG's Retail Businesses combined to serve approximately 2.1 million residential, small business, commercial and industrial customers.

Alternative Energy

NRG's investment in and development of new technologies is focused where the Company believes the benefits of such investments represent significant commercial opportunities and create a comparative advantage for the Company. The development and investment initiatives are primarily focused in the areas of Distributed Solar, solar thermal and solar photovoltaic, and also include other low or no Greenhouse Gases, or GHG, emitting energy generating sources, such as the fueling infrastructure for electric vehicle, or EV, ecosystems.

NRG's Business Strategy

The Company believes that the American energy industry is going to be increasingly impacted by the long-term societal trend towards sustainability which is both generational and irreversible. Moreover, the information technology-driven revolution which has enabled greater and easier personal choice in other sectors of the consumer economy will do the same in the American energy sector over the years to come. As a result, energy consumers will

have increasing personal control over whom they buy their energy from, how that energy is generated and used and what environmental impact these individual choices will have. The Company's initiatives in this area of future growth are focused on: (i) renewables, with a concentration in solar development; (ii) electric vehicle ecosystems; (iii) customer-facing energy products and services including smart grid services, nationwide retail green electricity, unique retail sales channels involving loyalty and affinity programs and custom design; and (iv) construction of other forms of on-site clean power generation. The Company's advances in each of these areas are driven by select acquisitions, joint ventures, and investments that are more fully described in Item 1, Business - New and On-going Company Initiatives and Development Projects.

Table of Contents

The Company's core business is focused on: (i) excellence in safety and operating performance of its existing assets; (ii) serving the energy needs of end-use residential, commercial and industrial customers in the Company's core markets with a retail energy product that is differentiated either by premium service (Reliant), sustainability (Green Mountain Energy) or loyalty/affinity programs (Energy Plus); (iii) optimal hedging of baseload generation and retail load operations, while retaining optionality on the Company's peaking facilities; (iv) repowering of power generation assets at premium sites; (v) investment in, and deployment of, alternative energy technologies both in its wholesale and, particularly, in and around its retail businesses and their customers; (vi) pursuing selective acquisitions, joint ventures, divestitures and investments; and (vii) engaging in a proactive capital allocation plan focused on achieving the regular return of and on stockholder capital within the dictates of prudent balance sheet management.

In summary, NRG's business strategy is intended to maximize stockholder value through the production and sale of safe, reliable and affordable power to its customers in the markets served by the Company, while aggressively positioning the Company to meet the market's increasing demand for sustainable and low carbon energy solutions. This strategy is designed to enhance the Company's core business of competitive power generation and mitigate the risk of declining power prices. The Company expects to become a leading provider of sustainable energy solutions that promotes national energy security, while utilizing the Company's retail business to complement and advance both initiatives.

Competition

NRG competes in wholesale power generation, deregulated retail energy services and in the development of renewable and conventional energy resources.

Wholesale Power Generation

Wholesale power generation is a capital-intensive, commodity-driven business with numerous industry participants. NRG competes on the basis of the location of its plants and ownership of portfolios of plants in various regions, which increases the stability and reliability of its energy supply. Wholesale power generation is a regional business that is currently highly fragmented and diverse in terms of industry structure. As such, there is a wide variation in terms of the capabilities, resources, nature and identity of the companies NRG competes with depending on the market. Competitors include regulated utilities, other independent power producers, and power marketers or trading companies, including those owned by financial institutions, municipalities and cooperatives.

Retail

The restructured electricity markets across the nation provide an intensely competitive landscape for energy providers to sell products and services to all customer segments (residential, small and mid-market businesses, governments and other public institutions). The markets in which we compete include, but are not limited to: Connecticut, Delaware, the District of Columbia, Illinois, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Ohio and Texas. The Electric Reliability Council of Texas, or ERCOT, is our primary market and constitutes both the highest number of customers and a substantial concentration of NRG's gross profits.

Retail customers make purchase decisions based on a variety of factors, including price, customer service, brand image, product choices, bundles or value-added features. Customers purchase products through a variety of sales channels including direct sales force, call centers, websites, brokers and brick-and-mortar stores. The Retail Businesses compete with national and international companies that operate in multiple geographic areas, as well as numerous companies that are regional or local in nature. Significant competitors in the markets in which we compete include Constellation, Direct Energy, GDF Suez and Energy Future Holdings (d/b/a TXU Energy), and other competitors, typically incumbent retail electric providers, which have the advantage of long-standing relationships

with customers.

Development

NRG may submit bids to develop generation resources, predominantly in response to requests for proposals, or RFPs, for new conventional or renewable generation and/or generating capacity. Bids are solicited by regulated utilities or electric system operators, often to comply with mandated renewable portfolio standards or to achieve an improved reserve margin, which is a measure of a utility's available electric power capacity over and above the electric power capacity needed to meet normal peak demand levels. NRG competes against other power plant developers and manufacturers of solar panel assemblies. The number and type of competitors vary based on the location, generation type, project size and counterparty specified in the RFP. Bids are awarded based on price, location of existing generation, prior experience developing generation resources similar to that specified in the RFP, and creditworthiness.

Table of Contents

Competitive Strengths

Conventional Wholesale Power Generation

NRG has one of the largest and most diversified power generation portfolios in the United States, with approximately 23,585 MW of fossil fuel and nuclear generation capacity in 189 active generating units at 45 plants as of December 31, 2011. In addition, the Company has a 550 MW combined cycle gas plant under construction. The Company's power generation assets are diversified by fuel-type, dispatch level and region, which helps mitigate the risks associated with fuel price volatility and market demand cycles.

NRG's U.S. baseload and intermediate facilities provide the Company with a significant source of cash flow, while its peaking facilities provide NRG with opportunities to capture upside potential that can arise from time to time during periods of high demand.

Many of NRG's generation assets are located within densely populated areas that tend to have more robust wholesale pricing as a result of relatively favorable local supply-demand balance. NRG has generation assets located within Houston, New York City, southwestern Connecticut, and the Los Angeles and San Diego load basins. These facilities are often ideally situated for repowering or the addition of new capacity, because their location and existing infrastructure give them significant advantages over undeveloped sites.

Retail

Through its Retail Businesses, NRG served 2.1 million customers in 2011, delivering over 57 TWhs, making it one of the largest retail energy providers in the United States. NRG's Retail Businesses offer a broad range of services and value propositions that enable it to attract, retain, and increase the value of our residential, small business and commercial customer relationships. With the largest market share in ERCOT based on volume sales, Reliant Energy is recognized by its exemplary customer service (ranked the highest in customer satisfaction by the Public Utility Commission of Texas, or PUCT, in 2011) as well as its innovative technology product offerings and home energy services. As one of the nation's leading retail providers of clean energy, Green Mountain Energy is widely recognized as a pioneer in the competitive retail energy market and provides customers an environmentally friendly alternative to their energy supply requirements. Acquired in 2011, Energy Plus primarily enrolls and retains electricity and natural gas customers through exclusive marketing arrangements with leading loyalty program providers and affinity group associations. Through these Retail Businesses, NRG is able to provide its customers a broad range of energy services and products, including system power, distributed generation, solar and wind products, carbon management and specialty services, and smart grid services. The breadth and scope of these Retail Businesses also create opportunities for delivering value enhancing energy solutions to customers on a national level.

Solar and Other Alternative Energy Technologies

NRG is one of the largest solar power developers in the U.S., having demonstrated the ability to develop, construct and finance a full range of solar energy solutions for utilities, schools, municipalities, commercial and residential market segments. The Company has 545 MW of renewable generation capacity which consists of ownership interests in four wind farms, three Utility Scale Solar facilities, and approximately 30 MW of Distributed Solar as of December 31, 2011. In addition, the Company has 860 MW of solar capacity under construction: 855 MW at six Utility Scale Solar facilities and 5 MW of Distributed Solar. Through its relationships with solar equipment providers, NRG is able to deploy diverse solar technologies in both the utility and distributed generating scale projects that creates value for the Company while meeting the clean renewable energy requirements of its customers NRG is responding to the growing consumer demand for cleaner transportation solutions by building the first privately funded EV charging infrastructure network in select major metropolitan areas.

9

Table of Contents

The map below shows the locations of NRG's U.S. power generation facilities as of December 31, 2011, (excluding Distributed Solar), both operating and under construction, as well as the states where NRG operates its Retail Businesses:

Table of Contents

The following table summarizes NRG's global generation portfolio as of December 31, 2011, by operating segment, which includes 47 fossil fuel plants, three Utility Scale Solar facilities and four wind farms, as well as Distributed Solar facilities. Also included are one natural gas plant, six Utility Scale Solar facilities and additional Distributed Solar facilities currently under construction. All Utility Scale Solar and Distributed Solar facilities are described in megawatts on an alternating current, or AC, basis:

	Fossil Fuel, Nuclear, and Renewable (In MW)							
Generation Type	Texas	Northeast	South Central	West	Thermal	Total Domestic	Inter-national	Total Global
Natural gas	4,930	1,300	2,630	2,130	105	11,095	—	11,095
Coal	4,190	1,600	1,495	—	15	7,300	1,005	8,305
Oil	—	4,015	—	—	—	4,015		4,015
Nuclear	1,175	—	—	—	—	1,175	—	1,175
Wind	450	—	—	—	—	450	—	450
Utility Scale Solar	—	—	—	65	—	65	—	65
Distributed Solar	—	—	—	30	—	30	—	30
Total generation capacity	10,745	6,915	4,125	2,225	120	24,130	1,005	25,135
Under Construction								
Natural gas	—	—	—	550	—	550	—	550
Utility Scale Solar [(a)]	—	—	—	855	—	855	—	855
Distributed Solar	—	—	—	5	—	5	—	5
Total under construction	—	—	—	1,410	—	1,410	—	1,410

(a) Includes 142 MWs, representing 49% of Agua Caliente's capacity, which was sold to a partner on January 18, 2012

In addition, the Company's thermal assets provide steam and chilled water capacity of approximately 1,170 megawatts thermal equivalent, or MWt, through its district energy business.

Reliability of future cash flows and portfolio diversification

NRG has hedged a portion of its expected baseload generation capacity with decreasing hedge levels through 2016. NRG also has cooperative load contract obligations in the South Central region expiring over various dates through 2025, which largely hedge the Company's generation in this region. In addition, as of December 31, 2011, the Company had purchased fuel forward under fixed price contracts, with contractually-specified price escalators, for approximately 42% of its expected baseload coal requirement from 2012 to 2016, excluding inventory. The Company has the capacity and intent to enter into additional hedges when market conditions are favorable.

The Company also has the advantage of being able to supply its Retail Businesses with its own generation, which can reduce the need to sell and buy power from other financial institutions and intermediaries, resulting in lower transaction costs and credit exposures. This combination of generation and retail allows for a reduction in actual and contingent collateral, through offsetting transactions and by reducing the need to hedge the retail power supply through third parties.

The generation and retail combination also provides stability in cash flows, as changes in commodity prices generally have offsetting impacts between the two businesses. The offsetting nature of generation and retail in relation to changes in market prices, is an integral part of NRG's goal of providing a reliable source of future cash flow for the Company.

When developing renewable and new, conventional power generation facilities, NRG typically secures long-term Power Purchase Agreements, or PPAs, which insulate the Company from commodity market volatility and provide future cash flow stability. These PPAs are typically contracted with high credit quality local utilities and have durations up to 25 years. Such projects include all of the Company's major Utility Scale Solar projects, in operation and under construction, as well as the 550 MW El Segundo Energy Center, or ESEC, project that is under construction.

Table of Contents

Commercial Operations Overview

NRG seeks to maximize profitability and manage cash flow volatility through the marketing, trading and sale of energy, capacity and ancillary services into spot, intermediate and long-term markets and through the active management and trading of emissions allowances, fuel supplies and transportation-related services. The Company's principal objectives are the realization of the full market value of its asset base, including the capture of its extrinsic value, the management and mitigation of commodity market risk and the reduction of cash flow volatility over time.

NRG enters into power sales and hedging arrangements via a wide range of products and contracts, including power purchase agreements, or PPAs, fuel supply contracts, capacity auctions, natural gas derivative instruments and other financial instruments. The PPAs that NRG enters into require the Company to deliver MWh of power to its counterparties. In addition, because changes in power prices in the markets where NRG operates are generally correlated to changes in natural gas prices, NRG uses hedging strategies which may include power and natural gas forward sales contracts to manage the commodity price risk primarily associated with the Company's baseload generation assets. The objective of these hedging strategies is to stabilize the cash flow generated by NRG's portfolio of assets.

Baseload Operations

The following table summarizes NRG's U.S. Baseload capacity and the corresponding revenues and average natural gas prices and positions resulting from Baseload hedge agreements extending beyond February 14, 2012, and through 2016:

	2012 [a]	2013	2014	2015	2016	Annual Average for 2012-2016
	(Dollars in millions unless otherwise stated)					
Net Baseload Capacity (MW) [b]	8,466	8,466	8,311	8,311	8,311	8,373
Forecasted Baseload Capacity (MW) [c]	5,823	5,797	5,453	5,818	6,013	5,781
Total Baseload Sales (MW) [d]	5,761	4,756	3,098	1,407	1,399	3,284
Percentage Baseload Capacity Sold Forward [e]	99 %	82 %	57 %	24 %	23 %	57 %
Total Forward Hedged Revenues [f][g]	$2,236	$1,909	$1,103	NM [h]	NM [h]	
Weighted Average Hedged Price ($ per MWh) [f]	$52.86	$45.83	$40.64	NM [h]	NM [h]	
Average Equivalent Natural Gas Price ($ per MMBtu)	$5.38	$5.29	$4.80	NM [h]	NM [h]	
Baseload Gas $1/MMBtu Up Sensitivity	$50	$145	$259	$368	$387	
Baseload Gas $1/MMBtu Down Sensitivity	$—	$(46)	$(180)	$(329)	$(350)	
Baseload Heat Rate 1 MMBtu/MWh Up Sensitivity	$16	$70	$146	$171	$209	
Baseload Heat Rate 1 MMBtu/MWh Down Sensitivity	$(1)	$(47)	$(119)	$(157)	$(191)	

(a) 2012 represents the period March through December.

(b) Nameplate capacity net of station services reflecting unit retirement schedule.

(c) Forecasted generation dispatch output (MWh) based on forward price curve as of February 14, 2012, which is then divided by number of hours in a given year to arrive at MW capacity. The dispatch takes into account planned and unplanned outage assumptions.

(d) Includes amounts under power sales contracts and natural gas hedges. The forward natural gas quantities are reflected in equivalent MWh based on forward market implied heat rate as of February 14, 2012, and then

combined with power sales to arrive at equivalent MWh hedged which is then divided by number of hours in given year to arrive at MW hedged. The Baseload Sales include swaps and delta of options sold which is subject to change. For detailed information on the Company's hedging methodology through use of derivative instruments, see discussion in Item 15 - Note 6, Accounting for Derivative Instruments and Hedging Activities, to the Consolidated Financial Statements. Includes inter-segment sales from the Company's Texas wholesale power generation business to the Retail Businesses.

(e) Percentage hedged is based on total baseload sales as described in (d) above divided by the forecasted baseload capacity.

(f) Represents all North American baseload sales, including energy revenue and demand charges.

(g) The South Central region's weighted average hedged prices ranges from $40/MWh-$50/MWh. These prices include demand charges and an estimated energy charge.

(h) NM — Not meaningful, as South Central hedges, which are subject to renegotiation of the transportation component of coal costs, represent a substantial portion of total hedges.

Table of Contents

Retail Operations

NRG's retail operations sell electricity on fixed price or indexed products, and these contracts have terms typically ranging from one month to five years. In 2011, the Company's Retail Businesses sold approximately 57 TWh of load. In any given year, TWh sold can be affected by weather, economic conditions and competition. The wholesale supply is typically purchased as the load is contracted in order to secure profit margin. The wholesale supply is purchased from a combination of NRG's wholesale portfolio and other third parties, depending on the existing hedge position for the NRG wholesale portfolio at the time.

Capacity and Other Contracted Revenue Sources

NRG revenues and cash flows benefit from capacity/demand payments and other contracted revenue sources, originating from either market clearing capacity prices, Resource Adequacy, or RA, contracts, tolling arrangements, PPAs and other long-term contractual arrangements:

- Northeast — The Company's largest sources for capacity revenues are derived from market capacity auctions in ISO New England Inc., or ISO-NE, New York Independent System Operator, or NYISO, and PJM Interconnection LLC, or PJM. The region's share of the GenConn plants in Connecticut earns fixed payments for their output under long-term financial contracts with a utility counterparty.
- South Central — NRG earns demand payments from its long-term full-requirements load contracts with ten Louisiana distribution cooperatives. Of the ten contracts, seven expire in 2025 and account for 57% of the cooperative customer contract load, with the remaining three contracts currently set to expire in 2014. The Company has executed agreements to extend the contracts of two of these three cooperatives representing 19% of the cooperative load through 2025, subject to regulatory approval. The remaining counterparty, with a 550 MW load service contract, accounting for 24% of the cooperative total, has elected not to extend their contract when it expires in 2014. Demand payments from the current long term contracts are tied to summer peak demand and provide a mechanism for recovering a portion of costs associated with new or changed environmental laws or regulations.
- West — Many of the region's sites, including solar and gas projects currently under construction, are under either long-term PPAs, tolling agreements, or renewable incentive agreements. The remaining sites have short-term RA contracts.
- Thermal — Output from the Company's thermal assets is generally sold under long-term contracts or through regulated public utility tariffs. The contracts or tariffs contain capacity or demand elements, mechanisms for fuel recovery and/or the recovery of operating expenses. Thermal output from the Thermal region's Northwind business is sold under long-term agreements with customers in Phoenix, while the PJM assets participate in the PJM capacity markets.
- Texas — The region's sources of capacity and contracted revenues are through a PPA contract for South Trent wind generation, capacity option premium agreements, and black start agreements with ERCOT.
- International — Generation output from the Company's share of the Schkopau facility in Germany and the Gladstone facility in Australia is sold under long-term contracts, which include capacity payments as well as the reimbursement of certain fixed and variable costs.

Fuel Supply and Transportation

NRG's fuel requirements consist of nuclear fuel and various forms of fossil fuel including coal, natural gas and oil. The prices of fossil fuels are highly volatile. The Company obtains its fossil fuels from multiple suppliers and transportation sources. Although availability is generally not an issue, localized shortages, transportation availability and supplier financial stability issues can and do occur. The preceding factors related to the sources and availability of raw materials are fairly uniform across the Company's business segments.

Coal — The Company is completely hedged for its domestic coal consumption for 2012; less so for subsequent years. Coal hedging is dynamic and is based on forecasted generation and market volatility. As of December 31, 2011, NRG

had purchased forward contracts to provide fuel for approximately 42% of the Company's expected requirements from 2012 through 2016, excluding inventory. NRG arranges for the purchase, transportation and delivery of coal for the Company's baseload coal plants via a variety of coal purchase agreements, rail/barge transportation agreements, and rail car lease arrangements. The Company purchased approximately 27 million tons of coal in 2011, of which 98% was Powder River Basin coal and lignite.

Table of Contents

The following table shows the percentage of the Company's coal requirements from 2012 through 2016 that have been purchased forward as of December 31, 2011:

	Percentage of Company's Requirement [a][b]	
2012	100	%
2013	52	%
2014	21	%
2015	20	%
2016	17	%

(a) The hedge percentages reflect the current plan for the Jewett mine, which supplies lignite for NRG's Limestone facility. NRG has the contractual ability to change volumes and may do so in the future.

(b) Does not include coal inventory.

As of December 31, 2011, NRG had approximately 5,900 privately leased or owned rail cars in the Company's transportation fleet. NRG has entered into rail transportation agreements with varying tenures that provide for substantially all of the Company's rail transportation requirements for the next three years.

Natural Gas — NRG operates a fleet of natural gas plants across all its U.S. wholesale regions, which are primarily comprised of peaking assets that run in times of high power demand. Due to the uncertainty of their dispatch, the fuel needs are managed on a spot basis as the Company does not believe it is prudent to forward purchase natural gas for units, the dispatch of which is highly unpredictable. The Company contracts for natural gas storage services as well as natural gas transportation services to ensure delivery of natural gas when needed.

Nuclear Fuel — South Texas Project's, or STP's, owners satisfy STP's fuel supply requirements by: (i) acquiring uranium concentrates and contracting for conversion of the uranium concentrates into uranium hexafluoride; (ii) contracting for enrichment of uranium hexafluoride; and (iii) contracting for fabrication of nuclear fuel assemblies. Through its proportionate participation in South Texas Project Nuclear Operating Company, or STPNOC, which is the U.S. Nuclear Regulatory Commission, or NRC, -licensed operator of STP and responsible for all aspects of fuel procurement, NRG is party to a number of long-term forward purchase contracts with many of the world's largest suppliers covering STP requirements for uranium and conversion services for the next five years, and with substantial portions of STP's requirements procured thereafter. Similarly, NRG is party to long-term contracts to procure STP's requirements for enrichment services and fuel fabrication for the life of the operating license.

Seasonality and Price Volatility

Annual and quarterly operating results of the Company's wholesale power generation segments can be significantly affected by weather and energy commodity price volatility. Significant other events, such as the demand for natural gas, interruptions in fuel supply infrastructure and relative levels of hydroelectric capacity can increase seasonal fuel and power price volatility. NRG derives a majority of its annual revenues in the months of May through October, when demand for electricity is generally at its highest in the Company's core domestic markets. Further, power price volatility is generally higher in the summer months, traditionally NRG's most important season. The Company's second most important season is the winter months of December through March when volatility and price spikes in underlying delivered fuel prices have tended to drive seasonal electricity prices. The preceding factors related to seasonality and price volatility are fairly uniform across the Company's wholesale generation business segments.

The sale of electric power to retail customers is also a seasonal business with the demand for power generally peaking during the summer months. As a result, net working capital requirements for the Company's retail operations generally increase during summer months along with the higher revenues, and then decline during off-peak months. Weather

may impact operating results and extreme weather conditions could materially affect results of operations. The rates charged to retail customers may be impacted by fluctuations in the price of natural gas, transmission constraints, competition, and changes in market heat rates.

Table of Contents

Regional Segment Review

Revenues

The following table contains a summary of NRG's operating revenues by segment for the years ended December 31, 2011, 2010, and 2009, as discussed in Item 15 — Note 18, Segment Reporting, to the Consolidated Financial Statements. Refer to that footnote for additional financial information about NRG's business segments and geographic areas, including a profit measure and total assets. In addition, refer to Item 2 — Properties, for information about facilities in each of NRG's business segments.

	Year Ended December 31, 2011							
	Energy Revenues	Capacity Revenues	Retail Revenues	Mark-to-Market Activities	Contract Amor-tization	Thermal Revenues	Other Revenues	Total Operating Revenues
	(In millions)							
Reliant Energy	$—	$—	$5,075	$8	$ (145)	$—	$—	$4,938
Texas	2,561	28	—	173	—	—	106	2,868
Northeast	579	291	—	28	—	—	26	924
South Central	548	243	—	(12)	20	—	18	817
West	42	118	—	(4)	—	—	4	160
International	58	70	—	—	—	—	16	144
Thermal	—	—	—	—	(1)	143	—	142
Corporate and Eliminations [a][b]	(1,719)	(14)	732	132	(33)	—	(12)	(914)
Total	$2,069	$736	$5,807	$325	$ (159)	$ 143	$158	$9,079

(a) Energy revenues include inter-segment sales primarily between Texas and Northeast, and the Retail Businesses.

(b) Retail revenues include Energy Plus retail revenues of $63 million for the period October 1, 2011, to December 31, 2011.

	Year Ended December 31, 2010							
	Energy Revenues	Capacity Revenues	Retail Revenues	Mark-to-Market Activities	Contract Amor-tization	Thermal Revenues	Other Revenues	Total Operating Revenues
	(In millions)							
Reliant Energy	$—	$—	$5,210	$(1)	$ (219)	$—	$—	$4,990
Texas	2,850	25	—	57	7	—	118	3,057
Northeast	726	396	—	(144)	—	—	47	1,025
South Central	387	235	—	(45)	21	—	10	608
West	31	113	—	(4)	—	—	4	144
International	46	71	—	—	—	—	11	128
Thermal	—	—	—	(2)	—	145	—	143
Corporate and Eliminations [c][d]	(1,186)	(16)	67	(60)	(4)	—	(47)	(1,246)
Total	$2,854	$824	$5,277	$(199)	$ (195)	$ 145	$143	$8,849

(c) Energy revenues include inter-segment sales primarily between Texas and both Reliant Energy and Green Mountain Energy.

(d) Retail revenues include Green Mountain Energy retail revenues of $69 million for the period November 5, 2010, to December 31, 2010.

Year Ended December 31, 2009

	Energy Revenues	Capacity Revenues	Retail Revenues	Mark-to-Market Activities	Contract Amor-tization	Thermal Revenues	Other Revenues	Total Operating Revenues
	(In millions)							
Reliant Energy [e]	$—	$—	$4,440	$—	$ (258)	$—	$—	$4,182
Texas	2,770	193	—	(17)	57	—	(57)	2,946
Northeast	873	407	—	(70)	—	—	(9)	1,201
South Central	367	269	—	(17)	22	—	(60)	581
West	26	122	—	—	—	—	2	150
International	52	79	—	—	—	—	13	144
Thermal	—	—	—	(2)	—	137	—	135
Corporate and Eliminations [f]	(362)	(47)	—	(1)	—	—	23	(387)
Total	$3,726	$1,023	$4,440	$(107)	$ (179)	$137	$(88)	$8,952

(e) For the period May 1, 2009, to December 31, 2009.