



FORM 10-K

2023

NRG Board of Directors and Officers

(AS OF MARCH 15, 2024)

BOARD OF DIRECTORS

Lawrence S. Coben - Interim President and Chief Executive Officer and Chair

E. Spencer Abraham - Chairman and Chief Executive Officer, The Abraham Group

Antonio Carrillo - President and Chief Executive Officer, Arcosa, Inc.

Matthew Carter, Jr. - Chief Executive Officer, Intrado Life & Safety, Inc.

Heather Cox - President, Insights & Empowerment, Zelis Healthcare, Inc.

Elisabeth B. Donohue - Former Chief Executive Officer, Publicis Spine

Marwan Fawaz - Former Executive Advisor, Google and Alphabet

Paul W. Hobby - Managing Partner, Genesis Park, L.P.

Kevin T. Howell - Former Chief Operating Officer, Dynegy Inc.

Alex Pourbaix - Executive Chair and Former President and Chief Executive Officer, Cenovus Energy

Alexandra Pruner - Senior Advisor, Perella Weinberg Partners

Anne C. Schaumburg - Former Managing Director, Credit Suisse First Boston

Marcie C. Zlotnik - Co-Founder, Former Chief Operating Officer and Chair, StarTex Power

OFFICERS

Lawrence S. Coben - Interim President and Chief Executive Officer and Chair

Bruce Chung - Executive Vice President and Chief Financial Officer

Brian Curci - Executive Vice President and General Counsel

Robert J. Gaudette - Executive Vice President, NRG Business

Elizabeth Killinger - Executive Vice President, NRG Home

Rasesh Patel - Executive Vice President, Smart Home

G. Alfred Spencer - Senior Vice President and Chief Accounting Officer

Stockholder information

STOCK TRANSFER AGENT AND REGISTRAR

Shareholder correspondence should be mailed to:

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P.O. BOX 43078

Providence, RI 02940-3078

Send certificates for transfer and address changes to:

Computershare

P.O. BOX 43078

Providence, RI 02940-3078

STOCKHOLDER INQUIRIES

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150 Royall St., Suite 101

Canton, MA 02021

1.866.214.2213

Email: shareholder@computershare.com

Online inquires: www-us.computershare.com/investor/Contact

Website: www.computershare.com/investor

STOCK LISTING

NRG's common stock is listed on the New York Stock Exchange under the ticker symbol NRG.

FINANCIAL INFORMATION

NRG's Annual Report on Form 10-K, Proxy Statement and other SEC Filings are available at www.nrg.com under the Investors section.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

- ☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Fiscal Year ended December 31, 2023.
- ☐ 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.)

910 Louisiana Street, Houston, Texas

(Address of principal executive offices)

77002

(Zip Code)

(713) 537-3000

(Registrant's telephone number, including area code)

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

<u>Title of Each Class</u>	<u>Trading Symbol(s)</u>	<u>Name of Exchange on Which Registered</u>
Common Stock, par value \$0.01	NRG	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 ☒ No ☐

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 ☐ No ☒

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

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

Large Accelerated Filer ☒

Non-accelerated filer ☐

Accelerated filer ☐

Smaller reporting company ☐

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C 7262(b)) by the registered public accounting firm that prepared or issued its audit report ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

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 \$6,266,747,422 based on the closing sale price of \$37.39 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.

<u>Class</u>	<u>Outstanding at February 1, 2024</u>
Common Stock, par value \$0.01 per share	208,021,012

Documents Incorporated by Reference:

Portions of the Registrant's definitive Proxy Statement relating to its 2024 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K

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Glossary of Terms

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

ACE	Affordable Clean Energy
Acquisition	The acquisition of Vivint Smart Home, Inc. by NRG completed on March 10, 2023
Adjusted EBITDA	Adjusted earnings before interest, taxes, depreciation and amortization
AESO	Alberta Electric System Operator
ARO	Asset Retirement Obligation
ASC	The FASB Accounting Standards Codification, which the FASB established as the source of authoritative GAAP
ASR	Accelerated Share Repurchases
ASU	Accounting Standards Updates – updates to the ASC
AUC	Alberta Utilities Commission
BTU	British Thermal Unit
Business	NRG Business, which serves business customers
CAA	Clean Air Act
CAISO	California Independent System Operator
CAMT	15% Corporate Alternative Minimum Tax enacted by the IRA on August 16, 2022
CDD	Cooling Degree Day
CFTC	U.S. Commodity Futures Trading Commission
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalents
Company	NRG Energy, Inc.
Convertible Senior Notes	As of December 31, 2023, consists of NRG's \$575 million unsecured 2.75% Convertible Senior Notes due 2048
Cottonwood	Cottonwood Generating Station, a 1,166 MW natural gas-fueled plant
CPP	Clean Power Plan
CPUC	California Public Utilities Commission
CWA	Clean Water Act
D.C. Circuit	U.S. Court of Appeals for the District of Columbia Circuit
DSI	Dry Sorbent Injection
DSU	Deferred Stock Unit
Dth	Dekatherms
Dual fuel customers	Customer that have both electricity and natural gas service with the Company
Economic gross margin	Sum of retail revenue, energy revenue, capacity revenue and other revenue, less cost of fuels, purchased energy and other cost of sales
EGU	Electric Generating Unit
EPA	U.S. Environmental Protection Agency
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
ESP	Electrostatic Precipitator
ESPP	NRG Energy, Inc. Amended and Restated Employee Stock Purchase Plan
Exchange Act	The Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
FGD	Flue gas desulfurization
FPA	Federal Power Act

FTRs	Financial Transmission Rights
GAAP	Generally accepted accounting principles in the United States
GHG	Greenhouse Gas
Green Mountain Energy	Green Mountain Energy Company
GW	Gigawatts
GWh	Gigawatt Hours
HDD	Heating Degree Day
Heat Rate	A measure of thermal efficiency computed by dividing the total BTU content of the fuel burned by the resulting kWhs 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
Home	NRG Home, which serves residential customers
ICE	Intercontinental Exchange
IoT	Internet of Things
IRA	Inflation Reduction Act
ISO	Independent System Operator, also referred to as RTOs
ISO-NE	ISO New England Inc.
Ivanpah	Ivanpah Solar Electric Generation Station, a 391 MW solar thermal power plant located in California's Mojave Desert in which NRG owns 54.5% interest
kWh	Kilowatt-hours
LaGen	Louisiana Generating LLC
LIBOR	London Inter-Bank Offered Rate
LSEs	Load Serving Entities
LTIPs	Collectively, the NRG LTIP and the Vivint LTIP
MDth	Thousand Dekatherms
Midwest Generation	Midwest Generation, LLC
MISO	Midcontinent Independent System Operator, Inc.
MMBtu	Million British Thermal Units
MMDth	Million Dekatherms
MW	Megawatts
MWh	Saleable megawatt hour net of internal/parasitic load megawatt-hour
NAAQS	National Ambient Air Quality Standards
NEPOOL	New England Power Pool
NERC	North American Electric Reliability Corporation
NERC-CIP	North American Electric Reliability Corporation Critical Infrastructure Protection
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
NIST	National Institute of Standards and Technology
Nodal	Nodal Exchange is a derivatives exchange
NOL	Net Operating Loss
NO _x	Nitrogen Oxides
NPNS	Normal Purchase Normal Sale
NRC	U.S. Nuclear Regulatory Commission
NRG	NRG Energy, Inc.

NRG LTIP	NRG Energy, Inc. Amended and Restated Long-Term Incentive Plan
Nuclear Decommissioning Trust Fund	NRG's nuclear decommissioning trust fund assets, which were for the Company's portion of the decommissioning of the STP, units 1 & 2 through the sale of STP on November 1, 2023
NYISO	New York Independent System Operator
NYMEX	New York Mercantile Exchange
OCI/OCL	Other Comprehensive Income/(Loss)
ORDC	Operating Reserve Demand Curve
ORDPA	Online Reliability Deployment Price Adder
PCI DSS	Payment Card Industry Data Security Standard
Peaking	Units expected to satisfy demand requirements during the periods of greatest or peak load on the system
Petra Nova	Petra Nova Parish Holdings, LLC
PJM	PJM Interconnection, LLC
PM2.5	Particulate Matter that has a diameter of less than 2.5 micrometers
PPA	Power Purchase Agreement
PUCT	Public Utility Commission of Texas
RCRA	Resource Conservation and Recovery Act of 1976
Receivables Facility	NRG Receivables LLC, a bankruptcy remote, special purpose, wholly-owned indirect subsidiary of the Company's \$1.4 billion accounts receivables securitization facility due 2024, which was last amended on October 6, 2023
Receivables Securitization Facilities	Collectively, the Receivables Facility and the Repurchase Facility
RECs	Renewable Energy Certificates
Renewable PPA	A third-party PPA entered into directly with a renewable generation facility for the offtake of the RECs or other similar environmental attributes generated by such facility, coupled with the associated power generated by that facility
Renewables	Consists of the following projects in which NRG has an ownership interest: Ivanpah and solar generating stations located at various NFL Stadiums
Renewables Platform	The renewable operating and development platform sold to Global Infrastructure Partners with NRG's interest in NRG Yield
REP	Retail electric provider
Repurchase Facility	NRG's \$150 million uncommitted repurchase facility related to the Receivables Facility due 2024, which was last amended on October 6, 2023
Revolving Credit Facility	The Company's \$4.3 billion revolving credit facility due 2028, which was last modified on March 13, 2023
RGGI	Regional Greenhouse Gas Initiative
RMR	Reliability Must-Run
RPS	Renewable Portfolio Standards
RPSU	Relative Performance Stock Unit
RSU	Restricted Stock Unit
RTO	Regional Transmission Organization
SCR	Selective Catalytic Reduction Control System
SEC	U.S. Securities and Exchange Commission
Securities Act	The Securities Act of 1933, as amended
Senior Notes	As of December 31, 2023, NRG's \$4.0 billion outstanding unsecured senior notes consisting of \$375 million of the 6.625% senior notes due 2027, \$821 million of 5.75% senior notes due 2028, \$733 million of the 5.25% senior notes due 2029, \$500 million of the 3.375% senior notes due 2029, \$1.0 billion of the 3.625% senior notes due 2031 and \$480 million of the 3.875% senior notes due 2032

Senior Secured First Lien Notes	As of December 31, 2023, NRG's \$3.2 billion outstanding Senior Secured First Lien Notes consists of \$600 million of the 3.75% Senior Secured First Lien Notes due 2024, \$500 million of the 2.0% Senior Secured First Lien Notes due 2025, \$900 million of the 2.45% Senior Secured First Lien Notes due 2027, \$500 million of the 4.45% Senior Secured First Lien Notes due 2029 and \$740 million of the 7.000% Senior Secured First Lien Notes due 2033
Series A Preferred Stock	As of December 31, 2023, NRG's Series A Preferred Stock consists of 650,000 outstanding shares of the 10.25% Series A Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock, with a \$1,000 liquidation preference per share
Services	NRG Services, which primarily includes the services businesses acquired in the Direct Energy acquisition and the Goal Zero business
SO ₂	Sulfur Dioxide
SOFR	Secured overnight financing rate
South Central Portfolio	NRG's South Central Portfolio, which owned and operated a portfolio of generation assets consisting of Bayou Cove, Big Cajun-I, Big Cajun-II, Cottonwood and Sterlington, was sold on February 4, 2019. NRG is leasing back the Cottonwood facility through May 2025
S&P	Standard & Poor's
STP	South Texas Project — nuclear generating facility located near Bay City, Texas in which NRG owned a 44% interest. NRG closed on the sale of its interest in STP on November 1, 2023
STPNOC	South Texas Project Nuclear Operating Company
Tax Act	The Tax Cuts and Jobs Act of 2017
TDSP	Transmission/distribution service provider
Texas Genco	Texas Genco LLC
TSR	Total Shareholder Return
TWh	Terawatt Hours
U.S.	United States of America
VaR	Value at Risk
VIE	Variable Interest Entity
Vivint LTIP	Vivint Smart Home, Inc. Long-Term Incentive Plan assumed by NRG pursuant to merger between NRG and Vivint
Winter Storm Elliott	A major winter storm that had impacts across the majority of the United States and parts of Canada occurring in December 2022
Winter Storm Uri	A major winter and ice storm that had widespread impacts across North America occurring in February 2021

PART I

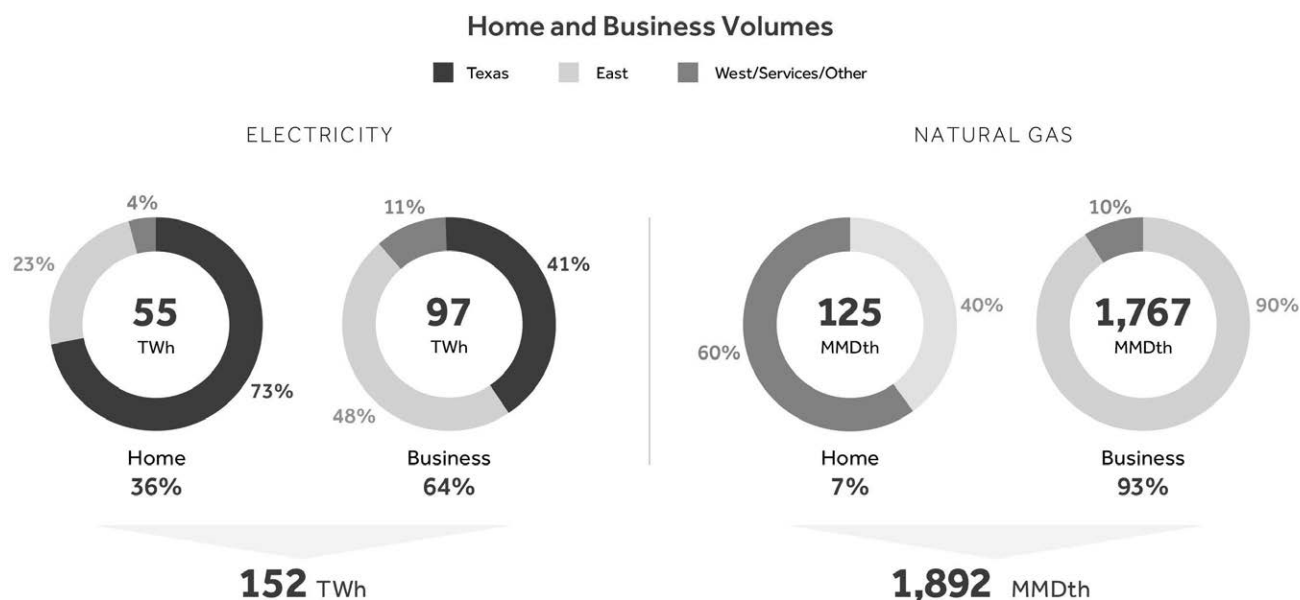
Item 1 — Business

General

NRG Energy, Inc., or NRG or the Company, sits at the intersection of energy and home services. NRG is a leading energy and home services company fueled by market-leading brands, proprietary technologies and complementary sales channels. Across the U.S. and Canada, NRG delivers innovative, sustainable solutions, predominately under brand names such as NRG, Reliant, Direct Energy, Green Mountain Energy and Vivint, while also advocating for competitive energy markets and customer choice. The Company has a customer base that includes approximately 8 million residential consumers in addition to commercial, industrial, and wholesale customers, supported by approximately 13 GW of generation as of December 31, 2023.

NRG sold 152 TWhs of electricity and 1,892 MMDth of natural gas in 2023, making it one of the largest competitive energy retailers in the U.S. As of the end of 2023, NRG had recurring electricity and/or natural gas sales in 25 U.S. states, the District of Columbia, and 8 provinces in Canada, as well as Vivint served customers in all 50 U.S. states. NRG's retail brands, collectively, have the largest share of competitively served residential electric customers in Texas and nationwide.

The following chart represents NRG's sales volumes for the year ended December 31, 2023:



Strategy

NRG's strategy is to maximize stakeholder value by being a leader in the emerging convergence of energy and smart automation in the home and business. Through a diversified supply strategy, the Company sells reliable electricity and natural gas to its customers in the markets it serves, while also providing innovative home solutions to customers. NRG's unique combination of assets and capabilities enables the Company to develop and sell highly differentiated offerings that bring together every day essential services like powering and securing the home through a seamless and integrated experience. This strategy is intended to enable the Company to optimize its unique integrated platform to delight customers, generate recurring cash flow, significantly strengthen earnings and cost competitiveness, and lower risk and volatility. Sustainability is a philosophy that underpins and facilitates value creation across NRG's business for its stakeholders. It is an integral piece of NRG's strategy and ties directly to business success, reduced risks and enhanced reputation.

To effectuate the Company's strategy, NRG is focused on: (i) serving the energy needs of end-use residential, commercial and industrial, and wholesale counterparties in competitive markets and optimizing on additional revenue opportunities through its multiple brands and channels; (ii) offering a variety of energy products and services, including renewable energy solutions and smart home products and services that are differentiated by innovative features, premium service, integrated platforms, sustainability and loyalty/affinity programs; (iii) excellence in operating performance of its assets; (iv) achieving the optimal mix of supply to serve its customer load requirements through a diversified supply strategy; and (v) engaging in disciplined and transparent capital allocation.

The following transactions were completed during 2023 in furtherance of the Company's strategy: (i) the March 10, 2023 acquisition of Vivint Smart Home, a leading smart home platform company; (ii) portfolio optimization, including the sale of the Company's 44% equity interest in STP for \$1.7 billion; and (iii) disciplined capital allocation through the execution of \$1.2 billion in share repurchases and \$1.4 billion in debt reduction.

Business Overview

The Company's core businesses are the sale of electricity and natural gas to residential, commercial and industrial and wholesale customers, supported by the Company's wholesale electric generation, as well as the sale of smart home products and services. NRG manages its electricity and natural gas operations based on the combined results of the retail and wholesale generation businesses with a geographical focus. Vivint Smart Home operations are reported within the Vivint Smart Home segment.

The Company's business is segmented as follows:

- Texas, which includes all activity related to customer, plant and market operations in Texas, other than Cottonwood;
- East, which includes all activity related to customer, plant and market operations in the East;
- West/Services/Other, which primarily includes the following assets and activities: (i) all activity related to customer, plant and market operations in the West and Canada, (ii) the Services businesses, (iii) activity related to the Cottonwood facility and other investments;
- Vivint Smart Home; and
- Corporate activities.

In Texas, the Company's generation supply is fully integrated with its retail load. This integrated model provides the advantage of being able to supply a portion of the Company's retail customers with electricity from the Company's assets, which reduces the need to sell electricity to, and buy electricity from, other institutions and intermediaries, resulting in more stable earnings and cash flows, lower transaction costs and less credit exposure. The integrated model also results in a reduction in actual and contingent collateral through offsetting transactions, thereby reducing transactions with third parties.

The integrated model consists of three core functions in each geographic segment above: Customer Operations, Market Operations and Plant Operations.

Customer Operations

Customer Operations is responsible for growing and retaining the customer base and delivering an outstanding customer experience. This includes acquisition and retention of all of NRG's residential, small commercial, commercial and industrial, and government customers. NRG employs a multi-brand strategy that leverages a wide array of sales and partnership channels, direct face-to-face sales channels, call centers, websites, and brokers. Go-to-market activities include market strategy planning and development, product innovation, offer design, campaign execution, marketing and creative services, and selling. Customer portfolio maintenance and retention activities include fulfillment, billing, payment processing, collections, customer service, issue resolution, and contract renewals. NRG provides energy and related services at either fixed, indexed or month-to-month prices. Home customers typically contract for terms ranging from one month to five years, while Business contracts are often between one year and five years in length. Throughout all Customer Operations activities, the customer experience is kept at the forefront to inform decision-making and optimize retention, while creating supporters and advocates for NRG's brands in the market. Customer Operations comprises three end-use customer facing teams: NRG Home, which serves residential customers, NRG Business, which serves business customers, and NRG Services, which primarily includes the Services businesses.

Product Offerings

NRG sells a variety of products to residential and small commercial customers, including retail electricity and energy management, natural gas, line and surge protection products, HVAC installation, repair and maintenance, home protection products, carbon offsets, back-up power stations, portable power, portable solar and portable lighting. Home and Services customers make purchase decisions based on a variety of factors, including price, incentive, customer service, brand, innovative offers/features and referrals from friends and family. Through its broad range of service offerings and value propositions, NRG seeks to attract, retain, and increase the value of its customer relationships. NRG's brands are recognized for exemplary customer service, innovative smart energy and technology product offerings, and environmentally-friendly solutions.

The Company provides power and natural gas to the business-to-business markets in North America, as well as retail services, including demand response, commodity sales, energy efficiency and energy management solutions to Business customers. The Company is an integrated provider of supply and distributed energy resources and focuses on distributed products and services as businesses seek greater reliability, cleaner power and other benefits that they cannot obtain from the grid. These solutions include system power, distributed generation, renewable and low-carbon products, carbon management

and specialty services, backup generation, storage and distributed solar, demand response, and energy efficiency and advisory services.

Market Operations

Market Operations has two primary objectives: to supply energy to customers in the most cost-efficient manner and to maximize the value of the Company's assets in satisfying its customer load requirements. These objectives are intended to reduce supply costs and maximize earnings with predictable cash flows.

Power and natural gas are the two main commercial groups within Market Operations.

Power

The power commercial group is responsible for end-use electricity supply including power plant optimization and certain fuel supply. To meet the market operations objectives, NRG enters into supply, power and gas hedging agreements via a wide range of products and contracts, including (i) physical and financial commodity instruments, (ii) fuel supply and transportation contracts, (iii) PPAs and Renewable PPAs and (iv) capacity and other contracted revenue or supply sources, as further discussed below.

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 that may include power and natural gas forward purchases and sales contracts to manage commodity price risk.

Physical and Financial Commodity Instruments

NRG trades power, natural gas, environmental, weather and other physical and financial commodity related products, including forwards, futures, options and swaps. NRG enters into these instruments primarily to manage price and delivery risk, optimize physical and contractual assets in the portfolio, manage working capital requirements, reduce the carbon exposure in its business and to comply with laws and regulations.

Fuel Supply and Transportation Contracts

NRG's fuel requirements consist of various forms of fossil fuel. The prices of fossil fuels can be volatile. The Company obtains its fossil fuels from multiple suppliers and through multiple transporters. Although availability is generally not an issue, localized shortages, transportation availability, delays arising from extreme weather conditions 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 and fuel products used. NRG's primary fuel requirements consist of the following:

Natural Gas — NRG operates a fleet of mid-merit and peaking natural gas plants. Fuel needs are managed by the natural gas commercial group, generally on a spot basis, as the Company does not believe it is prudent to forward purchase natural gas for these types of units as the dispatch is highly unpredictable. Natural gas storage and transportation contracts are utilized to reduce daily volatility.

Coal — NRG actively manages its coal requirements based on forecasted generation, market volatility and its inventory on site. The Company believes it is adequately hedged, using forward coal supply agreements, for its domestic coal consumption for 2024. As of December 31, 2023, NRG had purchased forward contracts to provide fuel for the Company's expected requirements for 2024. For the domestic fleet, NRG purchased approximately 13 million tons of coal in 2023, almost all of which was Powder River Basin coal. For fuel transport, NRG has entered into various rail transportation and rail car lease agreements with varying tenures, which will provide for the Company's transportation requirements of Powder River Basin coal for the next two years.

Renewable PPAs

The Company's strategy is to procure mid to long-term renewable generation through power purchase agreements. As of December 31, 2023, NRG has entered into Renewable PPAs totaling approximately 1.9 GW with third-party project developers and other counterparties, of which approximately 1.1 GW are operational. The average tenure of these agreements is eleven years. The Company expects to continue evaluating and executing similar agreements that support the needs of the business. The total GW entered into through Renewable PPAs may be impacted by contract terminations when they occur.

Capacity and Other Contracted Revenue or Supply Sources

NRG's revenues and/or cash flows, primarily in the East and West, benefit from capacity/demand payments and other contracted revenue sources, originating from market clearing capacity prices, tolling arrangements and other long-term contractual arrangements.

Natural Gas

The natural gas commercial group is responsible for costing, logistics and supply for all of NRG's residential, commercial and industrial, and wholesale customers. NRG has contractual rights to natural gas transportation and storage assets across its footprint that allow for optimal supply economics in support of its various businesses. NRG's diversified load coupled with this asset portfolio enables the Company to deliver supply economically while providing incremental optimization activities when market conditions allow. The scale of the natural gas operation extends from the wellhead (through its producer services business) to end use customers (through NRG's various sales channels). This scale, coupled with the Company's associated assets, gas system platform and people, create significant value across North America.

Plant Operations

The Company owns and leases a diversified wholesale generation portfolio with approximately 13 GW of fossil fuel, and renewable generation capacity at 19 plants as of December 31, 2023. The Company's wholesale generation assets are diversified by fuel-type and dispatch level, which helps mitigate the risks associated with fuel price volatility and market demand cycles. NRG continually evaluates its generation portfolio to focus on asset optimization opportunities and the locational value of its generation assets in each of the markets where the Company participates, as well as opportunities for the development of new generation.

The following table summarizes NRG's generation portfolio as of December 31, 2023:

Type	(In MW) ^(a)			
	Texas	East	West/Services/ Other ^(b)	Total
Natural gas	4,353	80	1,279	5,712
Coal	4,174	1,948	605	6,727
Oil	—	455	—	455
Utility Scale Solar	—	—	216	216
Battery Storage	2	—	—	2
Total generation capacity	8,529	2,483	2,100	13,112

(a) Utility Scale Solar is described in MW on an alternating current basis. MW figures provided represent nominal summer net MW capacity of power generated as adjusted for the Company's owned interest

(b) Includes proportionate share of equity owned investments

Plant Operations is responsible for operating the Company's generation facilities at the highest standards of safety and regulatory compliance, and includes (i) operations and maintenance, (ii) asset management, and (iii) development, engineering and construction.

Operations & Maintenance

NRG operates and maintains its generation portfolio, as well as approximately 6,500 MW of additional coal, natural gas and wind generation capacity at 15 plants operated on behalf of third parties, as of December 31, 2023, using prudent industry practices for the safe, reliable and economic generation of electricity in compliance with all local, state and federal requirements. The Company follows a consistent set of operating requirements, including a solid base of training, required adherence to specific safety and environmental limits, procedure and checklist usage, and the implementation of continuous process improvement through incident investigations.

NRG uses best-in-class maintenance practices for preventive, predictive, and corrective maintenance planning. The Company's strategic planning process evaluates equipment condition, performance, and obsolescence to support the development of a comprehensive work scope and schedule for long-term performance.

Asset Management

NRG manages all aspects of its generation portfolio to optimize the lifecycle value of the assets, consistent with the Company's goals. The Company evaluates capital projects required for continued operation and strategic enhancement of the assets, provides quality assurance on capital outlays, and assesses the impact of rules, regulations, and laws on business profitability. In addition, the Company manages its long-term contracts, PPAs, and real estate holdings and provides third-party asset management services.

Development, Engineering & Construction

NRG develops, engineers and executes major plant modifications, "new build" generation and energy storage projects that enhance the value of its generation portfolio and provide options to meet generation growth needs in the retail markets it serves, in accordance with the Company's strategic goals. These projects have included gas-fired generation development and

construction, coal to gas conversions, grid scale energy storage development, grid scale renewable construction, and asset demolition, remediation and reclamation work.

Vivint Smart Home

In March 2023, NRG completed the acquisition of Vivint Smart Home, which is a leading smart home platform that provides subscribers with technology, products and services to create a smarter, greener, safer home. A smart home has multiple devices integrated into a single expandable platform that incorporates artificial intelligence and machine-learning in its operating system allowing customers to interact with and manage their home from anywhere via the Vivint app on their smart device. Vivint Smart Home enables a customized solution for the home using integrated smart cameras (indoor, outdoor and doorbell), locks, lights, thermostats, garage door control and a host of other safety and security sensors.

Vivint Smart Home provides a fully integrated solution for consumers, including hardware, software, sales, installation by trained and experienced in-home service professionals, customer service, technical support and professional monitoring. This seamless integration of high-quality products and services resulted in an average subscriber lifetime of approximately nine years as of December 31, 2023. The Company believes its ability to offer related or adjacent products and services that leverage the existing smart home platform, as well as energy services, can extend the average subscriber lifetime and increase the lifetime value of subscribers. Vivint Smart Home's cloud-based home platform currently manages more than 30 million in-home devices as of December 31, 2023. The average subscriber on Vivint Smart Home's cloud-based home platform engages with the smart home app approximately 16 times per day and has approximately 15 devices in its home.

Through the addition of Vivint Smart Home, NRG identified opportunities to improve gross margin, customer retention and customer lifetime value.

Operational Statistics

The following statistics represent the Company's retail load and customer count:

	Year ended December 31,		
	2023	2022	2021
Sales volumes - Electricity (in GWh)			
Home - Texas	40,032	43,155	42,397
Home - East	12,838	13,269	14,108
Home - West/Services/Other	2,243	2,250	2,252
Business - Texas	40,250	38,447	34,367
Business - East	46,438	47,724	53,204
Business - West/Services/Other	10,393	10,231	10,625
Total Load	152,194	155,076	156,953
Sales volumes - Natural gas (in MDth)			
Home - East	49,990	53,051	50,417
Home - West/Services/Other	75,150	92,035	97,272
Business - East	1,587,052	1,618,946	1,620,036
Business - West/Services/Other	179,888	154,074	109,021
Total Load	1,892,080	1,918,106	1,876,746

	Year ended December 31,		
	2023	2022	2021
Customer count - Electricity customers^{(a)(b)} (in thousands)			
<i>Home - Texas</i>			
Average retail	2,878	2,961	3,040
Ending retail	2,928	2,859	3,010
<i>Home - East</i>			
Average retail	1,466	1,408	1,484
Ending retail	1,752	1,381	1,402
<i>Home - West/Services/Other</i>			
Average retail ^(c)	393	383	525
Ending retail ^(c)	404	390	512
Customer count - Natural gas customers^(b) (in thousands)			
<i>Home - East</i>			
Average retail	390	375	360
Ending retail	385	380	364
<i>Home - West/Services/Other</i>			
Average retail	381	416	452
Ending retail	358	396	434
Total Customer count (in thousands)			
Average retail - Home - Electricity and Natural gas	5,508	5,543	5,861
Average - Vivint Smart Home ^(d)	2,008	—	—
Ending retail - Home - Electricity and Natural gas	5,827	5,406	5,722
Ending - Vivint Smart Home ^(d)	2,043	—	—
Total Ending retail and Vivint Smart Home	7,870	5,406	5,722

(a) Includes Services customers

(b) Dual fuel customers are included within electricity customer counts only

(c) Includes 135 thousand whole home warranty customers as of December 31, 2021. The whole home warranty business was sold in January 2022

(d) Vivint Smart Home subscribers includes customers that also purchase other NRG products

The following are industry statistics for the Company's fossil and nuclear plants, as defined by the NERC:

Annual Equivalent Availability Factor, or EAF — Measures the percentage of maximum generation available over time as the fraction of net maximum generation that could be provided over a defined period of time after all types of outages and deratings, including seasonal deratings, are taken into account.

Net Heat Rate — The net heat rate represents the total amount of fuel in BTU required to generate one net kWh provided.

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 by the station.

The tables below present these performance metrics for the Company's generation portfolio, including leased facilities, for the years ended December 31, 2023 and 2022:

Year Ended December 31, 2023					
	Net Owned Capacity (MW)	Net Generation (In thousands of MWh) ^(a)	Fossil and Nuclear Plants ^(a)		
			Annual Equivalent Availability Factor	Average Net Heat Rate BTU/kWh	Net Capacity Factor
Texas	8,529	30,776	74.2 %	11,175	35.4 %
East	2,483	2,016	85.5 %	13,007	6.6 %
West/Services/Other	1,169	5,903	73.5 %	7,449	56.8 %

(a) Excludes equity method investments

Year Ended December 31, 2022					
	Net Owned Capacity (MW)	Net Generation (In thousands of MWh) ^(a)	Fossil and Nuclear Plants ^(a)		
			Annual Equivalent Availability Factor	Average Net Heat Rate BTU/kWh	Net Capacity Factor
Texas	10,027	37,275	69.5 %	10,733	41.8 %
East	4,285	7,282	78.1 %	11,959	17.3 %
West/Services/Other	1,172	6,676	84.5 %	7,442	64.9 %

(a) Excludes equity method investments

The generation performance by region for the three years ended December 31, 2023, 2022 and 2021 is shown below:

(In thousands of MWh)	Net Generation		
	2023	2022	2021
Texas			
Coal	15,576	18,860	18,876
Gas	7,333	8,763	8,846
Nuclear ^(a)	7,867	9,652	9,198
Total Texas	30,776	37,275	36,920
East			
Coal	1,328	6,738	5,774
Oil	3	7	201
Gas	685	537	1,519
Total East ^(b)	2,016	7,282	7,494
West/Services/Other			
Gas	5,899	6,669	7,941
Renewables	4	7	8
Total West/Services/Other ^(c)	5,903	6,676	7,949
Total generation performance	38,695	51,233	52,363

(a) Reflects the Company's undivided interest in total MWh generated by STP. The Company sold its interest in STP on November 1, 2023

(b) Includes gas generation of 855 thousand MWh and oil generation of 199 thousand MWh for the year ended December 31, 2021, that was sold to Generation Bridge on December 1, 2021

(c) Includes gas generation of 2,445 thousand MWh for the year ended December 31, 2021, that was sold to Generation Bridge on December 1, 2021

Competition

While there has been consolidation in the competitive retail energy space over the past few years, there is still considerable competition for customers. In Texas, there is healthy competition in deregulated areas and customers can choose providers based on the most appealing offers. Outside of Texas, electricity retailers compete with the incumbent utilities, in addition to other retail electric providers, which can inhibit competition depending on the market rules of the state. There is a high degree of fragmentation, with both large and small competitors offering a range of value propositions, including value, rewards, and sustainability-based offerings.

Wholesale generation is highly fragmented and diverse in terms of industry structure by region. As such, there is wide variation in terms of the capabilities, resources, nature and identities of the Company's competitors depending on the market. Competitors include regulated utilities, municipalities, cooperatives, other independent power producers, and power marketers or trading companies, including those owned by financial institutions.

The smart home market is an expanding global opportunity and is in the early stages of broad consumer adoption. It is highly competitive and fragmented. Major competitors range from large-cap technology companies seeking to expand their core market opportunity who predominantly offer do-it-yourself ("DIY") devices that put a large burden on homeowners to self-install and support many devices, to security-based providers, as well as industrial and telecommunications companies that offer connected home experiences. Vivint Smart Home provides the full smart home experience, with an end-to-end solution that includes a wide range of unique capabilities and use cases. Currently, the vast majority of competitors do not offer comprehensive smart home solutions and accompanying services.

Seasonality and Price Volatility

The sale of power and natural gas to retail customers are seasonal businesses with the demand for power generally peaking during the summer, and the demand for natural gas generally peaking during the winter. As a result, net working capital requirements for the Company's retail operations generally increase during summer and winter months along with the higher revenues, and then decline during off-peak months. Weather may impact operating results and extreme weather conditions could have a material impact. The rates charged to retail customers may be impacted by fluctuations in total power prices and market dynamics, such as the price of natural gas, transmission constraints, competitor actions, and changes in market heat rates.

Annual and quarterly operating results of the Company's generation portfolio 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. The preceding factors related to seasonality and price volatility are fairly uniform across the regions in which the Company operates.

Market Framework

NRG sells electricity, natural gas and related products and services, and smart home products and services to customers throughout the U.S. and Canada. In most of the states and regions that have introduced retail consumer choice, NRG competitively offers electricity, natural gas, portable power and other value-enhancing services to customers. Each retail consumer choice state or province establishes its own retail competition laws and regulations, and the specific operational, licensing, and compliance requirements vary by state or province. Regulated terms and conditions of default service, as well as any movement to replace default service with competitive services, as is done in ERCOT, can affect customer participation in retail competition. In Canada, NRG sells energy and related services to residential and commercial customers in the province of Alberta pursuant both to a regulated rate service governed by provincial regulations as well as a competitive service with rates set by market forces. Sales of energy to commercial customers take place in other provinces as well. The attractiveness of NRG's retail offerings may be impacted by the rules, regulations, market structure and communication requirements from public utility commissions in each state and province.

NRG's fleet of power plants which it owns, operates or manages are located in organized energy markets, known as RTOs or ISOs. Each organized market administers day-ahead and real-time centralized bid-based energy and ancillary services markets pursuant to tariffs approved by FERC, or in the case of ERCOT, market rules approved by the PUCT. These tariffs and rules dictate how the energy markets operate, how market participants make bilateral sales with one another and how entities with market-based rates are compensated. Established prices reflect the value of energy at the specific location and time it is delivered, which is known as the Locational Marginal Price. Each market is subject to market mitigation measures designed to limit the exercise of locational market power. These market structures facilitate NRG's sale of power and capacity products at market-based rates.

Other than ERCOT and AESO, each of the ISO regions also operates a capacity or resource adequacy market that provides an opportunity for generating and demand response resources to earn revenues to offset their fixed costs that are not recovered in the energy and ancillary services markets. The ISOs are also responsible for transmission planning and operations.

Texas

NRG's business in Texas is subject to standards and regulations adopted by the PUCT and ERCOT¹, including the requirement for retailers to be certified by the PUCT in order to contract with end-users to sell electricity. The ERCOT market is one of the nation's largest and, historically, fastest growing power markets. ERCOT is an energy-only market. The majority of the retail load in the ERCOT market region is served by competitive retail suppliers, except certain areas that have not opted into competitive consumer choice and are served by municipal utilities and electric cooperatives.

East

While most of the states in the East region of the U.S. have introduced some level of retail consumer choice for electricity and/or natural gas, the incumbent utilities currently provide default service in most of the states and as a result typically serve the majority of residential customers. NRG's retail activities in the East are subject to standards and regulations adopted by the ISOs, state public utility commissions and legislators, including the requirement for retailers to be certified in each state in order to contract with end-users to sell electricity.

Power plants owned, operated or managed by NRG and NRG's demand response assets located in the East region of the U.S. are within the control areas of PJM, NYISO and MISO. Each of the market regions in the East region provides for robust competition in the day-ahead and real-time energy and ancillary services markets. Additionally, the assets in the East region receive a significant portion of their revenues from capacity markets. PJM uses a forward capacity auction, while NYISO uses a month-ahead capacity auction. MISO has an annual auction. Capacity market prices are sensitive to design parameters, as well as additions of new capacity. PJM operates a pay-for-performance model where capacity payments are modified based on real-time generator performance. In such markets, NRG's actual capacity revenues will be the combination of cleared auction prices times the quantity of MW cleared, plus the net of any over-performance "bonus payments" and any under-performance charges. Additionally, bidding rules allow for the incorporation of a risk premium into generator bids.

West

In the West region of the U.S., NRG owns equity interests, operates or manages power plants located entirely within the CAISO footprint. The CAISO operates day-ahead and real-time locational markets for energy and ancillary services, while managing congestion primarily through nodal prices. The CAISO system facilitates NRG's sale of power, ancillary services and capacity products at market-based rates, either within the CAISO's centralized energy and ancillary service markets or bilaterally. The CPUC also determines capacity requirements for LSEs and for specified local areas utilizing inputs from the CAISO. Both the CAISO and CPUC rules require LSEs to contract with sufficient generation resources in order to maintain minimum levels of generation within defined local areas. Additionally, the CAISO has independent authority to contract with needed resources under certain circumstances, typically either when LSEs have failed to procure sufficient resources, or system conditions change unexpectedly.

Canada

In Canada, NRG sells to residential and commercial retail customers in Alberta, within the AESO footprint, under both regulated rates approved by the AUC as well as through competitive service. The Company's regulated rates are approved through periodic rate applications that establish rates for power and gas sales as well as for recovery of other costs associated with operating the regulated business. In addition, the Company sells energy to commercial customers in other provinces. All sales and operations are subject to applicable federal and provincial laws and regulations.

Vivint Smart Home

Vivint Smart Home operates in states that regulate in some manner the sale, installation, servicing, monitoring or maintenance of smart home and electronic security systems. Vivint Smart Home and Vivint Smart Home sales representatives are typically required to obtain and maintain licenses, certifications or similar permits from governmental entities as a condition to engaging in the smart home and security service business. Vivint Smart Home is subject to federal and state laws related to consumer financing which may include rules related to fees and charges, disclosures and regulation of the party extending consumer credit.

¹ The Cottonwood facility is located in Deweyville, Texas, but operates in the MISO market

Energy Regulatory Matters

As participants in wholesale and retail energy markets and owners and operators of power plants, certain NRG entities are subject to regulation by various federal, state and provincial agencies. These include the CFTC, FERC, and the PUCT, as well as other public utility commissions in certain states where NRG's generation or distributed generation assets are located. In addition, NRG is subject to the market rules, procedures and protocols of the various ISO and RTO markets in which it participates. These power markets are subject to ongoing legislative and regulatory changes that may impact NRG's wholesale and retail operations. NRG must also comply with the mandatory reliability requirements imposed by NERC and the regional reliability entities in the regions where NRG operates.

NRG's operations within the ERCOT footprint are not subject to rate regulation by FERC, as they are deemed to operate solely within the ERCOT market and not in interstate commerce. These operations are subject to regulation by the PUCT.

Regional Regulatory Developments

NRG is affected by rule/tariff changes that occur in the ISO regions. For further discussion on regulatory developments see Item 15 — Note 24, *Regulatory Matters*, to the Consolidated Financial Statements.

Texas

Public Utility Commission of Texas's Actions with Respect to Wholesale Pricing and Market Design — The PUCT continues to analyze and implement multiple options for promoting increased reliability in the wholesale electric market, including the adoption of a reliability standard for resource adequacy and market-based mechanisms to achieve this standard. During the 88th Regular Session, the Texas Legislature authorized deployment of the Performance Credit Mechanism ("PCM"), which will measure real-time contribution to system reliability and provide compensation for resources to be available, subject to certain "guardrails" such as an annual net cost cap, as part of its adoption of the PUCT Sunset Bill (House Bill 1500). The Texas Legislature also directed the PUCT to implement additional market design changes such as the creation of a new ancillary service called Dispatchable Reliability Reserve Service ("DRRS") to further increase ERCOT's capability to manage net load variability and firming requirements for new generation resources which penalize poor performance during periods of low grid reserves. The PUCT directed ERCOT to implement DRRS as a standalone product which will delay implementation until late 2025 or 2026. Additionally, through Senate Bill 2627, the Texas Legislature created the Texas Energy Fund, which received voter approval in November 2023, and will provide grants and low-interest loans to incentivize the development of more dispatchable generation and smaller backup generation in ERCOT. The PUCT has initiated a rulemaking proceeding to establish the process by which the Texas Energy fund loan proceeds will be distributed. A final rule creating the general structure of the loan program is expected to be adopted in March 2024.

Operating Reserve Demand Curve ("ORDC") — On August 3, 2023, the PUCT approved implementation of an enhancement to the ORDC as a bridge solution that was recommended by the ERCOT Technical Advisory Committee and the ERCOT board of directors. The ORDC enhancement will install price floors of \$10 and \$20 at reserve levels of 7,000 MW and 6,500 MW or below, respectively. ERCOT completed implementation on November 1, 2023.

Ruling on Pricing during Winter Storm Uri — On March 17, 2023, the Third Court of Appeals issued a ruling in *Luminant Energy Co. v. PUCT*, which is an appeal relating to the validity of two orders issued by the PUCT on February 15 and 16, 2021, respectively, governing scarcity pricing in the ERCOT wholesale electricity market during Winter Storm Uri. The Third Court found that the PUCT exceeded its statutory authority by ordering the market price of energy to be set at the high system wide offer cap due to scarcity conditions as a result of firm load shed occurring in ERCOT. The Third Court reversed the PUCT's orders and remanded the case. On March 23, 2023, the PUCT filed a petition for review to the Supreme Court of Texas seeking reversal of the Third Court's decision, which was granted on September 29, 2023. The Court received briefing on the merits and oral arguments occurred on January 30, 2024. The outcome of this appeal could potentially require a retroactive repricing of the ERCOT market prices during the subject time period.

Voluntary Mitigation Plan ("VMP") Changes — On March 13, 2023, the PUCT Staff determined that a portion of NRG's VMP should be terminated due to the increase in procurement of ancillary services by ERCOT, specifically non-spin reserve services, following Winter Storm Uri. As such, PUCT Staff terminated part of the VMP for NRG which provides protection from wholesale market power abuse accusations related to offers for ancillary services. NRG agreed with these changes to the VMP. At the March 23, 2023 open meeting, the PUCT approved the amended VMP. On February 23, 2024, NRG filed a notice of intent with the PUCT to terminate its existing VMP as of March 1, 2024.

ERCOT Request for Proposals for Winter Capacity — On October 2, 2023, ERCOT issued a Request for Proposals for Capacity ("RFP") for Winter 2023-2024. Proposals were due in early November to provide capacity for the December 1, 2023 to February 29, 2024 period. The RFP requirements were limited to demand response resources that have not participated in ERCOT or price responsive products. Ultimately, ERCOT cancelled the procurement due to lack of participation by qualified participants.

Lubbock, Texas Transition to Competition — The customers of Lubbock Power and Light ("LP&L"), a municipally owned utility, will enter the Texas retail competitive market in March 2024. Starting in January 2024, LP&L customers can shop for a REP. Customers who do not select a REP by February 15, 2024 will be assigned to one of three default REPs, one of which is Reliant. LP&L customers will start transitioning to their chosen REP or a default REP on March 4, 2024.

PJM

Revisions to PJM Local Deliverability Area Reliability Requirement — The Base Residual Auction for the 2024/2025 delivery year commenced on December 7, 2022 and closed on December 13, 2022. On December 19, 2022, PJM announced that it would delay the publication of the auction results. On December 23, 2022, PJM made a filing at FERC to revise the definition of Locational Deliverability Area Reliability Requirement in the Tariff. This would allow PJM to exclude certain resources from the calculation of the Local Deliverability Area Reliability Requirement. On February 21, 2023, FERC accepted PJM's filing. Multiple parties, including NRG, filed for rehearing. Rehearing was denied by operation of law, and multiple parties, including the Company, filed appeals to the Third Circuit Court of Appeals. The price of the auction cleared significantly lower as a result of the PJM Tariff change.

Capacity Performance Penalties and Bonuses from Winter Storm Elliott — PJM experienced approximately 23 hours of Capacity Performance events from December 23-24, 2022 across PJM's entire footprint. The Company is subject to penalty and bonus payments related to the events. On April 3, 2023, FERC approved PJM's request to allow Winter Storm Elliott penalty payments to be spread over 9 months (with interest) and allow future penalties to have a 9 month window to be satisfied without interest. Multiple generators filed various complaints against PJM at FERC alleging that PJM violated its Tariff in, among other things, the manner in which it operated the system during Winter Storm Elliott and the resulting assessment of capacity performance penalties. On June 5, 2023, FERC issued an order setting the various complaints for settlement. A settlement in principle was filed with FERC on September 29, 2023 and was approved on December 19, 2023.

PJM Base Residual Auction Revisions and Delay — On April 11, 2023, PJM filed, and FERC subsequently approved, to delay the Base Residual Auctions for the 2025/2026 to 2028/2029 delivery years. On October 13, 2023, PJM made two filings proposing to develop market reforms to improve the operation of the capacity market through changes to the Market Seller Offer Cap rules, changes to PJM's resource adequacy risk modeling and capacity accreditation processes, and changes to capacity performance enhancements. On January 30, 2024, FERC accepted certain reforms to PJM's resource adequacy risk modeling and accreditation processes; on February 6, 2024, FERC rejected PJM's proposed changes to certain Market Seller Offer Cap rules and capacity performance enhancements. The approved changes will be in effect for the 2025/2026 Base Residual Auction scheduled to occur in July 2024, and will impact both demand and supply characteristics.

PJM Files to Make Changes to the Performance Assessment Interval Trigger — On May 30, 2023, PJM filed proposed tariff revisions at FERC that narrow the definition of Emergency Actions used to determine Performance Assessment Intervals ("PAIs"). On July 28, 2023, FERC accepted the tariff revisions, and PJM made its compliance filing on August 28, 2023. The new definition narrows the instances of when PAIs can occur and therefore decrease the instances of when capacity performance penalties are assessed.

Independent Market Monitor Market Seller Offer Cap Complaint — On March 18, 2021, finding that the calculation of the default Market Seller Offer Cap was unjust and unreasonable, FERC issued an Order, which permitted the PJM May 2021 capacity auction for the 2022/2023 delivery rule to continue under the existing rules and set a procedural schedule for parties to file briefs with possible solutions. On September 2, 2021, FERC issued an order in response to a complaint filed by the PJM Independent Market Monitor's proposal, which eliminated the Cost of New Entry-based Market Seller Offer Cap, implemented a limited default cap for certain asset classes based on going-forward costs and provided for unit specific cost review by the Independent Market Monitor for all other non-zero offers into the auctions. On October 4, 2021, as required by the Order, PJM submitted its compliance tariff and certain parties filed a motion for rehearing, which was denied by operation of law. On February 18, 2022, FERC addressed the arguments raised on rehearing and rejected the rehearing requests. Multiple parties filed appeals at the Court of Appeals for the D.C. Circuit, and on August 15, 2023, the Court denied the petitions for review. On January 12, 2024, the generator trade association filed a petition for review with the U.S. Supreme Court to overturn the August 15, 2023 judgment.

California

California Resource Planning Proceedings — As part of the Integrated Resource Procurement docket, the CPUC is requiring that all LSEs procure a pro rata share of 15.5 GW of new non-fossil resource adequacy ("RA") from 2023 to 2026. The new RA program rules adopted in 2023 are now in an implementation phase with a compliance process likely to be continually recalibrated through the first quarter of 2024. CPUC jurisdictional retail providers will be required to procure RA that meets their hourly load shape beginning in 2025. The result of these changes may create upward pressure on RA prices through 2024, and if LSEs cannot meet their RA obligations, penalties and restrictions on serving new customers may be issued. As relief to the tightness of the RA market, the CPUC adopted a final decision in December 2023 to extend PG&E's

Diablo Canyon nuclear facility. The decision would allow the RA and GHG-free attributes of this 2-GW facility to be allocated to all LSEs to provide some relief to all LSEs' RA positions.

Other Regulatory Matters

From time to time, NRG entities may be subject to examinations, investigations and/or enforcement actions by federal, state and provincial licensing agencies and may face the risk of penalties for violation of financial services, consumer protections and other applicable laws and regulations.

Environmental Regulatory Matters

NRG is subject to numerous environmental laws in the development, construction, ownership and operation of power plants. These laws generally require that governmental permits and approvals be obtained before construction and maintained during operation of power plants. Federal and state environmental laws have become more stringent over time. Future laws may require the addition of emissions controls or other environmental controls or impose restrictions on the Company's operations including unit retirements. Complying with environmental laws often involves specialized human resources and significant capital and operating expenses, as well as occasionally curtailing operations. NRG decides to invest capital for environmental controls based on the relative certainty of the requirements, an evaluation of compliance options and the expected economic returns on capital.

A number of regulations that affect the Company have been and continue to be revised by the EPA, including requirements regarding coal ash, NAAQS revisions and implementation, and effluent limitation guidelines. NRG will evaluate the impact of these regulations as they are revised but cannot fully predict the impact of each until anticipated revisions and legal challenges are finally resolved.

Air

The CAA and related regulations (as well as similar state and local requirements) have the potential to affect air emissions, operating practices and pollution control equipment required at power plants. Under the CAA, the EPA sets NAAQS for certain pollutants including SO₂, ozone, and PM_{2.5}. Many of the Company's facilities are located in or near areas that are classified by the EPA as not achieving certain NAAQS (non-attainment areas). The relevant NAAQS may become more stringent. On February 7, 2024, the EPA released a prepublication version of a final rule that when published in the Federal Register will increase the stringency of the PM_{2.5} NAAQS. The Company maintains a comprehensive compliance strategy to address continuing and new requirements. Complying with increasingly stringent air regulations could require the installation of additional emissions control equipment at some NRG facilities or retiring of units if installing such controls is not economic. Significant changes to air regulatory programs affecting the Company are described below.

CPP/ACE Rules — The attention in recent years on GHG emissions has resulted in federal and state regulations. In 2019, the EPA promulgated the ACE rule, which rescinded the CPP, which had sought to broadly regulate CO₂ emissions from the power sector. On January 19, 2021, the D.C. Circuit vacated the ACE rule (but on February 22, 2021, at the EPA's request, stayed the issuance of the portion of the mandate that would vacate the repeal of the CPP). On June 30, 2022, the U.S. Supreme Court held that the "generation shifting" approach in the CPP exceeded the powers granted to the EPA by Congress. The Court did not address the related issues of whether the EPA may adopt only measures applied at each source. On May 23, 2023, the EPA proposed significantly revising the manner in which new and existing EGU's GHG emissions should be regulated including using hydrogen as a fuel, capturing and storing/sequestering CO₂ and requiring new units to be more efficient. The EPA has stated that it intends to finalize these revisions in 2024. The Company expects that the final rule will be challenged in the courts and accordingly uncertain over the next several years.

Cross-State Air Pollution Rule ("CSAPR") — On March 15, 2023, the EPA signed and released a prepublication of a final rule that sought to significantly revise the CSAPR to address the good-neighbor obligations of the 2015 ozone NAAQS for 23 states after earlier having disapproved numerous state plans to address the issue. Several states, including Texas, challenged the EPA's disapproval of their state plans. On May 1, 2023, the United States Court of Appeals for the Fifth Circuit stayed the EPA's disapproval of Texas' and Louisiana's state plans, which disapprovals are a condition precedent to the EPA imposing its plan on Texas and Louisiana. Several other states are also similarly situated because of similar stays. Nonetheless, on June 5, 2023, the EPA published this rule in the Federal Register. On July 31, 2023, the EPA promulgated an interim final rule that addresses the various judicial orders that have stayed several State-Implementation-Plan disapprovals by limiting the effectiveness of certain requirements of the final rule promulgated on June 5, 2023 in Texas and five other states. The final rule decreases, over time, the ozone-season NO_x allowances allocated to generators in the states not affected by the judicial stays beginning in 2023 by assuming that participants in this cap-and-trade program had or would optimize existing NO_x controls and later install additional NO_x controls. The Company cannot predict the outcome of the legal challenges to the: (i) various state disapprovals; (ii) the final rule promulgated on June 5, 2023; and (iii) the interim final rule promulgated on July 31, 2023 that seeks to address the judicial orders.

Regional Haze Proposal — On May 2023, the EPA proposed to withdraw the existing Texas Sulfur Dioxide Trading Program and replace it with unit-specific SO₂ limits for 12 units in Texas to address requirements to improve visibility at National Parks and Wilderness areas. If finalized as proposed, the rule would result in more stringent SO₂ limits for two of the Company's coal-fired units in Texas. The Company cannot predict the outcome of this proposal.

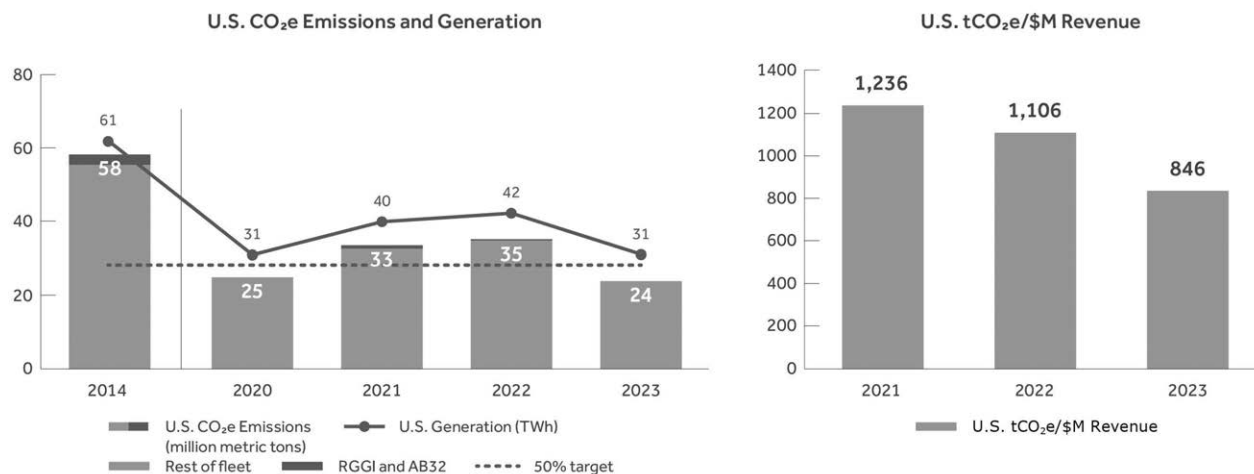
Greenhouse Gas Emissions — NRG emits CO₂ (and small quantities of other GHGs) when generating electricity at a majority of its facilities. Nearly all of NRG's domestic GHG emissions are subject to federal (U.S. EPA) GHG reporting requirements.

NRG's climate goals are to reduce greenhouse gas emissions by 50% by 2025, from its current 2014 base year, and to achieve net-zero emissions by 2050. Greenhouse gas emissions included in NRG's goals are directly controlled emissions, emissions from purchased electricity for NRG's consumption and emissions from employee business travel. In March 2021, the Science Based Targets initiative validated NRG's 2025 and 2050 goals as aligned with a 1.5 degree Celsius trajectory. This validation was based on NRG's business in 2020, prior to its acquisition of Direct Energy and Vivint. Following the acquisitions, the magnitude of NRG's indirect emissions changed, and the Company is currently in the process of analyzing these emissions.

From the current 2014 base year through 2023, the Company's directly controlled CO₂e emissions decreased from 58 million metric tons to 24 million metric tons, representing a cumulative 58% reduction. The decrease is attributed to reductions in fleet-wide annual net generation and an overall market-driven shift away from coal as a primary fuel to natural gas. The achievement of NRG's 2025 emissions reduction targets could be impacted by volatility within the power markets, driven by market conditions and changes in regulatory policies.

As of December 31, 2023, less than 5% of the Company's consolidated revenues were derived from coal-fired operating assets.

The following charts reflect the Company's domestic generation portfolio, including leased facilities and those accounted for through equity method investments, but excluding the battery storage and remaining renewables activity. Prior year information on U.S. CO₂e emissions and U.S. generation was adjusted to remove divested assets.



Byproducts

In 2015, the EPA finalized a rule regulating byproducts of coal combustion (e.g., ash and gypsum) as solid wastes under the RCRA. On August 21, 2018, the D.C. Circuit found, among other things, that the EPA had not adequately regulated unlined ponds and legacy surface impoundments. On August 28, 2020, the EPA finalized "A Holistic Approach to Closure Part A: Deadline to Initiate Closure," which amended the April 2015 Rule to address the August 2018 D.C. Circuit decision and extend some of the deadlines. On November 12, 2020, the EPA finalized "A Holistic Approach to Closure Part B: Alternative Demonstration for Unlined Surface Impoundments," which further amended the April 2015 Rule to, among other things, provide procedures for requesting approval to operate existing ash impoundments with an alternate liner. On May 23, 2023, the EPA proposed establishing requirements for: (i) inactive (or legacy) surface impoundments at inactive facilities and (ii) all CCR management units (regardless of how or when the CCR was placed) at regulated facilities. NRG anticipates further rulemaking related to legacy surface impoundments and the Federal Permit Program.

Domestic Site Remediation Matters

Under certain federal, state and local environmental laws, a current or previous owner or operator of a facility, including an electric generating facility, may be required to investigate and remediate releases or threatened releases of hazardous or toxic substances or petroleum products. NRG may be responsible for property damage, personal injury and investigation and remediation costs incurred by a party in connection with hazardous material releases or threatened releases. These laws impose liability without regard to whether the owner knew of or caused the presence of the hazardous substances, and the courts have interpreted liability under such laws to be strict (without fault) and joint and several. Cleanup obligations can often be triggered during the closure or decommissioning of a facility, in addition to spills during its operations.

Jewett Mine Lignite Contract — The Company's Limestone facility historically burned lignite obtained from the Jewett mine. Active mining ceased as of December 31, 2016; however, the Company remains responsible for reclamation activities and is responsible for all reclamation costs. NRG has recorded an adequate ARO liability. The Railroad Commission of Texas has imposed a bond obligation of approximately \$112 million for the reclamation of the Jewett mine, which NRG supports through surety bonds. The cost of the reclamation may exceed the value of the bonds. NRG may provide additional performance assurance if required by the Railroad Commission of Texas.

Water

The Company is required under the CWA to comply with intake and discharge requirements, requirements for technological controls and operating practices. As with air quality regulations, federal and state water regulations have become more stringent and imposed new requirements.

Effluent Limitations Guidelines — In 2015, the EPA revised the Effluent Limitations Guidelines ("ELG") for Steam Electric Generating Facilities, which imposed more stringent requirements (as individual permits were renewed) for wastewater streams from FGD, fly ash, bottom ash and flue gas mercury control. On September 18, 2017, the EPA promulgated a final rule that, among other things, postponed the compliance dates to preserve the status quo for FGD wastewater and bottom ash transport water by two years to November 2020 until the EPA amended the rule. On October 13, 2020, the EPA amended the 2015 ELG rule by: (i) altering the stringency of certain limits for FGD wastewater; (ii) relaxing the zero-discharge requirement for bottom ash transport water; and (iii) changing several deadlines. In October 2021, NRG informed its regulators that the Company intends to comply with the ELG by ceasing combustion of coal by the end of 2028 at its domestic coal units outside of Texas, and installing appropriate controls by the end of 2025 at its two plants that have coal-fired units in Texas. On March 29, 2023, the EPA proposed revisions to the ELG and sought comments, which the EPA is analyzing.

Regional Environmental Developments

Ash Regulation in Illinois — On July 30, 2019, Illinois enacted legislation that required the state to promulgate regulations regarding coal ash at surface impoundments. On April 15, 2021, the state promulgated the implementing regulation, which became effective on April 21, 2021. NRG has applied for initial operating permits and construction permits (for closure and retrofits) as required by the regulation and is waiting for permits to be issued by the Illinois EPA.

Houston Nonattainment for 2008 Ozone Standard — During the fourth quarter of 2022, the EPA changed the Houston area's classification from Serious to Severe nonattainment for the 2008 Ozone Standard. Accordingly, Texas is required to develop a new control strategy and submit it to the EPA, which is expected by May 2024.

Customers

NRG sells to a wide variety of customers, primarily end-use customers in the residential, commercial and industrial, and wholesale sectors. The Company owns and operates power plants to generate and sell power to wholesale customers, such as utilities and other intermediaries. The Company had no customer that comprised more than 10% of the Company's consolidated revenues for the year ended December 31, 2023.

Human Capital

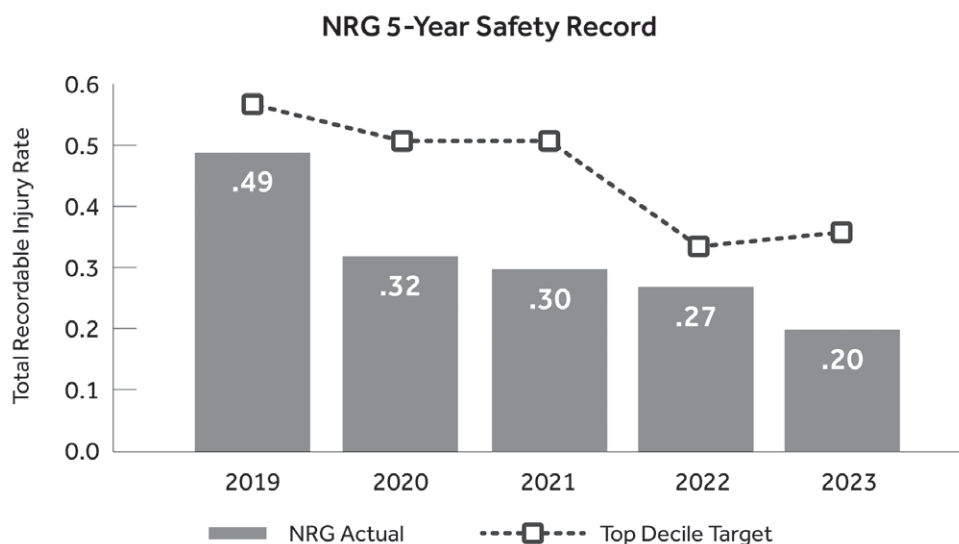
As of December 31, 2023, NRG and its consolidated subsidiaries had 18,131 employees, including 5,187 active smart home direct sales and installation individuals, which are largely seasonal. Approximately 4% of the Company's employees were covered by U.S. collective bargaining agreements. During 2023, the Company did not experience any labor stoppages or labor disputes at any of its facilities.

NRG believes its employees are vital to its success and is committed to offering employees a rewarding career that provides opportunities for growth and the ability to make valuable contributions toward the achievement of the Company's business objectives. NRG focuses on safety, health and wellness, diversity, equity and inclusion, talent development and total rewards for its employees.

Safety

Safety is embedded in the culture at NRG. The Company strives to begin meetings with a safety moment and regularly reminds its employees that safety comes first. NRG has achieved its targeted top decile safety record of Occupational Safety and Health Administration recordable injury rates in each of the 5 previous years.

The following chart reflects the Company's 5 year safety record, excluding Vivint Smart Home which uses different industry specific safety benchmarks.



Health and Wellness

For several years, NRG has invested in the health and well-being of its employees and their families. NRG provides programs that holistically support its employees' physical, emotional and financial wellness, allowing employees the opportunity to take control of their well-being and focus on what matters most to them for a healthy, secure future.

For the 2023 plan year, the Company included well-being goals in the Annual Incentive Plan (AIP), ensuring participants are motivated to improve their physical, emotional and financial well-being.

Diversity, Equity and Inclusion

NRG is committed to diversity, equity and inclusion (DE&I) as an integral way the Company operates. In 2023, NRG completed a gender and race pay equity study to analyze the Company's pay decisions in light of gender, race, or other similar factors. The study demonstrated equitable pay practices after accounting for job level, experience, tenure and location. The Company first conducted this study in 2020 and committed to conduct the study every three years. In 2023, Forbes and Statista recognized NRG as one of The Best Employers for Diversity. Also in 2023, NRG created designated reflection rooms in its headquarters to accommodate religious practices and reflection. NRG held its first Lunar New Year's celebrations hosted by VIVIDH, the Company's Asian American Pacific Islander Business Resource Group. The Company also hosted its inaugural listening session in recognition of Canada's National Day for Truth and Reconciliation sponsored by RISE, its Indigenous Communities Business Resource Group.

Talent Development

NRG deploys various talent development strategies and programs with the goal of ensuring a pipeline of leadership that can execute on the Company's strategy and drive value for all stakeholders. The Board of Directors regularly engages with management on leadership development and succession planning, including providing feedback on development plans and bench strength for key senior leader positions. The Board of Directors also has a structured program that allows directors to interact directly with individuals deeper within the organization whom management, through a robust talent assessment program, as well as mentoring relationships, has identified as high potential future leaders. In 2021, the Company launched an annual Emerging Leaders Program to strengthen the identified pipeline of future leaders and create a cohort of high potential candidates for leadership positions. In 2023, the Company launched a front-line leader program called Peak Leadership with the intent to onboard first-level leaders into their leadership role in select business units and is planning to expand its impact in 2024. The Company has a performance management tool that emphasizes a continuous feedback loop and a robust online training curriculum with topics including leadership, communication and productivity.

Total Rewards

NRG seeks to provide market competitive compensation and benefits, benchmarked against direct peers, industry, and, where appropriate, general peers. To ensure incentives are properly aligned with business needs and can attract and retain qualified employees, the Compensation Committee of the Board of Directors actively reviews the Company's total rewards programs, including benchmarking programs against peer groups, assessing the risks of programs and evaluating the design of the short-term and long-term incentive programs. NRG continues to evaluate its benefits and offerings taking into consideration the needs of its employees to ensure they are competitive and best serve its employees. Every two years, the Company engages an independent third-party to benchmark its compensation and benefits programs against its peers and report the results to the Compensation Committee of the Board of Directors.

For further discussion and recent available data regarding the Company's efforts and programs please see the Company's 2023 Proxy Statement and 2022 Sustainability Report, which are available on the Company's website at: www.nrg.com. Information included in these documents is not intended to be incorporated into this Form 10-K.

Available Information

NRG's annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to section 13(a) or 15(d) of the Exchange Act are available free of charge through the SEC's website, www.sec.gov, and through the Company's website, www.nrg.com, as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The Company also routinely posts press releases, presentations, webcasts, sustainability reports and other information regarding the Company on the Company's website. The information posted on the Company's website is not a part of this report.

Item 1A — Risk Factors

NRG's risk factors are grouped into the following categories: (i) Risks Related to the Acquisition of Vivint Smart Home; (ii) Risks Related to the Operation of NRG's Business; (iii) Risks Related to Governmental Regulation and Laws; and (iv) Risks Related to Economic and Financial Market Conditions, and the Company's Indebtedness.

Risks Related to the Acquisition of Vivint Smart Home

The acquisition of Vivint Smart Home may not achieve its intended results and its integration may disrupt or have a negative impact on the Company's business.

Achieving the anticipated cost savings and operating efficiencies from the acquisition of Vivint Smart Home is subject to risks, including whether the businesses of NRG and Vivint Smart Home are integrated in an efficient and effective manner. These risks include, but are not limited to:

- the difficulty of managing and integrating Vivint Smart Home and its operations;
- difficulties in implementing and maintaining uniform processes, systems, standards, controls, procedures, practices, policies and compensation standards;
- unanticipated issues in integrating information technology, communications, and other systems;
- the possibility of faulty assumptions underlying expectations regarding the integration process;
- the potential difficulty in managing an increased number of locations and employees;
- difficulty addressing any possible differences in corporate cultures and management philosophies; and
- the effect of any government regulations which relate to the business acquired.

Many of these factors are outside of the Company's control. Failure to address these risks effectively could result in increased costs, lower-than-expected revenues or income generated by the combined company and diversion of management's time and energy and could have an adverse effect on the Company's business, financial results and prospects.

Risks Related to the Operation of NRG's Business

NRG's financial performance may be impacted by price fluctuations in the retail and wholesale power and natural gas markets, as well as fluctuations in coal and oil markets and other market factors that are beyond the Company's control.

Market prices for power, capacity, ancillary services, natural gas, coal, oil and renewable energy credits are unpredictable and tend to fluctuate substantially. Electric power generally must be produced concurrently with its use. As a result, power prices are subject to significant volatility due to supply and demand imbalances, especially in the day-ahead and spot markets. Long and short-term power and gas prices may also fluctuate substantially due to other factors outside of the Company's control, including:

- changes in generation capacity in the Company's markets, including the addition of new supplies of power as a result of the development of new plants, expansion of existing plants, the continued operation of uneconomic power plants due to state subsidies, retirement of existing plants or addition of new transmission capacity;
- electric supply disruptions, including plant outages and transmission disruptions;
- changes in power and gas transmission infrastructure;
- transportation capacity constraints or inefficiencies;
- weather conditions, including extreme weather conditions and seasonal fluctuations, including the effects of climate change;
- changes in commodity prices and the supply of commodities, including but not limited to natural gas, coal and oil;
- changes in the demand for power or gas, or in patterns of power or gas usage, including the potential development of demand-side management tools and practices, distributed generation, and more efficient end-use technologies;
- development of new fuels, new technologies and new forms of competition for the production of power;
- economic and political conditions;
- changes in law, including judicial decisions, environmental regulations and environmental legislation; and
- federal, state and provincial power regulations and legislation, and regulations and actions of the ISO and RTOs.

While retail rates are generally designed to allow retail sellers of electricity and natural gas to pass through price fluctuations and other changes to costs, the Company may not be able to pass through all such changes to customers. For example, serving retail power customers in ISOs that have a capacity market exposes the Company to the risk that capacity costs can change and may not be recoverable, or the Company may engage in sales of power at fixed prices. Additionally, increases in wholesale costs to retail customers may cause additional customer defaults or increased customer attrition, or may be impacted by regulatory rules.

Further, in low natural gas price environments, natural gas can be the more cost-competitive fuel compared to coal for generating electricity. The Company enters into guaranteed supply contracts to provide for the amount of coal needed to operate its base load coal-fired generating facilities. The Company may experience periods where it holds excess amounts of coal if fuel

pricing results in the Company reducing or idling coal-fired generating facilities. In addition, the Company may incur costs to terminate supply contracts for coal in excess of its generating requirements.

Such factors and the associated fluctuations in power prices have affected the Company's wholesale and retail profitability in the past and are expected to continue to do so in the future.

Volatile power and gas supply costs and demand for power and gas could adversely affect the financial performance of NRG's retail operations.

The Company's earnings and cash flows could be adversely affected in any period in which the wholesale power or gas prices rise at a greater rate than the rates the Company can charge to customers. The price of wholesale electricity and gas supply purchases associated with the retail operations' energy commitments can be different than that reflected in the rates charged to customers due to, among other factors:

- varying supply procurement contracts used and the timing of entering into related contracts;
- subsequent changes in the overall price of natural gas;
- daily, monthly or seasonal fluctuations in the price of natural gas relative to the 12-month forward prices;
- transmission and transportation constraints and the Company's ability to move power or gas to its customers; and
- changes in market heat rate (i.e., the relationship between power and natural gas prices).

The Company's earnings and cash flows could also be adversely affected in any period in which its customers' actual usage of electricity or gas significantly varies from the forecasted usage, which could occur due to, among other factors, weather events, changes in usage patterns, competition and economic conditions.

NRG's trading operations and use of hedging agreements could result in financial losses that negatively impact its results of operations, and NRG's hedging activities may increase the volatility in the Company's quarterly and annual financial results.

The Company typically enters into hedging agreements, including contracts to purchase or sell commodities at future dates and at fixed prices, to manage the commodity price risks inherent in its business. The Company's risk management policies and hedging procedures may not mitigate risk as planned, and the Company may fail to fully or effectively hedge its commodity supply and price risk. In addition, these activities, although intended to mitigate price volatility, expose the Company to other risks. When the Company sells or buys power or gas forward, it gives up the opportunity to buy or sell at the future price, which not only may result in lost opportunity costs but also may require the Company to post significant amounts of cash collateral or other credit support to its counterparties. The Company also relies on counterparty performance under its hedging agreements and is exposed to the credit quality of its counterparties under those agreements. Further, if the values of the financial contracts change in a manner that the Company does not anticipate, or if a counterparty fails to perform under a contract, it could harm the Company's business, operating results or financial position.

NRG does not typically hedge the entire exposure of its operations against commodity price volatility. To the extent it does not hedge against commodity price volatility, the Company's results of operations and financial position may be improved or diminished based upon movement in commodity prices.

NRG may engage in trading activities, including the trading of power, natural gas, fuel, emissions allowances, environmental attributes and credits, weather, and other physical and financial commodity related products that are not directly related to the operation of the Company's generation facilities or the management of related risks. These trading activities take place in volatile markets and some of these trades could be characterized as speculative. This trading activity may expose the Company to the risk of significant financial losses which could have a material adverse effect on its business and financial condition.

NRG generally attempts to balance its fixed-price physical and financial purchases and sales commitments in terms of contract volumes and the timing of performance and delivery obligations through the use of financial and physical derivative contracts. These derivatives are accounted for in accordance with the FASB ASC 815, *Derivatives and Hedging* ("ASC 815"), which requires the Company to record all derivatives on the balance sheet at fair value with changes in the fair value resulting from fluctuations in the underlying commodity prices immediately recognized in earnings, unless the derivative qualifies for cash flow hedge accounting treatment or a scope exception. As a result, the Company's quarterly and annual results are subject to significant fluctuations caused by changes in market prices.

Competition may have a material adverse effect on NRG's results of operations, cash flows and the market value of its assets.

The Company's retail operations face competition for customers. Competitors may offer different products, lower prices, and other incentives which may attract customers away from the Company. In some retail electricity markets, the principal competitor may be the incumbent utility. The incumbent utility often has the advantage of long-standing relationships with its customers and strong brand recognition. Furthermore, NRG may face competition from other energy service providers, other

energy industry participants, or nationally branded providers of consumer products and services, who have, and may in the future, develop businesses and offerings that compete with NRG.

The Company's smart home services market faces competition from residential security companies as well as other companies that are able to bundle their existing offerings, such as cable, telecommunications and internet service, with automation and monitored security services, and from do-it-yourself smart home systems, which customers are able to install without subscription services.

The Company's plant operations face competition from newer or more efficient plants owned by competitors, which may put some of the Company's plants at a disadvantage to the extent these competitors are able to consume the same or less fuel as the Company's plant. Over time, the Company's plants may be unable to compete with these more efficient plants, which could result in asset retirements.

NRG's competitors may have greater liquidity, greater access to credit and other financial resources, lower cost structures, more effective risk management policies and procedures, greater ability to incur losses, longer-standing relationships with customers, greater brand awareness, greater potential for profitability from retail sales or greater flexibility in the timing of their sale of generation capacity and ancillary services than NRG does. Competitors may also have better access to subsidies or other out-of-market payments that put NRG at a competitive disadvantage.

NRG's competitors may be able to respond more quickly to new laws or regulations or emerging technologies, or devote greater resources to marketing of retail energy and home services than NRG can. In addition, current and potential competitors may make strategic acquisitions or establish cooperative relationships among themselves or with third parties. Accordingly, it is possible that new competitors or alliances among current and new competitors may emerge and rapidly gain significant market share.

There can be no assurance that NRG will be able to compete successfully against current and future competitors, and any failure to do so would have a material adverse effect on the Company's business, financial condition, results of operations and cash flow.

NRG's strategy relies, in part, on its ability to cross-serve and optimize its network of retail and Smart Home services customers, and if it is unable to retain existing customers and expand their use of the Company's products and services, its expected growth and operating results could be adversely affected.

As part of NRG's growth strategy, it is important for the Company to cross-sell energy sales and services to smart home services subscribers and smart home services to residential retail customers. As the Company continues pursuing cross-selling opportunities between these customers, there can be no assurances that its efforts in this regard will be successful. Additionally, for the Company to be successful in such cross-selling opportunities, it must retain its existing customers. The length of the terms for which NRG's retail customers are contracted can be for multi-year periods, but many customers are contracted for a period of one year or less. Smart home services customers historically have entered into subscriptions that range from three to five years. These customers are not obligated to, and may not, renew their contracts or subscriptions after the expiration of their original commitments. If customers terminate their contracts, do not renew their contracts or do not expand their use of NRG's products and services, the Company's growth strategy may not be successful and its expected results of operations may be adversely affected.

NRG's costs, results of operations, financial condition and cash flows could be adversely impacted by disruption of its fuel supplies.

NRG relies on natural gas, coal and oil to fuel a majority of its power generation facilities. Grid operations depend on the continuing financial viability of contractual counterparties, as well as the infrastructure (including rail lines, rail cars, barge facilities, roadways, riverways and natural gas pipelines) available to serve generation facilities and to ensure that there is sufficient power produced to meet retail demand. As a result, the Company's wholesale generation facilities are subject to the risks of disruptions or curtailments in the production of power at its generation facilities if no fuel is available at any price, if a counterparty fails to perform or if there is a disruption in the fuel delivery infrastructure.

NRG routinely hedges both its wholesale sales and purchases to support its retail load obligations. In order to hedge these obligations, the Company may enter into long-term and short-term contracts for the purchase and delivery of fuel. Many of the forward power sales contracts do not allow the Company to pass through changes in fuel costs or discharge the power sale obligations in the case of a disruption in fuel supply due to force majeure events or the default of a fuel supplier or transporter. Disruptions in the Company's fuel supplies or power supply arrangements may therefore require it to supply replacement power either by running its other, higher cost power plants or by obtaining power from third-party sources at market prices that could substantially exceed the contract price, or to pay damages to counterparties for failure to deliver power or sell electricity or natural gas as contracted. Any such event could have a material adverse effect on the Company's financial performance.

NRG also buys energy and fuel on a short-term or spot market basis. Prices sometimes rise or fall significantly over a relatively short period of time. The price NRG can obtain for the sale of energy may not rise at the same rate, or may not rise at

all, to match a rise in fuel or delivery costs. Retail rates may also not rise at the same rate or may not rise at all. This may have a material adverse effect on the Company's financial performance.

NRG's plant operating characteristics and equipment, particularly at its coal-fired plants, often dictate the specific fuel quality to be combusted. The availability and price of specific fuel qualities may vary due to supplier financial or operational disruptions, transportation disruptions and force majeure. At times, coal of specific quality may not be available at any price or the Company may not be able to transport such coal to its facilities on a timely basis. In this case, the Company may not be able to run the coal facility even if it would be profitable. Operating a coal facility with different quality coal can lead to emission or operating problems. If the Company had sold forward the power from such a coal facility, it could be required to supply or purchase power from alternate sources, perhaps at a loss. This could have a material adverse impact on the financial results of specific plants and on the Company's results of operations.

There may be periods when NRG will not be able to meet its commitments under forward sale or purchase obligations at a reasonable cost or at all.

The Company may sell fixed price gas as a proxy for power. Because the obligations under most of the Company's forward sale agreements are not contingent on a unit being available to generate power, NRG is generally required to deliver power to the buyer, even in the event of a plant outage, fuel supply disruption or a reduction in the available capacity of the unit. To the extent that the Company does not have sufficient lower-cost capacity to meet its commitments under its forward sale obligations, the Company would be required to supply replacement power either by running its other, higher cost power plants or by obtaining power from third-party sources at market prices that could substantially exceed the contract price. If NRG fails to deliver the contracted power, it would be required to pay the difference between the market price at the delivery point and the contract price, and the amount of such payments could be substantial.

NRG may not have sufficient liquidity to hedge market risks effectively.

The Company is exposed to market risks through its retail and wholesale operations, which involve the purchase of electricity and natural gas for resale, the sale of energy, capacity and related products, and the purchase and sale of fuel, transmission services and emission allowances. These market risks include, among other risks, volatility arising from location and timing differences that may be associated with buying and transporting fuel, converting fuel into energy and delivering energy to a buyer.

NRG undertakes to hedge these market activities through agreements with various counterparties. Many of the Company's agreements with counterparties include provisions that require the Company to provide guarantees, offset or netting arrangements, letters of credit, a first lien on assets and/or cash collateral to protect the counterparties against the risk of the Company's default or insolvency. The amount of such credit support that must be provided typically is based on the difference between the price of the commodity in a given contract and the market price of the commodity. Significant movements in market prices can result in the Company being required to provide cash collateral and letters of credit in very large amounts. The effectiveness of the Company's strategy may depend on the amount of collateral available to enter into or maintain these contracts, and liquidity requirements may be greater than the Company anticipates or will be able to meet. Without a sufficient amount of working capital to post as collateral in support of performance guarantees or as a cash margin, the Company may not be able to manage price volatility effectively or to implement its strategy. An increase in the amount of letters of credit or cash collateral required to be provided to the Company's counterparties may negatively affect the Company's liquidity and financial condition.

Further, if retail customers use more power or gas than expected, or if any of NRG's facilities experience unplanned outages, the Company may be required to procure additional power or gas at spot market prices to fulfill contractual commitments. Without adequate liquidity to meet margin and collateral requirements, the Company may be exposed to significant losses, may miss significant opportunities, and may have increased exposure to the volatility of spot markets.

The operation of the Company's businesses is subject to advanced persistent cyber-based security threats and integrity risk. Attacks on NRG's infrastructure that breach cyber/data security measures could expose the Company to significant liabilities, reputational damage, regulatory action, and disrupt business operations, which could have a material adverse effect.

Numerous functions affecting the efficient operation of NRG's businesses depend on the secure and reliable storage, processing and communication of electronic data and the use of sophisticated computer hardware and software systems, much of which is connected (directly or indirectly) to the internet. As a result, NRG's information technology systems and infrastructure, and those of its vendors and suppliers, are susceptible to cyber-based security threats which could compromise confidentiality, integrity or availability. While the Company has controls in place designed to protect its infrastructure, such breaches and threats are becoming increasingly sophisticated and complex, requiring continuing evolution of its program. Any such breach, disruption or similar event that impairs NRG's information technology infrastructure could disrupt normal business operations and affect the Company's ability to control its generation assets, provide smart home services, maintain

confidentiality, availability and integrity of restricted data, access retail customer information and limit communication with third parties, which could have a material adverse effect on the Company.

As part of the continuing development of new and modified reliability standards, the FERC has approved changes to its Critical Infrastructure Protection reliability standards and has established standards for assets identified as "critical cyber assets." Under the Energy Policy Act of 2005, the FERC can impose penalties (up to \$1 million per day, per violation) for failure to comply with mandatory electric reliability standards, including standards to protect the power system against potential disruptions from cyber/data and physical security breaches.

Further, the Company's retail, Home and Services businesses, as well as Vivint Smart Home's smart home platform, require accessing, collecting, storing and transmitting sensitive customer data in the ordinary course of business. Concerns about data privacy have led to increased regulation and other actions that could impact NRG's businesses and changes in data privacy and data protection laws and regulations or any failure to comply with such laws and regulations could adversely affect the Company's business and financial results. NRG's retail, Home, Services and Smart Home businesses may need to provide sensitive customer data to vendors and service providers who require access to this information in order to provide services, such as call center operations, to such businesses. The services and the networks and information systems utilized by the Company may be at risk for breaches as a result of third-party actions, employee or vendor error, malfeasance or other factors.

Although the Company takes precautions to protect its infrastructure, it has been, and will likely continue to be, subject to attempts at phishing and other cybersecurity intrusions. International conflict increases the risk of state-sponsored cyber threats and escalated use of cybercriminal and cyber-espionage activities. In particular, the current geopolitical climate has further escalated cybersecurity risk, with various government agencies, including the U.S. Cybersecurity & Infrastructure Security Agency, issuing warnings of increased cyber threats, particularly for U.S. critical infrastructure. While the Company has not experienced a cyber/data event causing any material operational, reputational or financial impact, it recognizes the growing threat within the general marketplace and the industry, and there is no assurance that NRG will be able to prevent any such impacts in the future. If a material breach of the Company's information technology systems were to occur, the critical operational capabilities and reputation of its business may be adversely affected, customer confidence may be diminished, and NRG may be subject to substantial legal or regulatory scrutiny and claims, any of which may contribute to potential legal or regulatory actions against the Company, loss of customers, fines, penalties or other sanctions and otherwise have a material adverse effect. Any loss or disruption of critical operational capabilities to support the Company's generation, commercial or retail operations, loss of customers, or loss of confidential or proprietary data through a breach, unauthorized access, disruption, misuse or disclosure could adversely affect NRG's reputation, expose the Company to material legal or regulatory claims and impair the Company's ability to execute its business strategy, which could have a material adverse effect. In addition, NRG may experience increased capital and operating costs to implement increased security for its information technology infrastructure. NRG cannot provide any assurance that such events and impacts will not be material in the future, and the Company's efforts to deter, identify and mitigate future breaches may require additional significant capital and may not be successful.

NRG relies on storage, transportation assets and suppliers, which it does not own or control, to deliver natural gas.

The Company depends on natural gas pipelines and other transportation and storage facilities owned and operated by third parties to deliver natural gas to wholesale and retail markets and to provide retail energy services to customers. The Company's ability to provide natural gas for its present and projected customers will depend upon its suppliers' ability to obtain and deliver supplies of natural gas, as well as NRG's ability to acquire supplies. Factors beyond the control of the Company and its suppliers may affect the Company's ability to deliver such supplies. These factors include other parties' control over the drilling of new wells and the facilities to transport natural gas to the Company's receipt points, development of additional interstate pipeline infrastructure, availability of supply sources competition for the acquisition of natural gas, priority allocations, impact of severe weather disruptions to natural gas supplies and the regulatory and pricing policies of federal and state regulatory agencies, as well as the availability of Canadian reserves for export to the U.S. Energy deregulation legislation may increase competition among natural gas utilities and impact the quantities of natural gas requirements needed for sales service. If supply, transportation or storage is disrupted, including for reasons of force majeure, the ability of the Company to sell and deliver its products and services may be hindered. As a result, the Company may be responsible for damages incurred by its customers, such as the additional cost of acquiring alternative supply at then-current market rates. These conditions could have a material impact on the Company's financial condition, results of operations and cash flows.

Operation of power generation facilities involves significant risks and hazards customary to the power industry that could have a material adverse effect on NRG's revenues and results of operations, and NRG may not have adequate insurance to cover these risks and hazards.

The ongoing operation of NRG's facilities involves risks that include the breakdown or failure of equipment or processes, performance below expected levels of output or efficiency and the inability to transport the Company's products to its customers in an efficient manner due to a lack of transmission capacity. Unplanned outages of generating units, including extensions of scheduled outages due to mechanical failures or other problems occur from time to time and are an inherent risk of the

Company's business. Unplanned outages typically increase the Company's operation and maintenance expenses and may reduce the Company's revenues as a result of selling fewer MWh or incurring non-performance penalties and/or require NRG to incur significant costs as a result of obtaining replacement power from third parties in the open market or running one of its higher cost units to satisfy the Company's forward power sales obligations. NRG's inability to operate the Company's plants efficiently, manage capital expenditures and costs, and generate earnings and cash flow from the Company's asset-based businesses could have a material adverse effect on the Company's results of operations, financial condition or cash flows.

In addition, NRG provides plant operations and commercial services to a variety of third parties. There is a risk that mistakes, mis-operations or actions taken by these third parties could be attributed to NRG, including the risk of investigation or penalties being assessed to NRG in connection with the services it offers, or that regulators could question whether NRG had the appropriate safeguards in place.

Power generation involves hazardous activities, including acquiring, transporting and unloading fuel, operating large pieces of rotating equipment and delivering electricity to transmission and distribution systems. In addition to natural risks such as earthquake, flood, lightning, hurricane and wind, other hazards, such as fire, explosion, structural collapse and machinery failure are inherent risks in the Company's operations. These and other hazards can cause significant personal injury or loss of life, severe damage to and destruction of property, plant and equipment, contamination of, or damage to, the environment and suspension of operations. The occurrence of any one of these events may result in NRG being named as a defendant in lawsuits asserting claims for substantial damages, including for environmental cleanup costs, personal injury and property damage and fines and/or penalties.

NRG maintains an amount of insurance protection that it considers adequate, obtains warranties from vendors and obligates contractors to meet certain performance levels, but the Company cannot provide any assurance that these measures will be sufficient or effective under all circumstances and against all hazards or liabilities to which it may be subject. A successful claim for which the Company is not adequately insured or protected could hurt its financial results and materially harm NRG's financial condition. NRG cannot provide any assurance that its insurance coverage will continue to be available at all or at rates or on terms similar to those presently available. Any losses not covered by insurance could have a material adverse effect on the Company's financial condition, results of operations or cash flows.

Supplier and/or customer concentration, the inability of suppliers to meet their obligations and dependence on third-party service providers may expose the Company to significant financial credit or performance risks and adversely affect NRG's results of operations, cash flows and financial condition.

NRG often relies on a single contracted supplier or a small number of suppliers for the provision and transportation of fuel, chemicals and other services required for the operation of certain of its facilities. If these suppliers cannot perform these services, the Company utilizes the marketplace. There can be no assurance that the marketplace can provide these services as, when and where required or at comparable prices. The Company also relies on a number of sole or limited source suppliers for critical components for its smart home products and services, and those services are dependent on third-party cellular, telecommunications and/or internet providers.

The failure of any supplier or customer to fulfill its contractual obligations to NRG, the inability of NRG to source products and services on acceptable terms, if at all, and the failure of third parties to provide services to its customers that are necessary for the Company's smart home services could have a material adverse effect on the Company's financial results. As a result, the financial performance of the Company's facilities is dependent on the credit quality of, and continued performance by, suppliers and customers, which cannot be guaranteed.

Maintenance, expansion and refurbishment of power generation facilities involve significant risks that could result in unplanned power outages or reduced output and could have a material adverse effect on NRG's results of operations, cash flows and financial condition.

NRG's facilities require periodic maintenance and repair. Any unexpected failure, including failure associated with breakdowns, forced outages or any unanticipated capital expenditures could result in reduced profitability. NRG cannot be certain of the level of capital expenditures that will be required due to changing environmental and safety laws (including changes in the interpretation or enforcement thereof), needed facility repairs and unexpected events (such as natural disasters or terrorist attacks). The unexpected requirement of large capital expenditures could have a material adverse effect on the Company's liquidity and financial condition.

NRG relies on power transmission and distribution facilities that it does not own or control and that are subject to transmission constraints within a number of the Company's core regions.

NRG depends on transmission and distribution facilities owned and operated by others to deliver power to its customers. If transmission or distribution is disrupted, including by force majeure events, or if the transmission or distribution infrastructure is inadequate, NRG's ability to deliver power may be adversely impacted. The Company also cannot predict

whether transmission or distribution facilities will be expanded in specific markets to accommodate competitive access to those markets.

In addition, in certain of the markets in which NRG operates, energy transmission congestion may occur and the Company may be deemed responsible for congestion costs associated with power sales or purchases, or retail sales, particularly where the Company's load is not co-located with its retail sales obligations. If NRG were liable for such congestion costs, the Company's financial results could be adversely affected.

Rates and terms for service of certain residential and commercial customers in Alberta are subject to regulatory review and approval.

The Company owns Direct Energy Regulated Services, which serves as a regulated rate supplier for residential and commercial energy customers in portions of the province of Alberta. It is required to engage in regulatory approval proceedings as a part of the process of establishing the terms and rates for sales of power and natural gas. These proceedings typically involve multiple parties, including governmental bodies and officials, consumer advocacy groups and various consumers of energy, who have differing concerns but also have the common objective of limiting rate increases or even reducing rates. Decisions are subject to appeal, potentially leading to additional uncertainty associated with the approval proceedings. The potential duration of such proceedings creates a risk that rates ultimately approved by the applicable regulatory body may not be sufficient for the Company to recover its costs by the time the rates become effective. Established rates are also subject to subsequent reviews by regulators, whereby various portions of rates could be adjusted, subject to refund or disallowed. In certain instances, the Company could agree to negotiated settlements related to various rate matters and other cost recovery elements. These settlements are subject to regulatory approval. The ultimate outcome and timing of regulatory rate proceedings have a significant effect on the Company to recover its costs or earn an adequate return. In addition, subsequent legislative or regulatory action could alter the terms on which the regulated business operates and future earnings could be negatively impacted. The Company also operates a competitive energy supply business in Alberta that is not subject to rate regulation and is subject to stringent requirements to segregate operations and information relating to the competitive business from the regulated business. Failure to comply with these and other requirements on the business could subject the Company's regulated and competitive businesses in Alberta to fines, penalties, and restrictions on the ability to continue business.

Because NRG owns less than a majority of the ownership interests of some of its project investments, the Company cannot exercise complete control over their operations.

NRG has limited control over the operation of some project investments and joint ventures because the Company's investments are in projects where it beneficially owns less than a majority of the ownership interests. NRG seeks to exert a degree of influence with respect to the management and operation of projects in which it owns less than a majority of the ownership interests by negotiating to obtain positions on management committees or to receive certain limited governance rights, such as rights to veto significant actions. However, the Company may not always succeed in such negotiations. NRG may be dependent on its co-venturers to operate such projects. The Company's co-venturers may not have the level of experience, technical expertise, human resources management or other attributes necessary to operate these projects optimally. The approval of co-venturers also may be required for NRG to receive distributions of funds from projects or to transfer the Company's interest in projects.

Future acquisition or disposition activities could involve unknown risks and may have materially adverse effects and NRG may be subject to trailing liabilities from businesses that it disposes of or that are inactive.

NRG may in the future acquire or dispose of businesses or assets, acquire or sell books of retail customers, or pursue other business activities, directly or indirectly, through subsidiaries that involve a number of risks. The acquisition of companies and assets, and their integration, is subject to substantial risks, including the failure to identify material problems during due diligence, the risk of over-paying for assets or customers, the inability to retain customers and the inability to arrange financing for an acquisition as may be required or desired. Further, the integration and consolidation of acquisitions requires substantial human, financial and other resources and, ultimately, the Company's acquisitions may not be successfully integrated. In the case of dispositions, such risks may relate to employment matters, counterparties, regulators and other stakeholders in the disposed business, the separation of disposed assets from NRG's business, the management of NRG's ongoing business, and other financial, legal and operational matters related to such disposition, which may be unknown to NRG at the time. In addition, NRG may be subject to material trailing liabilities from disposed businesses. Any such risk may result in one or more costly disputes or litigation. There can be no assurances that any future acquisitions will perform as expected or that the returns from such acquisitions will support the indebtedness incurred to acquire them or the capital expenditures needed to develop them. There can also be no assurances that NRG will realize the anticipated benefits from any such dispositions. The failure to realize the anticipated returns or benefits from an acquisition or disposition could adversely affect NRG's results of operations, cash flows and financial condition.

Negative publicity may damage NRG's reputation or its brands and negatively impact its business, financial condition, results of operations and ability to attract and retain highly qualified employees.

NRG's reputation and brands could be damaged for numerous reasons, including negative views of the Company's environmental impact, sustainability goals, supply chain practices, product and service offerings, sponsorship relationships, charitable giving programs and public statements made by Company officials. Additionally, the Company is from time to time named in investigations, claims and lawsuits arising in the ordinary course of business, and customers have in the past communicated complaints to consumer protection organizations, regulators or the media. Negative claims or publicity regarding the Company or its operations, offerings, practices or customer service may damage its brands or reputation, even if such claims are untrue. The Company may also experience criticism or backlash from media, customers, employees, government entities, advocacy groups and other stakeholders that disagree with positions taken by the Company or its executives. If the Company's brands or reputation are damaged, it could negatively impact the Company's business, financial condition, results of operations, and ability to attract and retain highly qualified employees.

The Company has made investments focused on consumer products that may not be successful, may not achieve the intended financial results or may result in product liability and reputational risk that could adversely affect the Company.

The Company may be liable to customers for any damage caused to customers' homes, facilities, belongings or property during the installation of Company products and systems, such as smart home systems, home back-up generators and residential HVAC system repairs, installation and replacements. Where such work is performed by independent contractors, such as repairs performed under the Company's home protection plan products, the Company may nonetheless face claims and costs for damage. In addition, shortages of skilled labor for Company projects could significantly delay a project or otherwise increase its costs. The products that the Company sells or manufactures may expose the Company to product liability claims relating to personal injury, death, or environmental or property damage, and may require product recalls or other actions. Although the Company maintains liability insurance and its service contracts limit Company liability, the Company cannot be certain that its coverage will be adequate for liabilities actually incurred or that insurance will continue to be available to the Company on economically reasonable terms, or at all, or that contractual limitations will be enforced. The laws of some states limit or prohibit insurance coverage for certain liabilities and actions, and any significant uninsured damages could have a material adverse effect on the Company's business, financial condition and cash flows. Further, any product liability claims or damage caused by the Company could significantly impair the Company's brand and reputation, which may result in a failure to maintain customers and achieve the Company's desired growth initiatives in these new businesses.

Changes in technology may impair the value of, and the attractiveness of, its retail products, smart home services and NRG's generation facilities.

Research and development activities are ongoing in the industry to provide alternative and more efficient technologies to produce power, including wind, photovoltaic (solar) cells, hydrogen, energy storage, and improvements in traditional technologies and equipment, such as more efficient gas turbines. Advances in these or other technologies, including through artificial intelligence, could reduce the costs of power production to a level below what the Company has currently forecasted, which could adversely affect its cash flows, results of operations or competitive position. Technology, including distributed technology or changes in retail rate structures, may also have a material impact on the Company's ability to retain retail customers. Further, technological innovation and changes could cause the Company's smart home products and services to become obsolete, or otherwise more expensive and less effective than those of competitors, putting the Company at a competitive disadvantage.

Some emerging technologies, such as distributed renewable energy technologies, broad consumer adoption of electric vehicles and energy storage devices, could affect the price of energy. These emerging technologies may affect the financial viability of utility counterparties and could have significant impacts on wholesale market prices, which could ultimately have a material adverse effect on NRG's financial condition, results of operations and cash flows.

The Company's smart home services rely on intellectual property and any failure to adequately protect such intellectual property, or claims that the Company has infringed on others' intellectual property rights, could have an adverse effect on its business and operations and result in a competitive disadvantage.

The Company relies on a combination of patent, trademark, copyright and trade secret laws of the United States and other countries and a combination of confidentiality procedures, contractual provisions and other methods, to protect its intellectual property, all of which offer only limited protection. If the Company fails to acquire the necessary intellectual property rights or adequately protect or assert its intellectual property rights, competitors may manufacture and market similar products and services or convert customers, which could adversely affect market share and results of operations for smart home services. In addition, patent rights may not prevent competitors from developing, using or selling products or services that are similar to or address the same market as the Company's smart home products and services. Certain of the Company's smart home solutions contain software modules licensed under "open-source" licenses, which may entail greater risks than the use of third-party commercial software, as open-source licensors generally do not provide warranties or other contractual protections regarding

infringement claims or the quality of the code. Further, if proprietary software is combined with open-source software, in certain cases the Company could be required to release the source code of the proprietary software to the public, allowing competitors to create similar products with lower development effort and time.

It is possible that certain of the Company's smart home products and services or those of third parties incorporated into its offerings could infringe the intellectual property rights of others. From time to time, Vivint Smart Home has been subject to claims based on allegations of infringement, misappropriation or other violations of the intellectual property rights of others. If the Company is unable to successfully defend against such claims or license necessary third-party technology or other intellectual property on acceptable terms it may be required to develop alternative, non-infringing technology, which could require significant time, effort, and expense and may ultimately not be successful.

NRG's business, financial condition and results of operations could be adversely impacted by strikes or work stoppages by its unionized employees or inability to replace employees as they retire.

As of December 31, 2023, approximately 4% of NRG's employees were covered by collective bargaining agreements. In the event that the Company's union employees strike, participate in a work stoppage or slowdown or engage in other forms of labor strife or disruption, NRG would be responsible for procuring replacement labor or the Company could experience reduced power generation or outages. Although NRG's ability to procure such labor is uncertain, contingency staffing planning is completed as part of each respective contract negotiation. Strikes, work stoppages or the inability to negotiate future collective bargaining agreements on favorable terms could have a material adverse effect on the Company's business, financial condition, results of operations and cash flows. In addition, a number of the Company's employees at NRG's plants are close to retirement. The Company's inability to replace retiring workers could create potential knowledge and expertise gaps as such workers retire.

NRG's failure to manage key executive succession and retention and to continue to attract qualified personnel could adversely affect the Company's financial condition and results of operations.

The loss of one or more of the Company's key personnel or the inability to effectively identify a suitable successor to a key role could adversely affect the Company's business. The failure to successfully transition and assimilate key employees, the effectiveness of the Company's leaders, and any further transition, could adversely affect the Company's financial condition and results of operations.

Risks that are beyond NRG's control, including but not limited to acts of terrorism or related acts of war, natural disaster or other catastrophic events could have a material adverse effect on NRG's financial condition, results of operations and cash flows.

NRG's generation facilities and the facilities of third parties on which they rely may be targets of terrorist activities, as well as events occurring in response to or in connection with such activities, all of which could cause environmental repercussions and/or result in full or partial disruption of the facilities ability to generate, transmit, transport or distribute electricity or natural gas. Strategic targets, such as energy-related facilities, may be at greater risk of future terrorist activities than other domestic targets. Any such environmental repercussions or disruption could result in a significant decrease in revenues or significant reconstruction or remediation costs beyond what could be recovered through insurance policies, which could have a material adverse effect on the Company's financial condition, results of operations and cash flows. In addition, significant weather events or terrorist actions could damage or shut down the power or gas transmission and distribution facilities upon which the Company is dependent, which may reduce retail volume for extended periods of time. Power or gas supply may be sold at a loss if these events cause a significant loss of retail customer demand.

Risks Related to Governmental Regulation and Laws

NRG's business is subject to substantial energy regulation and may be adversely affected by legislative or regulatory changes, as well as liability under, or any future inability to comply with, existing or future energy regulations or requirements.

NRG's business is subject to extensive U.S. federal, state and local laws and foreign laws. Compliance with, or changes to, the requirements under these legal regimes may cause the Company to incur significant additional costs, reduce the Company's ability to hedge exposure or to sell retail power within certain states or to certain classes of retail customers, or restrict the Company's marketing practices, its ability to pass through costs to retail customers, or its ability to compete on favorable terms with competitors, including the incumbent utility. Retail competition and home protection services are regulated on a state-by-state or at the province-by-province level and are highly dependent on state and provincial laws, regulations and policies, which could change at any moment. Failure to comply with such requirements could result in the shutdown of a non-complying facility or line of business, the imposition of liens, fines, and/or civil or criminal liability.

Public utilities under the FPA are required to obtain FERC acceptance of their rate schedules for wholesale sales of electricity. Except for ERCOT generation facilities and power marketers, all of NRG's non-qualifying facility generating companies and power marketing affiliates in the U.S. make sales of electricity in interstate commerce and are public utilities for

purposes of the FPA. FERC has granted each of NRG's generating and power marketing companies that make sales of electricity outside of ERCOT the authority to sell electricity at market-based rates. FERC's orders that grant NRG's generating and power marketing companies market-based rate authority reserve the right to revoke or revise that authority if FERC subsequently determines that NRG can exercise market power in transmission or generation, create barriers to entry, or engage in abusive affiliate transactions. In addition, NRG's market-based sales are subject to certain market behavior rules, and if any of NRG's generating and power marketing companies were deemed to have violated those rules, they are subject to potential disgorgement of profits associated with the violation and/or suspension or revocation of their market-based rate authority. If NRG's generating and power marketing companies were to lose their market-based rate authority, such companies would be required to obtain FERC's acceptance of a cost-of-service rate schedule and could become subject to the accounting, record-keeping, and reporting requirements that are imposed on utilities with cost-based rate schedules. This could have a material adverse effect on the rates NRG charges for power from its facilities.

The Company's generation assets are also subject to the reliability standards promulgated by the designated Electric Reliability Organization (currently NERC) and approved by FERC. If NRG fails to comply with the mandatory reliability standards, NRG could be subject to sanctions, including substantial monetary penalties and increased compliance obligations. NRG is also affected by legislative and regulatory changes, as well as changes to market design, market rules, tariffs, cost allocations, and bidding rules that occur in the existing ISOs. The ISOs that oversee most of the wholesale power markets impose, and in the future may continue to impose, mitigation, including price limitations, offer caps, non-performance penalties and other mechanisms to address some of the volatility and the potential exercise of market power in these markets. These types of price limitations and other regulatory mechanisms may have a material adverse effect on the profitability of NRG's generation facilities that sell energy and capacity into the wholesale power markets.

The regulatory environment is subject to significant changes due to state and federal policies affecting wholesale and retail competition and the creation of incentives for the addition of large amounts of new renewable generation and, in some cases, transmission. These changes are ongoing, and the Company cannot predict the future design of the wholesale power markets or the ultimate effect that the changing regulatory environment will have on NRG's business. In addition, in some of these markets, interested parties have proposed material market design changes. If competitive restructuring of the electric power markets is reversed, discontinued, or delayed, the Company's business prospects and financial results could be negatively impacted. In addition, there have been a number of reforms to the regulation of the derivatives markets, both in the United States and internationally. These regulations, and any further changes thereto, or adoption of additional regulations, including any regulations relating to position limits on futures and other derivatives or margin for derivatives, could negatively impact NRG's ability to hedge its portfolio in an efficient, cost-effective manner by, among other things, potentially decreasing liquidity in the forward commodity and derivatives markets or limiting NRG's ability to utilize non-cash collateral for derivatives transactions.

NRG's business may be affected by interference in the competitive wholesale marketplace.

NRG's generation and competitive retail operations rely on a competitive wholesale marketplace. The competitive wholesale marketplace may be impacted by out-of-market subsidies, imports of power from Canada, renewable mandates or subsidies, mandates to sell power below its cost of acquisition and associated costs as well as out-of-market payments to new or existing generators. These out-of-market subsidies to existing or new generation undermine the competitive wholesale marketplace, which can lead to premature retirement of existing facilities, including those owned by the Company. If these measures continue, capacity and energy prices may be suppressed, and the Company may not be successful in its efforts to insulate the competitive market from this interference. The Company's retail operations may be materially impacted by rules or regulations that allow regulated utilities to participate in competitive retail markets or own and operate facilities that could be provided by competitive market participants.

Additions or changes in tax laws and regulations could potentially affect the Company's financial results or liquidity.

NRG is subject to various types of tax arising from normal business operations in the jurisdictions in which the Company operates. Any additions or changes to tax legislation, or their interpretation and application, including those with retroactive effect, could have a material adverse effect on NRG's financial condition and results of operations, including income tax provision and accruals reflected in the consolidated financial statements. Beginning in 2023, the Company is now subject to a 15% corporate alternative minimum tax as a result of the Inflation Reduction Act. The CAMT may lead to volatility in the Company's cash tax payment obligations, particularly in periods of significant commodity or currency variability resulting from potential changes in the fair value of derivative instruments. The Company continuously monitors and assesses proposed tax legislation that could negatively impact its business.

The Capacity Performance product into the PJM market could lead to substantial changes in capacity income and non-performance penalties, which could have a material adverse effect on NRG's results of operations, financial condition and cash flows.

PJM operates a pay-for-performance model where capacity payments are modified based on real-time generator performance. Capacity market prices are sensitive to design parameters, as well as additions of new capacity. NRG may experience substantial changes in capacity income and incur non-performance penalties, which could have a material adverse effect on NRG's results of operations, financial condition and cash flows.

NRG is subject to environmental laws that impose extensive and increasingly stringent requirements on the Company's ongoing operations, as well as potentially substantial liabilities arising out of environmental contamination. These environmental requirements and liabilities could adversely impact NRG's results of operations, financial condition and cash flows.

NRG is subject to the environmental laws of foreign and U.S., federal, state and local authorities. The Company must comply with numerous environmental laws and obtain numerous governmental permits and approvals to build and operate the Company's plants. Federal and state environmental laws generally have become more stringent over time. Should NRG fail to comply with any environmental requirements that apply to its operations, the Company could be subject to administrative, civil and/or criminal liability and fines, and regulatory agencies could take other actions seeking to curtail the Company's operations. In addition, when new requirements take effect or when existing environmental requirements are revised, reinterpreted or subject to changing enforcement policies, NRG's business, results of operations, financial condition and cash flows could be adversely affected.

NRG's businesses are subject to physical, market and economic risks relating to potential effects of climate change, and policies at the national, regional and state levels to regulate GHG emissions and mitigate climate change which could adversely impact NRG's results of operations, financial condition and cash flows.

Fluctuations in weather and other environmental conditions, including temperature and precipitation levels, may affect consumer demand for electricity or natural gas. In addition, the potential physical effects of climate change, such as increased frequency and severity of storms, floods and other climatic events, could disrupt NRG's operations and supply chain, and cause it to incur significant costs in preparing for or responding to these effects. These or other changes in climate could lead to increased operating costs or capital expenses. NRG's customers may also experience the potential physical impacts of climate change and may incur significant costs in preparing for or responding to these efforts, including changing the fuel mix and resiliency of their energy solutions and supply.

The contribution of climate change to the frequency or intensity of weather-related events could affect NRG's operations and planning process. Climate change could also affect the availability of a secure and economical supply of water in some locations, which is essential for the continued operation of NRG's generation plants. NRG monitors water supply risk carefully. If it is determined that a water supply risk exists that could impact projected generation levels at any plant, risk mitigation efforts are identified and evaluated for implementation.

Further, demand for NRG's energy-related services could be similarly impacted by consumers' preferences or market or regulatory factors favoring energy efficiency, lower carbon energy sources or reduced electricity or natural gas usage.

NRG's GHG emissions reduction targets can be found in Item 1, *Business —Environmental Regulatory Matters*. The Company's ability to achieve these targets depends on many factors, including the ability to retire high emitting assets, ability to reduce emissions based on technological advances and innovation, and ability to source energy from less carbon intense resources. In addition, any future decarbonization efforts may increase costs, or NRG may otherwise be limited in its ability to apply them. The cost associated with NRG's GHG emissions reduction goals could be significant. Failure to achieve the Company's emissions targets could result in a negative impact on access to and cost of capital, changing investor sentiment regarding investment in the Company or reputation harm.

Enhanced data privacy and data protection laws and regulations or any non-compliance with such laws and regulations, could adversely affect NRG's business and financial results.

The consumer privacy landscape continues to experience momentum for greater privacy protection and reform at the state and federal level in response to precedents set forth by the General Data Protection Regulation (the "GDPR") and the California Consumer Privacy Act (the "CCPA"). The development and evolving nature of domestic and international privacy regulation and enforcement could impact and potentially limit how NRG processes personally identifiable information. California residents now have increased access rights (including the right to limit the use and disclosure of sensitive personal information), which are enforced by a new state privacy regulator, resulting in more scrutiny of business practices and disclosures. Additional states including Virginia, Utah, Connecticut, Colorado, Nevada and Texas have similarly adopted enhanced data privacy legislation and patterned after the standards set forth by CCPA, including broader data access rights, with Virginia going a step further requiring businesses to perform data protection assessments for certain processing activities. The Company is also

bound by contractual requirements relating to privacy and data protection, and may agree to additional contractual requirements addressing these matters from time to time.

As new laws and regulations are created, amended or expanded, requiring businesses to implement processes to enable customers access to their data and enhanced data protection and management standards, NRG cannot forecast with any certainty the impact that they may have on the Company's business; however, it is possible the Company may find it necessary or desirable to change certain of its business practices or to expend resources to modify its home products and services and otherwise adapt to these changes. It is possible that the Company may be unable to make such changes and modifications in a commercially reasonable manner or at all, and its ability to develop new home services and features could be limited. Any non-compliance with laws may result in proceedings or actions against the Company by governmental entities or individuals. Moreover, any inquiries or investigations, government penalties or sanctions, or civil actions by individuals may be costly to comply with, resulting in negative publicity, increased operating costs, significant management time and attention, and may lead to remedies that harm the business, including fines, demands or orders that existing business practices be modified or terminated.

NRG's retail operations and smart home services are subject to changing rules and regulations that could have a material impact on the Company's profitability.

The competitiveness of NRG's retail operations partially depends on regulatory policies that establish the structure, rules, terms and conditions upon which services are offered to retail customers. These policies can include, among other things, controls on the retail rates that NRG can charge, the imposition of additional costs on sales, restrictions on the Company's sell certain types of products or ability to obtain new customers through various marketing channels and disclosure requirements. The Company's retail operations may be materially impacted by rules or regulations that allow regulated utilities to participate in competitive retail markets or own and operate facilities that could be provided by competitive market participants. Additionally, state, federal or provincial imposition of net metering or RPS programs can make it more or less expensive for retail customers to supplement or replace their reliance on grid power.

The Company's smart home services focus on transactions with residential customers, subjecting it to a variety of laws, regulations and licensing requirements governing interactions with residential consumers, including those pertaining to privacy and data security, consumer financial and credit transactions, home improvements, warranties and door-to-door solicitation. In certain jurisdictions, the Company is required to obtain licenses or permits to comply with standards governing marketing and sales efforts, installation of equipment or servicing of subscribers, and monitoring station employee selection and training. Increased regulation of matters relating to interactions with residential consumers could require modification to the Company's home services operations and the incurrence of additional expenses. Further, any expansion of the scope of products or services into new markets may require additional licenses and expenditures to otherwise maintain compliance with additional laws, regulations or licensing requirements. These laws and regulations, as well as their interpretation, and any new laws, regulations or licensing requirements could negatively affect the Company's ability to acquire new residential customers. Any of these measures could increase costs for providing, or reduce customer satisfaction with respect to, smart home services.

The Federal Trade Commission ("FTC") and the Federal Communications Commission have issued regulations that restrict direct-to-home marketing, telemarketing, email marketing and other sales practices, including limitations on methods of communication, requirements to maintain a "do not call" list, cancellation rights and required training for personnel to comply with these restrictions. Any noncompliance, or alleged noncompliance, of applicable regulations by the Company, third-party vendors used for marketing, telemarketing or lead generation activities or independent, third-party authorized dealers of smart home services could result in private rights of actions or enforcement actions for civil or criminal penalties. Changes in regulations or interpretations that further restrict lead generating activities also could result in a reduction in the number of new smart home services customers.

The Company's smart home business exposes it to risks of liability for the acts or omissions of its employees, including with respect to sales practices.

Activities in connection with sales efforts by employees, independent contractors, and other agents, including predatory door-to-door sales tactics and fraudulent misrepresentations, have in the past subjected it to, and could in the future subject the Company to, governmental investigations and class action lawsuits for, among others, false advertising and deceptive trade practice damage claims. Any litigation or regulatory proceedings resulting from such activities could adversely impact the Company's business, financial condition, results of operations, and cash flows.

The Company is subject to various risks in connection with Vivint Smart Home's ongoing settlement administration process involving the FTC, and may be subject to FTC Actions in the future.

In 2021, Vivint Smart Home entered into a settlement with the FTC where Vivint Smart Home paid a total of \$20 million to the United States and agreed to implement various compliance-related measures. The settlement requires an initial assessment and thereafter biennial assessments by an independent third-party assessor of Vivint Smart Home's compliance

programs and for the assessor to provide a report to the FTC staff on ongoing compliance with the settlement. Although Vivint Smart Home took action to enhance its compliance programs, these and other measures that the Company may take in the future may not be successful. If any assessments identify deficiencies in the Company's efforts to comply, and should the FTC determine that Vivint Smart Home is not in full compliance with the settlement, the FTC could take further action, such as seeking judicial remedies for any noncompliance, and Vivint Smart Home could be subject to additional sanctions and restrictions on its smart home operations. In addition, the filing of an application with the court for noncompliance with the settlement could lead to regulatory actions by other agencies or private litigation, which could impact Vivint Smart Home's ability to obtain regulatory approvals necessary to carry out present or future plans and operations, and result in negative publicity.

The Company's international operations are exposed to political and economic risks, commercial instability and events beyond the Company's control in the countries in which it operates, which risks may negatively impact the Company's business.

The Company's international operations depend on products manufactured, purchased and sold in the U.S. and internationally. In some cases, these countries have greater political and economic volatility and greater vulnerability to infrastructure labor, and supply chain disruptions than in NRG's other markets. Operating a business in a number of different regions and countries exposes the Company to a number of risks, including: imposition of burdensome tariffs or quotas, multiple and potentially conflicting laws, regulations and policies that are subject to change, imposition of currency restrictions on repatriation of earnings or other restraints, national and international conflict, including terrorist acts and political and economic instability or civil unrest that may severely disrupt economic activity in affected countries and result in increased cost. The occurrence of one or more of these events may negatively impact the Company's business, results of operations and financial condition.

Risks Related to Economic and Financial Market Conditions and the Company's Indebtedness

NRG's level of indebtedness could adversely affect its ability to raise additional capital to fund its operations or return capital to stockholders. It could also expose it to the risk of increased interest rates and limit its ability to react to changes in the economy or its industry.

NRG's substantial amount of debt could have negative consequences, including:

- increasing NRG's vulnerability to general economic and industry conditions;
- requiring a substantial portion of NRG's cash flow from operations be used to pay principal and interest on its indebtedness, which reduces NRG's ability to pay dividends or fund its operations, capital expenditures and future business opportunities;
- limiting NRG's ability to enter into long-term power sales or fuel purchases, which require credit support;
- adversely impacting NRG's credit rating, which could increase borrowing costs;
- limiting NRG's ability to obtain additional financing for working capital, including collateral postings, capital expenditures, debt service requirements, acquisitions and general corporate purposes;
- limiting NRG's ability to adjust to changing market conditions and placing it at a competitive disadvantage compared to its competitors, who may have less debt; and
- exposing NRG to the risk of increased interest rates because certain of its borrowings are at variable rates of interest.

The Company's debt agreements contain financial and other restrictive covenants that may limit the Company's ability to return capital to stockholders, including by paying dividends, or otherwise engage in activities that may be in its long-term best interests. NRG's failure to comply with those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of such indebtedness, which in turn could cause a cross default to NRG's other indebtedness. NRG's assets and available cash balances may not be sufficient to fully repay all outstanding indebtedness if accelerated upon an event of default. If NRG is unable to repay, refinance, or restructure its indebtedness as required, or amend the covenants contained in those agreements, the lenders or other creditors may be entitled to obtain a lien or institute foreclosure proceedings against its assets, which could have a material adverse effect on its business, results of operations and financial condition. In addition, the Company's Revolving Credit Facility and sustainability-linked bonds include a sustainability-linked metric, which could result in increased interest expense for the Company if the sustainability metrics set forth therein are not achieved. Furthermore, financial and other restrictive covenants contained in any subsidiary or project level debt may limit the ability of NRG to receive distributions from such subsidiary.

In addition, NRG's ability to arrange financing, either at the corporate level, a non-recourse project-level subsidiary or otherwise, and the costs of such capital are dependent on numerous factors, including: general economic and capital market conditions, credit availability from banks and other financial institutions, investor confidence in NRG, its partners and the regional wholesale power markets, NRG's financial performance and the financial performance of its subsidiaries, NRG's level of indebtedness and compliance with covenants in debt agreements, maintenance of acceptable credit ratings, cash flow and provisions of tax and securities laws that may impact raising capital.

NRG's ability to meet its payment obligations under its debt agreements is dependent on its ability to generate significant cash flows or obtain additional capital in the future. This, to some extent, is subject to market, economic, financial, competitive, legislative, and regulatory factors as well as other factors that are beyond its control. NRG may not be successful in obtaining additional capital for these or other reasons. The failure to obtain additional capital on terms acceptable to NRG, or at all, from time to time may have a material adverse effect on its business and operations.

NRG's preferred stock is senior to its common stock, and a failure to pay dividends on its preferred stock will prohibit the payment of dividends on its common stock.

NRG has outstanding 650,000 shares of 10.25% Series A Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock, with a \$1,000 liquidation preference per share. The Series A Preferred Stock is senior to NRG's common stock in right of payment of dividends and other distributions and could adversely affect NRG's ability to declare or pay dividends or distributions on its common stock. In the event of NRG's voluntary or involuntary liquidation, winding-up or dissolution, the holders of Series A Preferred Stock must receive their \$1,000 per share, plus accumulated but unpaid dividends, prior to any distributions to holder of common stock. NRG must be current on dividends payable to holders of Series A Preferred Stock before any dividends can be paid on its common stock.

Whenever dividends on any shares of Series A Preferred Stock have not been declared and paid for the equivalent of three or more dividend payments, whether or not for consecutive dividend periods, the number of directors on the Company's Board of Directors will be increased by two, and the holders of Series A Preferred Stock will have the right to elect two members of the Company's Board of Directors to fill such newly created openings.

Adverse economic conditions could adversely affect NRG's business, financial condition, results of operations and cash flows.

Adverse economic conditions, including inflation, and declines in wholesale energy prices, partially resulting from adverse economic conditions, may impact NRG's results of operations, including by reducing the demand for energy commodities. In general, economic and commodity market conditions will continue to impact NRG's unhedged future energy margins, liquidity, earnings growth and overall financial condition. Macroeconomic factors may also impact consumer spending, which could adversely affect the Company's Smart Home services, and increase the Company's costs for such products and services, which it may not be able to pass on to customers. In addition, adverse economic conditions, declines in wholesale energy prices, reduced demand for energy and other factors may negatively impact the trading price of NRG's common stock and impact forecasted cash flows, which may require NRG to evaluate its goodwill and other long-lived assets for impairment. Any such impairment could have a material impact on NRG's financial condition.

Goodwill and other intangible assets that NRG has recorded in connection with its acquisitions are subject to impairment evaluations and, as a result, the Company could be required to write off some or all of this goodwill and other intangible assets, which may adversely affect the Company's financial condition and results of operations.

Goodwill is not amortized but is reviewed annually or more frequently for impairment. Other intangibles are also reviewed at least annually or more frequently, if certain conditions exist, and are amortized. Any reduction in or impairment of the value of goodwill or other intangible assets will result in a charge against earnings, which could materially adversely affect NRG's reported results of operations and financial position in future periods.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

This Annual Report on Form 10-K of NRG Energy, Inc., or NRG or the Company, includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or Exchange Act. The words "believes," "projects," "anticipates," "plans," "expects," "intends," "estimates," "should," "forecasts," and similar expressions are intended to identify forward-looking statements. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause NRG's actual results, performance and achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. These factors, risks and uncertainties include the factors described under Item 1A — *Risk Factors* and the following:

- Business uncertainties related to NRG's ability to integrate the operations of Vivint Smart Home with its own;
- NRG's ability to obtain and maintain retail market share;
- General economic conditions, changes in the wholesale power and gas markets and fluctuations in the cost of fuel;
- Volatile power and gas supply costs and demand for power and gas, including the impacts of weather;
- Hazards customary to the power production industry and power generation operations, such as fuel and electricity price volatility, unusual weather conditions, catastrophic weather-related or other damage to facilities, unscheduled generation outages, maintenance or repairs, unanticipated changes to fuel supply costs or availability due to higher demand, shortages, transportation problems or other developments, environmental incidents, or electric transmission or gas pipeline system constraints and the possibility that NRG may not have adequate insurance to cover losses as a result of such hazards;
- The effectiveness of NRG's risk management policies and procedures and the ability of NRG's counterparties to satisfy their financial commitments;
- NRG's ability to enter into contracts to sell power or gas and procure fuel on acceptable terms and prices;
- NRG's ability to successfully integrate, realize cost savings and manage any acquired businesses;
- NRG's ability to engage in successful acquisitions and divestitures, as well as other mergers and acquisitions activity;
- Cyber terrorism and cybersecurity risks, data breaches or the occurrence of a catastrophic loss and the possibility that NRG may not have sufficient insurance to cover losses resulting from such hazards or the inability of NRG's insurers to provide coverage;
- Counterparties' collateral demands and other factors affecting NRG's liquidity position and financial condition;
- NRG's ability to operate its businesses efficiently and generate earnings and cash flows from its asset-based businesses in relation to its debt and other obligations;
- The liquidity and competitiveness of wholesale markets for energy commodities;
- Changes in law, including judicial and regulatory decisions;
- Government regulation, including changes in market rules, rates, tariffs and environmental laws;
- NRG's ability to develop and innovate new products, as retail and wholesale markets continue to change and evolve;
- Price mitigation strategies and other market structures employed by ISOs or RTOs that result in a failure to adequately and fairly compensate NRG's generation units;
- NRG's ability to mitigate forced outage risk;
- NRG's ability to borrow funds and access capital markets, as well as NRG's substantial indebtedness and the possibility that NRG may incur additional indebtedness in the future;
- Operating and financial restrictions placed on NRG and its subsidiaries that are contained in NRG's corporate credit agreements, and in debt and other agreements of certain of NRG subsidiaries and project affiliates generally;
- The ability of NRG and its counterparties to develop and build new power generation facilities;
- NRG's ability to implement its strategy of finding ways to meet the challenges of climate change, clean air and protecting natural resources, while taking advantage of business opportunities;
- NRG's ability to increase cash from operations through operational and market initiatives, corporate efficiencies, asset strategy, and a range of other programs throughout NRG to reduce costs or generate revenues;
- NRG's ability to successfully evaluate investments and achieve intended financial results in new business and growth initiatives; and
- NRG's ability to develop and maintain successful partnering relationships as needed.

In addition, unlisted factors may present significant additional obstacles to the realization of forward-looking statements. Forward-looking statements speak only as of the date they were made and NRG undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise except as otherwise required by applicable laws. The foregoing factors that could cause NRG's actual results to differ materially from those contemplated in any forward-looking statements included in this Annual Report on Form 10-K should not be construed as exhaustive.

Item 1B — Unresolved Staff Comments

None.

Item 1C — Cybersecurity

Risk Management and Strategy

The Company leverages a comprehensive, multi-tiered cybersecurity strategy to manage cybersecurity risk based on criteria established by the NIST Cybersecurity Framework. As part of the cybersecurity strategy the Company utilizes a range of industry and regulatory standards including, but not limited to, NERC-CIP, PCI DSS, and IoT Security Assurance Framework. Compliance with NERC-CIP standards is mandated for entities involved in power generation, transmission, and distribution by regulatory bodies to which the purpose of is to protect critical infrastructure within the United States. NRG engages certified external assessors to ensure compliance with standards.

The Company's strategy seeks to align underlying processes not only with industry standards but also mirror best practices among peer organizations. The strategy ensures a standardized method across all activities at NRG allowing for consistent recognition, assessment and potential mitigation of significant cybersecurity risks. To further the strategy, the Company established the NRG Cybersecurity Integration Center ("CIC") which is composed of experienced team members from across cybersecurity disciplines with relevant educational and industry experience. The CIC provides the following functions to the Company: cyber governance, operations, detection and response, engineering, testing, cyber risk management (including third-party), compliance, training and awareness, and reporting. The CIC utilizes advanced continuous monitoring systems and investigative techniques for real-time threat detection. The systematic monitoring approach allows for risk classification and prioritization based on potential impacts, facilitating targeted resource allocation according to risk severity. The Company conducts regular penetration testing to proactively identify vulnerabilities and enhance its defense measures. The Company engages third-party assessors to gain comprehensive insights into its cyber risk profile's composition.

The Company relies on third-party service providers in the normal course of business. The Company has established a comprehensive approach to identify and manage cybersecurity risks associated with providers including, but not limited to, rigorous due diligence and assessments of third-party service providers' cybersecurity protocols before engagement, requirements relating to information handling, incident notification and assessment against the Company's cybersecurity requirements. Furthermore, the Company has implemented additional control measures and procedures in business processes to enable continuous risk identification, assessment and to support monitoring mechanisms to oversee and manage supplier cybersecurity practices.

Through December 31, 2023, no cybersecurity threats have been identified or are anticipated to have a material adverse effect on NRG's business strategy, financial standing, or operational performance.

Governance

Management

The Chief Information Security Officer ("CISO") is the head of cybersecurity for the Company and leads the NRG Cybersecurity Integration Center. The CISO has decades of professional experience, education, and certification in security analysis, design, implementation, and management, with a particularly strong background in technical vulnerability assessment and program development. Within various roles throughout the CISO's career, he has overseen information assurance and cybersecurity efforts, including critical infrastructure protection in government agencies and industry.

At least twice per year, the CISO provides comprehensive updates to the Board on cybersecurity and any recent developments impacting the Company. These updates include, among other items:

- Incident reports and developments from any cybersecurity events;
- Current cybersecurity landscape and emerging cybersecurity threats, with a particular emphasis on Company and industry-specific threats; and
- Status of ongoing initiatives to strengthen the Company's cybersecurity program.

In addition, the CISO regularly informs other members of senior management, including the Interim President and CEO, of all aspects related to cybersecurity risks and incidents. This is intended to ensure that the highest levels of management remain

updated on the cybersecurity preparedness and potential risks facing the Company. Furthermore, significant cybersecurity matters and strategic risk management decisions are escalated to the Board of Directors ensuring that they have comprehensive oversight and can provide guidance on critical cybersecurity issues.

In preparation for a potential cybersecurity incident, the Company has implemented structured processes and procedures aligned with the NIST framework. This framework provides a foundation for a systematic and consistent approach to preparing for, identifying, containing, eradicating, and recovering from incidents. The effectiveness of these protocols is routinely verified through tabletop exercises involving relevant teams and Company leadership. In accordance with the Company's process and procedures, incidents which may have a material impact on the Company are promptly referred to senior leadership and the Board of Directors for review and appropriate determination.

Board of Directors

The Board of Directors is primarily responsible for the risk oversight of the Company, and has delegated oversight of risks related to cybersecurity to the Finance and Risk Management ("FARM") Committee of the Board. The FARM Committee regularly reports on its activities to the Board after each meeting. The FARM Committee, as well as the overall Board, is composed of members with diverse expertise, including risk management, incident response and technology. The Board is aware of the critical nature of managing risks associated with cybersecurity threats and has worked with the Company's management to establish comprehensive oversight mechanisms to ensure effective cybersecurity governance.

The FARM Committee and the Board receive updates on any significant developments in the cybersecurity domain, seeking to ensure that the Board's oversight is proactive and responsive. The Board remains involved in ensuring that cybersecurity considerations are integrated into the Company's broader strategic objectives. Pursuant to the charter of the FARM Committee, the Committee's responsibilities include an annual review of the Company's cybersecurity program and the effectiveness of its risk management strategies. This review is intended to help identify areas for improvement and ensure the alignment of cybersecurity efforts with the overall risk management framework.

Item 2 — Properties

Listed below are descriptions of NRG's interests in facilities, operations and/or projects owned or leased as of December 31, 2023. The rated MW capacity figures provided represent nominal summer MW capacity of power generated. Net MW capacity is adjusted for the Company's owned or leased interest as of December 31, 2023. The Company believes its existing facilities, operations and/or projects are suitable for the conduct of its business. The following table summarizes NRG's power production and cogeneration facilities by region:

Name of Facility	Power Market	Plant Type	Primary Fuel	Location	Rated MW Capacity ^(a)	Net MW Capacity ^(b)	% Owned
Texas							
Cedar Bayou	ERCOT	Fossil	Natural Gas	TX	1,494	1,494	100.0
Cedar Bayou 4	ERCOT	Fossil	Natural Gas	TX	504	252	50.0
Elbow Creek	ERCOT	Other	Battery Storage	TX	2	2	100.0
Greens Bayou	ERCOT	Fossil	Natural Gas	TX	327	327	100.0
Limestone	ERCOT	Fossil	Coal	TX	1,660	1,660	100.0
San Jacinto	ERCOT	Fossil	Natural Gas	TX	160	160	100.0
T.H. Wharton	ERCOT	Fossil	Natural Gas	TX	1,002	1,002	100.0
W.A. Parish ^(c)	ERCOT	Fossil	Coal	TX	2,514	2,514	100.0
W.A. Parish	ERCOT	Fossil	Natural Gas	TX	1,118	1,118	100.0
Total Texas					8,781	8,529	
East							
Chalk Point	PJM	Fossil	Natural Gas	MD	80	80	100.0
Fisk	PJM	Fossil	Oil	IL	171	171	100.0
Indian River ^(d)	PJM	Fossil	Coal	DE	410	410	100.0
Indian River	PJM	Fossil	Oil	DE	16	16	100.0
Powerton ^(e)	PJM	Fossil	Coal	IL	1,538	1,538	100.0
Vienna ^(f)	PJM	Fossil	Oil	MD	167	167	100.0
Waukegan	PJM	Fossil	Oil	IL	101	101	100.0
Total East					2,483	2,483	
West/Services/Other							
Cottonwood	MISO	Fossil	Natural Gas	TX	1,166	1,166	— ^(g)
Gladstone		Fossil	Coal	AUS	1,613	605	37.5
Ivanpah	CAISO	Renewable	Solar	CA	391	213	54.5
Midway-Sunset	CAISO	Fossil	Natural Gas	CA	226	113	50.0
Stadiums and Other		Renewable	Solar	various	3	3	100.0
Total West/Services/Other					3,399	2,100	
Total Fleet					14,663	13,112	

(a) MW capacity of the facility without taking into account NRG ownership percentage

(b) Actual capacity can vary depending on factors including weather conditions, operational conditions, and other factors. Additionally, ERCOT and PJM require periodic demonstration of capability, and the capacity may vary individually and in the aggregate from time to time

(c) In May 2022, W.A. Parish Unit 8 came offline as a result of damage to the steam turbine/generator. The extended forced outage ended in September 2023 and the unit has returned to service

(d) The Company previously announced the shut down of the Indian River facility. However, PJM identified reliability impacts resulting from the proposed deactivation and Indian River Unit 4 currently remains active under a RMR agreement that ends December 31, 2026

(e) Powerton is projected to close by December 31, 2028 to comply with ELG regulations

(f) A retirement notice was filed with PJM that the Vienna facility will retire in June 2025

(g) NRG leases 100% interests in the Cottonwood facility through a facility lease agreement expiring in May 2025 and operates the Cottonwood facility

The following table summarizes the primary changes that occurred during 2023:

Name of Facility	Power Market	Plant Type	Primary Fuel	Status	Location	Rated MW Capacity	Net MW Capacity	% Owned
Texas								
Gregory	ERCOT	Fossil	Natural Gas	Sold	TX	365	365	100.0 %
South Texas Project	ERCOT	Nuclear	Uranium	Sold	TX	2,572	1,132	44.0 %
East								
Astoria Turbines	NYISO	Fossil	Natural Gas	Retired	NY	420	420	100.0 %
Joliet	PJM	Fossil	Natural Gas	Retired	IL	1,381	1,381	100.0 %
Total						4,738	3,298	

Other Properties

NRG owns several real properties and facilities related to its generation assets, other vacant real property unrelated to its generation assets, and properties not used for operational purposes. NRG believes it has satisfactory title to its plants and facilities in accordance with standards generally accepted in the electric power industry, subject to exceptions that, in the Company's opinion, would not have a material adverse effect on the use or value of its portfolio.

NRG leases its operational and corporate headquarters in Houston, Texas, its financial and commercial corporate offices in Princeton, New Jersey, its smart home corporate offices in Provo, Utah, as well as its retail operations offices, smart home monitoring stations, call centers, warehouses and various other office space.

Item 3 — Legal Proceedings

See Item 15 — Note 23, *Commitments and Contingencies*, to the Consolidated Financial Statements for discussion of the material legal proceedings to which NRG is a party.

Item 4 — Mine Safety Disclosures

There have been no events that are required to be reported under this Item.

PART II

Item 5 — Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information and Holders

NRG's common stock trades on the New York Stock Exchange under the symbol "NRG". NRG's authorized capital stock consists of 500,000,000 shares of common stock and 10,000,000 shares of preferred stock. A total of 25,000,000 shares of the Company's common stock are authorized for issuance under the NRG LTIP, and a total of 17,500,000 shares of common stock are authorized for issuance under the Vivint LTIP. For more information about the LTIPs, refer to Item 12 — *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters* and Item 15 — Note 21, *Stock-Based Compensation*, to the Consolidated Financial Statements.

As of February 1, 2024, there were 15,102 common stockholders of record.

On June 22, 2023, the Company updated its capital allocation framework, and plans, after debt reduction, to return approximately 80% of excess cash to shareholders and invest 20% in growth initiatives. The Company expects to return the capital to shareholders through share repurchases and dividends on its common stock.

Consistent with its capital allocation framework, in 2021, 2022 and 2023, the Company increased the annual dividend on its common stock to \$1.30, \$1.40 and \$1.51 per share, respectively, representing an 8% increase each year. The Company further increased the annual dividend by 8% to \$1.63 per share beginning in the first quarter of 2024. The long-term capital allocation policy targets an annual dividend growth rate of 7-9% per share.

Issuer Purchases of Equity Securities

NRG engages in share repurchase programs with the goal of returning excess cash to shareholders. The share repurchase plan permits the execution of the plan through open-market purchases, private transactions, accelerated share repurchases and other similar transactions. The timing, price and volume of repurchases is based on a number of factors, including available capital, market conditions, and compliance with associated laws and regulations.

On June 22, 2023, as part of the updated capital allocation framework, the Company announced that the Board of Directors has increased the share repurchase authorization of its common stock to \$2.7 billion to be executed through 2025. Through December 31, 2023, the Company completed \$1.2 billion of share repurchases under the \$2.7 billion authorization. For further information regarding share repurchases, see Item 15 — Note 16, *Capital Structure* in this Form 10-K.

The table below sets forth the information with respect to purchases made by or on behalf of NRG or any "affiliated purchaser" (as defined in Rule 10b-18(a)(3) under the Exchange Act) of NRG's common stock during the quarter ended December 31, 2023.

For the three months ended December 31, 2023	Total Number of Shares Purchased	Average Price Paid per Share ^(a)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (in millions) ^(b)
Month #1				
(October 1, 2023 to October 31, 2023	3,732,657	\$ 40.17	3,732,657	\$ 2,500
Month #2				
(November 1, 2023 to November 30, 2023)	4,494,224	(c)	4,494,224	\$ 1,550
Month #3				
(December 1, 2023 to December 31, 2023)	13,181,918	(c)	13,181,918	\$ 1,550
Total at December 31, 2023	21,408,799		21,408,799	

(a) The average price paid per share excludes excise taxes and commissions per share paid in connection with the open market share repurchases

(b) Includes commissions of \$0.015 per share paid in connection with the open market share repurchases

(c) Represents shares delivered under the November 6, 2023 ASR agreements. The total number of shares delivered and the average price per share under the ASR agreements will be determined at the end of the ASR period which is expected to occur in March of 2024. See Item 15—Note 16, *Capital Structure* for additional information on the ASR agreements

Director and Officer Trading Arrangements

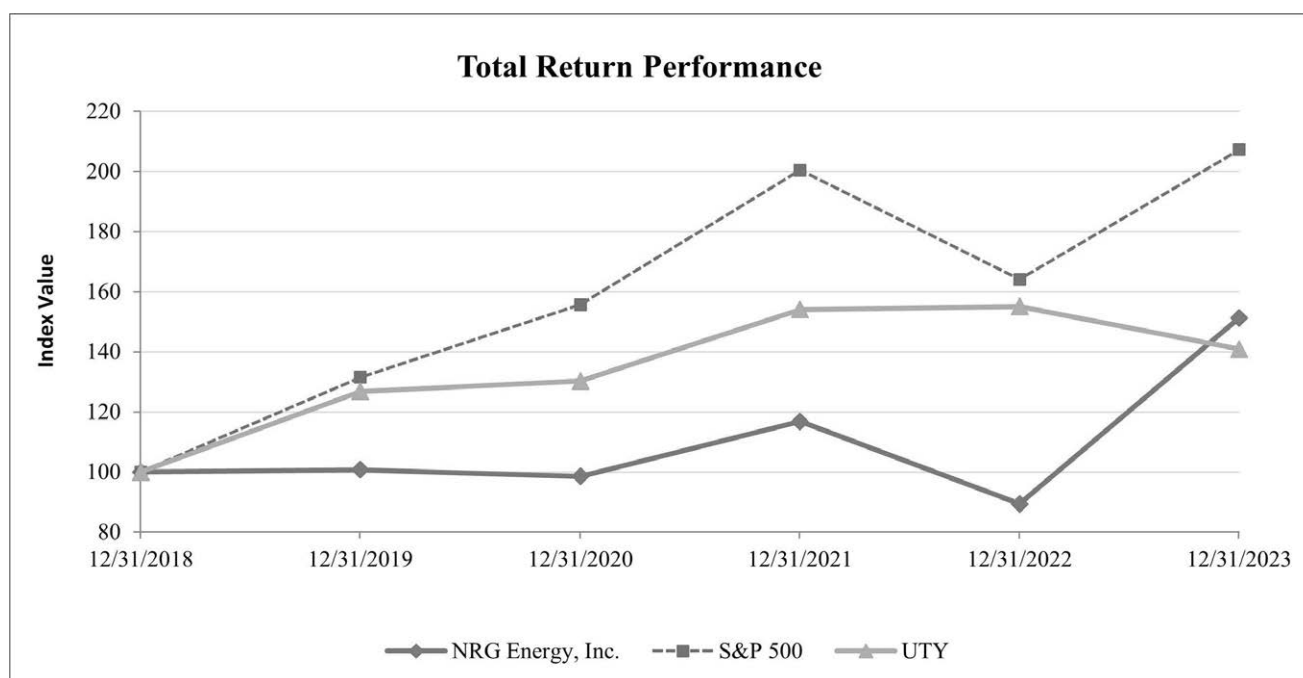
The Company's officers and directors are required to comply with the Company's Securities Trading and Non-Disclosure Policy at all times, including during a share repurchase program. The securities trading and non-disclosure policy, among other things, prohibits trading in the Company's securities when in possession of material non-public information and restricts the ability of certain officers or directors from transacting in the Company's securities during specific blackout periods, subject to certain limited exceptions, including transactions pursuant to a Rule 10b5-1 trading plan that complies with the conditions of Securities Exchange Act Rule 10b5-1. The Company's policy also requires officers and directors to obtain preclearance in advance of effecting any purchase, sale or other trading of Company stock. See Item 9B — Other Information, for details of any "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement" by any director or officer of the Company during the three months ended December 31, 2023.

Stock Performance Graph

The performance graph below compares the cumulative total stockholder return on NRG's common stock for the period December 31, 2018 through December 31, 2023, with the cumulative total return of the Standard & Poor's 500 Composite Stock Price Index ("S&P 500") and the Philadelphia Utility Sector Index ("UTY").

The performance graph shown below is being furnished and compares each period assuming that \$100 was invested on December 31, 2018, in each of the common stock of NRG, the stocks included in the S&P 500 and the stocks included in the UTY, and that all dividends were reinvested.

Comparison of Cumulative Total Return



	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
NRG Energy, Inc.	\$ 100.00	\$ 100.69	\$ 98.53	\$ 116.81	\$ 89.40	\$ 151.29
S&P 500	100.00	131.49	155.68	200.37	164.08	207.21
UTY	100.00	126.82	130.27	154.04	155.04	140.83

Item 6 — Reserved

Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations

The discussion and analysis below has been organized as follows:

- Executive Summary, including the business environment in which the Company operates, a discussion of regulation, weather, competition and other factors that affect the business, and other significant events that are important to understanding the results of operations and financial condition;
- Results of operations for the years ended December 31, 2023 and December 31, 2022, including an explanation of significant differences between the periods in the specific line items of NRG's Consolidated Statements of Operations;
- Liquidity and capital resources including liquidity position, financial condition addressing credit ratings, material cash requirements and commitments, and other obligations; and
- Critical accounting estimates that are most important to both the portrayal of the Company's financial condition and results of operations, and require management's most difficult, subjective, or complex judgments.

As you read this discussion and analysis, refer to NRG's Consolidated Statements of Operations in this Form 10-K, which present the results of the Company's operations for the years ended December 31, 2023 and 2022, and also refer to Item 1 — Business to this Form 10-K for more detail discussion about the Company's business. A discussion and analysis of fiscal year 2021 may be found in Part II, Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations of the Annual Report on Form 10-K for the fiscal year ended December 31, 2022.

Executive Summary

NRG Energy, Inc., or NRG or the Company, sits at the intersection of energy and home services. NRG is a leading energy and home services company fueled by market-leading brands, proprietary technologies and complementary sales channels. Across the U.S. and Canada, NRG delivers innovative, sustainable solutions, predominately under the brand names such as NRG, Reliant, Direct Energy, Green Mountain Energy, and Vivint, while also advocating for competitive energy markets and customer choice. The Company has a customer base that includes approximately 8 million residential consumers in addition to commercial, industrial, and wholesale customers, supported by approximately 13 GW of generation as of December 31, 2023.

Business Environment

The industry dynamics and external influences affecting the Company, its businesses, and the retail energy and power generation industry in 2023 and for the future medium term include:

Market Dynamics — The price of natural gas plays an important role in setting the price of electricity in many of the regions where NRG operates. Natural gas prices are driven by variables including demand from the industrial, residential, and electric sectors, productivity across natural gas supply basins, costs of natural gas production, changes in pipeline infrastructure, global LNG demand, exports of natural gas, and the financial and hedging profile of natural gas customers and producers. In 2023, the average natural gas price at Henry Hub was \$2.74 per MMBtu compared to \$6.64 per MMBtu in 2022, representing a decrease of 59%.

NRG may experience impacts to gross margins due to significant, rapid changes in current natural gas prices, the impact those prices have on power prices, and the lag in its ability to make a corresponding adjustment to the retail rates it charges customers on term and month to month contracts. The Company hedges its load commitments in order to mitigate the impact of changes in commodity prices, and as a result, these gross margin impacts would be realized in future periods until it is able to make the corresponding adjustments to the retail customer rates.

The relative price of natural gas as compared to coal and prevailing power prices are the primary driver of coal demand. Coal commodity prices decreased slightly in 2023.

Electricity Prices — The price of electricity is a key determinant of the profitability of the Company. Many variables such as the price of different fuels, weather, load growth and unit availability all coalesce to impact the final price for electricity and the Company's profitability. An increase in supply cost volatility in the competitive retail markets may result in smaller companies choosing to exit the market, which may result in further consolidation in the competitive retail space. The following table summarizes average on-peak power prices for each of the major markets in which NRG operates. For the year ended December 31, 2023, as compared to the same period in 2022, Texas, East and West average on-peak power prices decreased as a result of lower natural gas prices.

Region	Average On-Peak Power Price (\$/MWh)		
	Year Ended December 31,		2023 vs 2022
	2023	2022	Change %
Texas			
ERCOT - Houston ^(a)	\$ 74.32	\$ 90.62	(18)%
ERCOT - North ^(a)	72.89	78.34	(7)%
East			
NY J/NYC ^(b)	38.95	93.58	(58)%
NEPOOL ^(b)	41.36	92.42	(55)%
COMED (PJM) ^(b)	32.72	71.86	(54)%
PJM West Hub ^(b)	39.34	83.48	(53)%
West			
CAISO - SP15 ^(b)	60.17	87.67	(31)%
MISO - Louisiana Hub ^(b)	33.64	71.12	(53)%

(a) Average on-peak power prices based on real time settlement prices as published by the respective ISOs

(b) Average on-peak power prices based on day-ahead settlement prices as published by the respective ISOs

Increased Awareness of, and Action to Combat, Climate Change —Diverse groups of stakeholders, including investors, asset managers, financial institutions, non-government organizations, industry coalitions, individual companies, consumer groups and academic institutions, are increasingly engaged in efforts to limit global warming in the post-industrial era to 1.5 degrees Celsius. As a result, policymakers and regulators at regional, national, sub-national and local levels of government, both in the U.S. and other parts of the world, are increasingly focused on actions to combat climate change.

NRG actively monitors climate change related developments that could impact its business and regularly engages with a diverse set of stakeholders on these issues. Such engagement helps the Company identify and pursue potential opportunities both to decarbonize its business and better serve its customers. NRG is committed to providing transparent disclosures of its climate risks and opportunities to stakeholders. The Company was an early supporter of the Task Force on Climate-related Financial Disclosures ("TCFD") recommendations after they were issued in 2017, published a TCFD mapping disclosure in December 2020 and issued a stand-alone TCFD report in December 2021.

Lower Carbon Infrastructure Development — Policy mechanisms at the state and federal level, including production and investment tax credits, cash grants, loan guarantees, accelerated depreciation tax benefits, RPS, and carbon trading plans, have supported and continue to support the development of renewable generation, demand-side and smart grid, and other lower carbon infrastructure technologies. The U.S. Inflation Reduction Act, signed into law in August 2022, is intended to further support the deployment of lower carbon energy technologies. As costs associated with the development of lower carbon infrastructure, such as wind and solar generating facilities, continue to evolve and impact the development of lower carbon infrastructure in the markets where the Company participates, it may impact the ability of the Company's generating facilities to participate in those markets. According to ERCOT, 41% of 2023 energy consumption in the ERCOT market was generated from carbon emission-free resources, with wind power contributing 24%. In addition, as subsidies and incentives contribute to increases in renewable power sources, customer awareness and preferences are shifting toward sustainable solutions. Increased demand for sustainable energy products from both residential and commercial customers creates opportunities for diversified product offerings in competitive retail markets.

Digitization and Customization — The electric industry is experiencing major technological changes in the way power is distributed and consumed by end-use customers. The electric grid is shifting from a centralized analog system, where power is generated from limited sources and flows in one direction, to a decentralized multidirectional system, where power can be generated from a number of distributed resources and stored or dispatched on an as-needed basis. In addition, customers are seeking new ways to engage with their power providers. Technologies like smart thermostats, smart appliances and electric vehicles are giving individuals more choice and control over their electricity usage. Power providers are starting to engage with customers who have transitioned to smart homes with new offerings, including but not limited to behind-the-meter demand

response, or virtual power plant products. Companies with large customer bases in competitive market places are poised to create further engagement with their customer bases and help their customers further integrate their smart home into their daily lives.

Weather — Weather conditions in the regions of the U.S. in which NRG conducts business influence the Company's financial results. Weather conditions can affect the supply and demand for electricity and fuels and may also impact the availability of the Company's generating assets. Changes in energy supply and demand may impact the price of these energy commodities in both the spot and forward markets, which may affect the Company's results in any given period. Typically, demand for and the price of electricity is higher in the summer and the winter seasons, when temperatures and resultant demand are more extreme. The demand for and price of natural gas is also generally higher in the winter. However, all regions of the U.S. typically do not experience extreme weather conditions at the same time, thus NRG's operations are typically not exposed to the effects of extreme weather in all parts of its business at once.

Other Factors — A number of other factors significantly influence the level and volatility of prices for energy commodities and related derivative products for NRG's business. These factors include:

- seasonal, daily and hourly changes in demand;
- extreme peak demands;
- performance of renewable generation;
- available supply resources;
- transportation and transmission availability and reliability within and between regions;
- location of NRG's generating facilities relative to the location of its load-serving opportunities;
- procedures used to maintain the integrity of the physical electricity system during extreme conditions; and
- changes in the nature and extent of federal and state regulations.

These factors can affect energy commodity and derivative prices in different ways and to different degrees. These effects may vary throughout the country as a result of regional differences in:

- weather conditions;
- market liquidity;
- capability and reliability of the physical electricity and gas systems;
- local transportation systems; and
- the nature and extent of electricity deregulation.

Environmental Matters, Regulatory Matters and Legal Proceedings — Details of environmental matters are presented in Item 15 — Note 25, *Environmental Matters*, to the Consolidated Financial Statements and Item 1 — Business, *Environmental Matters*. Details of regulatory matters are presented in Item 15 — Note 24, *Regulatory Matters*, to the Consolidated Financial Statements and Item 1 — Business, *Regulatory Matters*. Details of legal proceedings are presented in Item 15 — Note 23, *Commitments and Contingencies*, to the Consolidated Financial Statements. Some of this information relates to costs that may be material to the Company's financial results.

Significant Events

The following significant events occurred during 2023 and through the filing date, as further described within this Management's Discussion and Analysis and the Consolidated Financial Statements:

Vivint Smart Home Acquisition and related financings

On March 10, 2023, the Company completed the acquisition of Vivint Smart Home. The Company paid \$12 per share, or \$2.6 billion in cash. See Item 15 — Note 4, *Acquisitions and Dispositions*, to the Consolidated Financial Statements for further discussion.

On March 9, 2023, the Company issued 650,000 shares of 10.25% Series A Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock. The proceeds, net of issuance costs, of \$635 million were used to partially fund the Vivint Smart Home acquisition.

On March 9, 2023, the Company issued \$740 million of aggregate principal amount of 7.000% senior secured first lien notes due 2033. The net proceeds of \$724 million, net of issuance costs, were used to partially fund the Vivint Smart Home acquisition.

Dispositions

On November 1, 2023, the Company closed on the previously announced sale of its 44% equity interest in STP to Constellation. Proceeds of \$1.75 billion were reduced by working capital and other adjustments of \$96 million, resulting in net proceeds of \$1.654 billion.

On October 2, 2023, the Company closed on the sale of its 100% ownership in the Gregory natural gas generating facility in Texas for \$102 million.

On January 6, 2023, NRG closed on the sale of land and related assets from the Astoria site, within the East region of operations, for proceeds of \$212 million subject to transaction fees of \$3 million and certain indemnifications. NRG recognized a gain on the sale of \$199 million. As part of the transaction, NRG entered into an agreement to lease the land back for the purpose of operating the Astoria gas turbines. Decommissioning was completed in December 2023 and the lease agreement has been terminated.

Operations

In May 2022, W.A. Parish Unit 8 came offline as a result of damage to the steam turbine/generator. The extended forced outage ended in September 2023 and the unit has returned to service.

During the second quarter of 2022, the Company announced the planned retirement of the Joliet generating facility in 2023. On September 1, 2023, the Joliet generating facility fully retired.

The Company's strategy is to procure mid to long-term renewable generation through power purchase agreements. As of December 31, 2023, NRG has entered into Renewable PPAs totaling approximately 1.9 GW with third-party project developers and other counterparties, of which approximately 1.1 GW are operational. The average tenor of these agreements is eleven years. The Company expects to continue evaluating and executing similar agreements that support the needs of the business. The total GW entered into through Renewable PPAs may be impacted by contract terminations when they occur.

Capital Allocation

In June 2023, NRG revised its long-term capital allocation policy to target allocating approximately 80% of cash available for allocation after debt reduction to be returned to shareholders. As part of the revised capital allocation framework, the Company announced an increase to its share repurchase authorization to \$2.7 billion, to be executed through 2025.

On November 6, 2023, the Company executed Accelerated Share Repurchase agreements to repurchase a total of \$950 million of NRG's outstanding common stock. Under the ASR, the Company paid a total of \$950 million and will receive shares of NRG's common stock on specified settlement dates.

During the year ended December 31, 2023, the Company completed \$1.2 billion of share repurchases, including the \$950 million ASR and \$200 million of open market repurchases, under the \$2.7 billion authorization. See Item 15 - Note 16, *Capital Structure*, to the Consolidated Financial Statements for additional discussion.

In the first quarter of 2023, NRG increased the annual dividend on its common stock to \$1.51 from \$1.40 per share, representing an 8% increase from 2022. Beginning in the first quarter of 2024, NRG increased the annual dividend by 8% to \$1.63 per share. The Company expects to target an annual dividend growth rate of 7-9% per share in subsequent years.

During 2023, the Company reduced its debt by \$900 million using funds from cash from operations. Additionally, the Company redeemed \$620 million in aggregate principal amount of its 3.875% Senior Notes, due 2032, for \$502 million using a portion of the proceeds from the sale of STP.

The Company intends to spend approximately \$500 million reducing debt during 2024 to maintain its targeted credit metrics. The Company intends to fund the debt reduction from cash from operations.

Consolidated Results of Operations for the years ended December 31, 2023 and 2022

The following table provides selected financial information for the Company:

(In millions)	Year Ended December 31,		Change
	2023	2022	
Revenue			
Retail revenue	\$ 27,467	\$ 29,722	\$ (2,255)
Energy revenue ^(a)	553	1,250	(697)
Capacity revenue ^(a)	197	272	(75)
Mark-to-market for economic hedging activities	144	(83)	227
Contract amortization	(32)	(39)	7
Other revenues ^{(a)(b)}	494	421	73
Total revenue	28,823	31,543	(2,720)
Operating Costs and Expenses			
Cost of fuel	992	1,919	927
Purchased energy and other cost of sales ^(c)	20,647	24,984	4,337
Mark-to-market for economic hedging activities	3,007	(1,331)	(4,338)
Contract and emissions credit amortization ^(c)	93	111	18
Operations and maintenance	1,397	1,352	(45)
Other cost of operations	390	411	21
Cost of operations (excluding depreciation and amortization shown below)	26,526	27,446	920
Depreciation and amortization	1,127	634	(493)
Impairment losses	26	206	180
Selling, general and administrative costs	1,968	1,228	(740)
Provision for credit losses	251	11	(240)
Acquisition-related transaction and integration costs	119	52	(67)
Total operating costs and expenses	30,017	29,577	(440)
Gain on sale of assets	1,578	52	1,526
Operating Income	384	2,018	(1,634)
Other Income/(Expense)			
Equity in earnings of unconsolidated affiliates	16	6	10
Impairment losses on investments	(102)	—	(102)
Other income, net	47	56	(9)
Gain on debt extinguishment	109	—	109
Interest expense	(667)	(417)	(250)
Total other expenses	(597)	(355)	(242)
(Loss)/Income Before Income Taxes	(213)	1,663	(1,876)
Income tax (benefit)/expense	(11)	442	(453)
Net (Loss)/Income	<u>\$ (202)</u>	<u>\$ 1,221</u>	<u>\$ (1,423)</u>

(a) Includes realized gains and losses from financially settled transactions

(b) Includes trading gains and losses and ancillary revenues

(c) Includes amortization of SO₂ and NO_x credits and excludes amortization of RGGI credits

Gross Margin

The Company calculates gross margin in order to evaluate operating performance as revenues less cost of fuel, purchased energy and other costs of sales, mark-to-market for economic hedging activities, contract and emission credit amortization and depreciation and amortization.

Economic Gross Margin

In addition to gross margin, the Company evaluates its operating performance using the measure of economic gross margin, which is not a GAAP measure and may not be comparable to other companies' presentations or deemed more useful

than the GAAP information provided elsewhere in this report. Economic gross margin should be viewed as a supplement to and not a substitute for the Company's presentation of gross margin, which is the most directly comparable GAAP measure. Economic gross margin is not intended to represent gross margin. The Company believes that economic gross margin is useful to investors as it is a key operational measure reviewed by the Company's chief operating decision maker. Economic gross margin is defined as the sum of retail revenue, energy revenue, capacity revenue and other revenue, less cost of fuels, purchased energy and other cost of sales. Economic gross margin does not include mark-to-market gains or losses on economic hedging activities, contract amortization, emission credit amortization, depreciation and amortization, operations and maintenance, or other costs of operations.

The following tables present the composition and reconciliation of gross margin and economic gross margin for the years ended December 31, 2023 and 2022:

(\$ in millions, except otherwise noted)	Year Ended December 31, 2023					
	Texas	East	West/ Services/ Other	Vivint Smart Home	Corporate/ Eliminations	Total
Retail revenue	\$ 10,030	\$ 11,946	\$ 3,943	\$ 1,549	\$ (1)	\$ 27,467
Energy revenue	77	291	185	—	—	553
Capacity revenue	—	197	2	—	(2)	197
Mark-to-market for economic hedging activities	—	57	103	—	(16)	144
Contract amortization	—	(32)	—	—	—	(32)
Other revenue ^(a)	369	88	48	—	(11)	494
Total revenue	10,476	12,547	4,281	1,549	(30)	28,823
Cost of fuel	(760)	(112)	(120)	—	—	(992)
Purchased energy and other costs of sales ^{(b)(c)(d)}	(6,288)	(10,683)	(3,532)	(153)	9	(20,647)
Mark-to-market for economic hedging activities	315	(2,471)	(867)	—	16	(3,007)
Contract and emissions credit amortization	(11)	(68)	(14)	—	—	(93)
Depreciation and amortization	(294)	(116)	(95)	(586)	(36)	(1,127)
Gross margin	\$ 3,438	\$ (903)	\$ (347)	\$ 810	\$ (41)	\$ 2,957
Less: Mark-to-market for economic hedging activities, net	315	(2,414)	(764)	—	—	(2,863)
Less: Contract and emissions credit amortization, net	(11)	(100)	(14)	—	—	(125)
Less: Depreciation and amortization	(294)	(116)	(95)	(586)	(36)	(1,127)
Economic gross margin	\$ 3,428	\$ 1,727	\$ 526	\$ 1,396	\$ (5)	\$ 7,072

(a) Includes trading gains and losses and ancillary revenues

(b) Includes capacity and emissions credits

(c) Includes \$3.1 billion, \$244 million and \$1.1 billion of TDSP expense in Texas, East, and West/Services/Other respectively

(d) Excludes depreciation and amortization shown separately

Year Ended December 31, 2023

Business Metrics	Texas	East	West/ Services/ Other	Vivint Smart Home	Corporate/ Eliminations	Total
Home electricity sales volume (GWh)	40,032	12,838	2,243	—	—	55,113
Business electricity sales volume (GWh)	40,250	46,438	10,393	—	—	97,081
Home natural gas retail sales volumes (MDth)	—	49,990	75,150	—	—	125,140
Business natural gas retail sales volumes (MDth)	—	1,587,052	179,888	—	—	1,766,940
Average retail Home customer count (in thousands) ^(a)	2,878	1,856	774	—	—	5,508
Ending retail Home customer count (in thousands) ^(a)	2,928	2,137	762	—	—	5,827
Average Vivint Smart Home subscriber count (in thousands) ^(b)	—	—	—	2,008	—	2,008
Ending Vivint Smart Home subscriber count (in thousands) ^(b)	—	—	—	2,043	—	2,043
GWh sold	30,776	5,396	5,903	—	—	42,075
GWh generated ^(c)	30,776	2,016	5,903	—	—	38,695

(a) Home customer count includes recurring residential customers, services customers and community choice.

(b) Vivint Smart Home subscribers includes customers that also purchase other NRG products

(c) Includes owned and leased generation, excludes tolled generation and equity investments

Year Ended December 31, 2022

(\$ in millions, except otherwise noted)	Texas	East	West/ Services/ Other	Corporate/ Eliminations	Total
Retail revenue	\$ 9,617	\$ 15,856	\$ 4,250	\$ (1)	\$ 29,722
Energy revenue	111	641	466	32	1,250
Capacity revenue	—	232	40	—	272
Mark-to-market for economic hedging activities	2	(30)	(56)	1	(83)
Contract amortization	—	(40)	1	—	(39)
Other revenue ^(a)	327	104	5	(15)	421
Total revenue	10,057	16,763	4,706	17	31,543
Cost of fuel	(1,213)	(376)	(330)	—	(1,919)
Purchased energy and other costs of sales ^{(b)(c)(d)}	(6,379)	(14,782)	(3,804)	(19)	(24,984)
Mark-to-market for economic hedging activities	611	218	503	(1)	1,331
Contract and emissions credit amortization	—	(91)	(20)	—	(111)
Depreciation and amortization	(310)	(208)	(85)	(31)	(634)
Gross margin	\$ 2,766	\$ 1,524	\$ 970	\$ (34)	\$ 5,226
Less: Mark-to-market for economic hedging activities, net	613	188	447	—	1,248
Less: Contract and emissions credit amortization, net	—	(131)	(19)	—	(150)
Less: Depreciation and amortization	(310)	(208)	(85)	(31)	(634)
Economic gross margin	\$ 2,463	\$ 1,675	\$ 627	\$ (3)	\$ 4,762

(a) Includes trading gains and losses and ancillary revenues

(b) Includes capacity and emissions credits

(c) Includes \$3.0 billion, \$120 million and \$1.1 billion of TDSP expense in Texas, East, and West/Services/Other respectively

(d) Excludes depreciation and amortization shown separately

Year Ended December 31, 2022

Business Metrics	Texas	East	West/ Services/ Other	Corporate/ Eliminations	Total
Home electricity sales volume (GWh)	43,155	13,269	2,250	—	58,674
Business electricity sales volume (GWh)	38,447	47,724	10,231	—	96,402
Home natural gas retail sales volumes (MDth)	—	53,051	92,035	—	145,086
Business natural gas retail sales volumes (MDth)	—	1,618,946	154,074	—	1,773,020
Average retail Home customer count (in thousands) ^(a) ..	2,961	1,783	799	—	5,543
Ending retail Home customer count (in thousands) ^(a) ...	2,859	1,761	786	—	5,406
GWh sold	37,275	10,832	6,676	—	54,783
GWh generated ^(b)	37,275	7,282	6,676	—	51,233

(a) Home customer count includes recurring residential customers, services customers and community choice

(b) Includes owned and leased generation, excludes tolled generation and equity investments

The following table represents the weather metrics for 2023 and 2022:

	Year ended December 31,			Quarter ended December 31,			Quarter ended September 30,			Quarter ended June 30,			Quarter ended March 31,		
Weather Metrics	Texas	East	West/ Services /Other ^(a)	Texas	East	West/ Services /Other ^(a)	Texas	East	West/ Services /Other ^(a)	Texas	East	West/ Services /Other ^(a)	Texas	East	West/ Services /Other ^(a)
2023															
CDDs ^(b)	3,468	1,229	2,024	285	85	158	2,039	817	1,291	978	273	502	166	54	73
HDDs ^(b)	1,469	4,139	2,105	613	1,520	688	—	48	4	57	479	254	799	2,092	1,159
2022															
CDDs	3,417	1,340	2,133	277	72	160	1,789	874	1,268	1,283	352	674	68	42	31
HDDs	1,935	4,627	2,232	734	1,683	884	—	54	3	24	486	194	1,177	2,404	1,151
10-year average															
CDDs	3,051	1,311	1,939	290	91	163	1,673	824	1,173	986	356	557	102	40	46
HDDs	1,715	4,766	2,064	665	1,642	774	5	52	9	67	547	188	978	2,525	1,093

(a) The West/Services/Other weather metrics are comprised of the average of the CDD and HDD regional results for the West - California and West - South Central regions

(b) National Oceanic and Atmospheric Administration-Climate Prediction Center - A Cooling Degree Day ("CDD"), represents the number of degrees that the mean temperature for a particular day is above 65 degrees Fahrenheit in each region. A Heating Degree Day ("HDD"), represents the number of degrees that the mean temperature for a particular day is below 65 degrees Fahrenheit in each region. The CDDs/HDDs for a period of time are calculated by adding the CDDs/HDDs for each day during the period

Gross margin and economic gross margin

Gross margin decreased \$2.3 billion and economic gross margin increased \$2.3 billion, both of which include intercompany sales, during the year ended December 31, 2023, compared to the same period in 2022. The detail by segment is as follows:

Texas

	(In millions)
Higher gross margin due to the net effect of:	
• a 15%, or \$548 million, decrease in cost to serve the retail load, primarily driven by lower supply costs which were a result of lower realized power pricing, the diversified supply strategy and improved plant performance coupled with the 2022 impact of the W.A. Parish Unit 8 extended outage that began in May 2022, net of business interruption insurance proceeds; and	
• increased net revenue rates of \$5.45 per MWh, or \$523 million, partially offset by changes in customer term, product and mix of \$61 million	\$ 1,010
Lower gross margin due to a decrease in load of 1.5 TWhs from weather	(58)
Higher gross margin from market optimization activities	33
Other	(20)
Increase in economic gross margin	\$ 965
Decrease in mark-to-market for economic hedging primarily due to net unrealized gains/losses on open positions related to economic hedges	(298)
Increase in contract and emissions credit amortization	(11)
Decrease in depreciation and amortization	16
Increase in gross margin	\$ 672

East

	(In millions)
Lower gross margin due to a decrease in generation and capacity as a result of asset retirements	\$ (116)
Lower natural gas gross margin including the impact of transportation and storage contract optimization, reflects lower net revenue rates from changes in customer term, product and mix of \$2.35 per Dth, or \$3.86 billion, partially offset by lower supply costs of \$2.30 per Dth, or \$3.78 billion	(82)
Lower gross margin from the sales of NO _x emissions credits	(24)
Lower natural gas gross margin from a decrease in load of 6.9 MMDth due to weather and changes in customer mix	(16)
Lower electric gross margin from a decrease in load of 686 GWhs primarily due to weather	(16)
Higher electric gross margin due to higher net revenue rates as a result of changes in customer term, product and mix of \$2.50 per MWh, or \$155 million, as well as lower supply costs of \$1.50 per MWh, or \$86 million driven primarily by decreases in power prices	241
Higher gross margin due to an increase in average realized pricing and a decrease in supply costs at Midwest Generation, offset by lower gross margin as a result of a 74% decrease in generation volumes due to dark spread contractions	56
Higher gross margin primarily due to net capacity performance penalties resulting from Winter Storm Elliott in 2022 and an increase in NYISO capacity pricing, partially offset by a decrease in PJM capacity prices	16
Other	(7)
Increase in economic gross margin	\$ 52
Decrease in mark-to-market for economic hedging primarily due to net unrealized gains/losses on open positions related to economic hedges	(2,602)
Decrease in contract amortization	31
Decrease in depreciation and amortization	92
Decrease in gross margin	\$ (2,427)

West/Services/Other

	(In millions)
Lower gross margin at Cottonwood driven by lower average realized power prices, planned outages in 2023 and capacity performance bonus resulting from PJM Winter Storm Elliott in 2022	\$ (76)
Lower gross margin primarily due to lower Services sales	(51)
Lower electric gross margin due to an increase in supply costs of \$6.50 per MWh, or \$82 million, partially offset by higher revenue rates of \$5.25 per MWh, or \$64 million, and changes in customer mix of \$2 million	(16)
Higher gross margin from market optimization activities	28
Higher natural gas gross margin due to a decrease in supply costs of \$0.90 per Dth, or \$228 million, and changes in customer mix of \$4 million, partially offset by lower revenue rates of \$0.85 per Dth, or \$218 million	14
Decrease in economic gross margin	\$ (101)
Decrease in mark-to-market for economic hedges primarily due to net unrealized gains/losses on open positions related to economic hedges	(1,211)
Decrease in contract amortization	5
Increase in depreciation and amortization	(10)
Decrease in gross margin	\$ (1,317)

Vivint Smart Home^(a)

	(In millions)
Increase due to the acquisition of Vivint Smart Home	\$ 1,396
Increase in economic gross margin	\$ 1,396
Increase in depreciation and amortization	(586)
Increase in gross margin	\$ 810

(a) Includes results of operations following the acquisition date of March 10, 2023

Mark-to-market for Economic Hedging Activities

Mark-to-market for economic hedging activities includes asset-backed hedges that have not been designated as cash flow hedges. Total net mark-to-market results decreased by \$4.1 billion during the year ended December 31, 2023, compared to the same period in 2022.

The breakdown of gains and losses included in revenues and operating costs and expenses by segment is as follows:

	Year Ended December 31, 2023				
(In millions)	Texas	East	West/ Services/ Other	Eliminations	Total
Mark-to-market results in revenues					
Reversal of previously recognized unrealized (gains)/losses on settled positions related to economic hedges	\$ —	\$ (25)	\$ 56	\$ (12)	\$ 19
Reversal of acquired (gain) positions related to economic hedges	—	(2)	—	—	(2)
Net unrealized gains on open positions related to economic hedges	—	84	47	(4)	127
Total mark-to-market gains in revenues	\$ —	\$ 57	\$ 103	\$ (16)	\$ 144
Mark-to-market results in operating costs and expenses					
Reversal of previously recognized unrealized (gains) on settled positions related to economic hedges	\$ (473)	\$ (812)	\$ (480)	\$ 12	\$ (1,753)
Reversal of acquired loss/(gain) positions related to economic hedges	17	11	(6)	—	22
Net unrealized gains/(losses) on open positions related to economic hedges	771	(1,670)	(381)	4	(1,276)
Total mark-to-market gains/(losses) in operating costs and expenses	\$ 315	\$ (2,471)	\$ (867)	\$ 16	\$ (3,007)

(In millions)	Year Ended December 31, 2022				
	Texas	East	West/ Services/ Other	Eliminations	Total
Mark-to-market results in revenues					
Reversal of previously recognized unrealized losses/ (gains) on settled positions related to economic hedges	\$ 2	\$ (5)	\$ 40	\$ (8)	\$ 29
Reversal of acquired (gain) positions related to economic hedges	—	(3)	—	—	(3)
Net unrealized (losses) on open positions related to economic hedges	—	(22)	(96)	9	(109)
Total mark-to-market gains/(losses) in revenues	\$ 2	\$ (30)	\$ (56)	\$ 1	\$ (83)
Mark-to-market results in operating costs and expenses					
Reversal of previously recognized unrealized (gains) on settled positions related to economic hedges	\$ (366)	\$ (738)	\$ (165)	\$ 8	\$ (1,261)
Reversal of acquired loss/(gain) positions related to economic hedges	29	(5)	(19)	—	5
Net unrealized gains on open positions related to economic hedges	948	961	687	(9)	2,587
Total mark-to-market gains in operating costs and expenses	\$ 611	\$ 218	\$ 503	\$ (1)	\$ 1,331

Mark-to-market results consist of unrealized gains and losses on contracts that are yet to be settled. The settlement of these transactions is reflected in the same revenue or cost caption as the items being hedged.

The reversals of acquired gain or loss positions were valued based upon the forward prices on the acquisition date.

For the year ended December 31, 2023, the \$144 million gain in revenues from economic hedge positions was driven by an increase in the value of open positions as a result of decreases in power prices. The \$3.0 billion loss in operating costs and expenses from economic hedge positions was driven primarily by the reversal of previously recognized unrealized gains on contracts that settled during the period, as well as a decrease in the value of East and West/Other open positions as a result of decreases in natural gas and power prices. This was partially offset by an increase in the value of Texas open positions as a result of increases in ERCOT power prices.

For the year ended December 31, 2022, the \$83 million loss in revenues from economic hedge positions was driven by a decrease in the value of open positions as a result of increases in power prices across all segments, partially offset by the reversal of previously recognized unrealized losses on contracts that settled during the period. The \$1.3 billion gain in operating costs and expenses from economic hedge positions was driven primarily by an increase in the value of open positions as a result of increases in natural gas and power prices across all segments partially offset by the reversal of previously recognized unrealized gains on contracts that settled during the period.

In accordance with ASC 815, the following table represents the results of the Company's financial and physical trading of energy commodities for the years ended December 31, 2023 and 2022. The realized and unrealized financial and physical trading results are included in revenue. The Company's trading activities are subject to limits within the Company's Risk Management Policy.

(In millions)	Year ended December 31,	
	2023	2022
Trading gains/(losses)		
Realized	\$ 11	\$ 6
Unrealized	38	(4)
Total trading gains	\$ 49	\$ 2

Operations and Maintenance Expenses

Operations and maintenance expenses are comprised of the following:

(In millions)	Texas	East	West/ Services/ Other	Vivint Smart Home ^(a)	Corporate	Eliminations	Total
Year Ended December 31, 2023	\$ 624	\$ 345	\$ 245	\$ 187	\$ —	\$ (4)	\$ 1,397
Year Ended December 31, 2022	749	391	214	—	1	(3)	1,352

(a) Includes results of operations following the acquisition date of March 10, 2023

Operations and maintenance expenses increased by \$45 million for the year ended December 31, 2023, compared to the same period in 2022, due to the following:

	(In millions)
Increase due to the acquisition of Vivint Smart Home	\$ 187
Increase in retail operation personnel costs primarily driven by an increase in accruals as part of the Company's annual incentive plan reflecting financial outperformance for the year	48
Increase in major maintenance expenditures associated with the scope and duration of outages at the Texas gas facilities and Cottonwood, partially offset by the Texas coal facilities (excluding W.A. Parish Unit 8 included below)	21
Decrease due to the current year partial property insurance claim for the extended outage at W.A. Parish Unit 8, as well as restoration expenses incurred in 2022, partially offset by the prior year Limestone property insurance claim	(124)
Decrease driven by the disposition of STP and Gregory in 2023	(28)
Decrease in variable operation and maintenance expense due to a reduction in PJM generation volumes in 2023	(26)
Decrease due to change in estimates of environmental remediation costs at deactivated sites in the East in 2022	(23)
Decrease driven primarily by East asset retirements, partially offset by an increase in deactivation costs in the West	(8)
Other	(2)
Increase in operations and maintenance expense	<u>\$ 45</u>

Other Cost of Operations

Other Cost of operations are comprised of the following:

(In millions)	Texas	East	West/Services/ Other	Vivint Smart Home ^(a)	Total
Year Ended December 31, 2023	\$ 243	\$ 131	\$ 13	\$ 3	\$ 390
Year Ended December 31, 2022	246	149	16	—	411

(a) Includes results of operations following the acquisition date of March 10, 2023

Other cost of operations decreased by \$21 million for the year ended December 31, 2023, compared to the same period in 2022, due to the following:

	(In millions)
Decrease due to changes in current year ARO cost estimates, primarily at Jewett Mine	\$ (28)
Decrease in retail gross receipt taxes due to lower revenue in the East offset by higher revenues in Texas	(10)
Decrease driven by the disposition of STP and Gregory in 2023	(5)
Increase due to higher property insurance premiums	18
Other	4
Decrease in other cost of operations	<u>\$ (21)</u>

Depreciation and Amortization

Depreciation and amortization expenses are comprised of the following:

(In millions)	Texas	East	West/Services/ Other	Vivint Smart Home ^(a)	Corporate	Total
Year Ended December 31, 2023	\$ 294	\$ 116	\$ 95	\$ 586	\$ 36	\$ 1,127
Year Ended December 31, 2022	310	208	85	—	31	634

(a) Includes results of operations following the acquisition date of March 10, 2023

Depreciation and amortization expense increased by \$493 million for the year ended December 31, 2023, compared to the same period in 2022, primarily due to higher amortization of intangible assets due to the acquisition of Vivint Smart Home in March 2023, partially offset by lower depreciation at Midwest Generation as a result of asset impairments and retirements in 2022.

Impairment Losses

During the year ended December 31, 2023, the Company recorded impairment losses related to property plant and equipment and leases of \$2 million, \$4 million and \$20 million in the Texas, East and West/Services/Other segments, respectively.

During the year ended December 31, 2022, the Company recorded impairment losses of \$206 million, of which \$150 million were related to the decline in PJM capacity prices and the near-term retirement date of the Joliet facility, \$43 million related to the purchase and sale agreement for the sale of the land and related assets at the Astoria generating site and the planned withdrawal and cancellation of its proposed Astoria redevelopment project, and an additional \$13 million in the East segment.

Refer to Item 15 — Note 11, *Asset Impairments*, to the Consolidated Financial Statements for further discussion.

Selling, General and Administrative Costs

Selling, general and administrative costs are comprised of the following:

(In millions)	Texas	East	West/Services/ Other	Vivint Smart Home ^(a)	Corporate/ Eliminations	Total
Year Ended December 31, 2023	\$ 637	\$ 573	\$ 202	\$ 499	\$ 57	\$ 1,968
Year Ended December 31, 2022	559	428	202	—	39	1,228

(a) Includes results of operations following the acquisition date of March 10, 2023

Selling, general and administrative costs increased by \$740 million for the year ended December 31, 2023 compared to the same period in 2022, due to the following:

	(In millions)
Increase due to the acquisition of Vivint Smart Home	\$ 499
Increase in personnel costs primarily driven by an increase in accruals as part of the Company's annual incentive plan reflecting financial outperformance for the year	140
Increase in broker fee and commissions expenses	49
Increase in marketing and media expenses	28
Increase in consulting and legal expenses	17
Other	7
Increase in selling, general and administrative costs	<u>\$ 740</u>

Provision for Credit Losses

Provision for credit losses are comprised of the following:

(In millions)	Texas	East	West/Services/ Other	Vivint Smart Home ^(a)	Total
Year Ended December 31, 2023	\$ 159	\$ 28	\$ 30	\$ 34	\$ 251
Year Ended December 31, 2022	(40)	28	23	—	11

(a) Includes results of operations following the acquisition date of March 10, 2023

Provision for credit losses increased by \$240 million for the year ended December 31, 2023, compared to the same period in 2022, due to the following:

	(In millions)
Increase due to Winter Storm Uri loss mitigation recognized as income in 2022	\$ 126
Increase due to higher Home retail revenues, deteriorated customer payment behavior and the longer duration of the Texas disconnect moratorium in 2023 as compared to 2022	80
Increase due to the acquisition of Vivint Smart Home	34
Increase in provision for credit losses	<u>\$ 240</u>

Acquisition-Related Transaction and Integration Costs

Acquisition-related transaction and integration costs were \$119 million and \$52 million for the years ended December 31, 2023 and 2022, respectively, include:

	As of December 31,	
(In millions)	2023	2022
Vivint Smart Home acquisition costs	\$ 38	\$ 17
Vivint Smart Home integration costs	52	—
Other integration costs, primarily related to Direct Energy	29	35
Acquisition-related transaction and integration costs	<u>\$ 119</u>	<u>\$ 52</u>

Gain on Sale of Assets

The gain on sale of assets of \$1.6 billion and \$52 million recorded for the years ended December 31, 2023 and 2022, respectively, include:

	As of December 31,	
(In millions)	2023	2022
Sale of the Company's 44% equity interest in STP	\$ 1,236	\$ —
Sale of Astoria land and related assets	199	—
Sale of the Company's 100% ownership in the Gregory natural gas generating facility	82	—
Sale of the Company's 49% ownership in the Watson natural gas generating facility	—	46
Sale of land and structures at the Company's deactivated Norwalk Harbor, LLC site	38	—
Sale of the Company's 50% ownership in Petra Nova	—	22
Sale of land at the Company's Indian River Power, LLC site	19	—
Other asset sales	4	(16)
Gain on sale of assets	<u>\$ 1,578</u>	<u>\$ 52</u>

Impairment Losses on Investments

During the year ended December 31, 2023, the Company recorded other-than-temporary impairment losses of \$102 million on the Company's equity method investment in Gladstone generation facility in Queensland, Australia, as further described in Item 15 — Note 11, Asset Impairments, to the Consolidated Financial Statements.

Gain on Debt Extinguishment

A gain on debt extinguishment of \$109 million was recorded for the year ended December 31, 2023, driven by a partial redemption of the 3.875% Senior Notes, due 2032, as further discussed in Item 15 — Note 13, *Long-term Debt and Finance Leases*, to the Consolidated Financial Statements.

Interest Expense

Interest expense increased by \$250 million for the year ended December 31, 2023, compared to the same period in 2022, primarily due to the Vivint Smart Home acquisition including the impact of newly issued Senior Secured First Lien Notes, the acquired debt of Vivint Smart Home, the borrowings on the Revolving Credit Facility and the Receivables Securitization Facilities, as well as the write-off of the deferred financing costs associated with the cancellation of the bridge facility.

Income Tax Expense

For the year ended December 31, 2023, NRG recorded an income tax benefit of \$11 million on a pre-tax loss of \$213 million. For the same period in 2022, NRG recorded income tax expense of \$442 million on pre-tax income of \$1.7 billion. The effective tax rate was 5.2% and 26.6% for the years ended December 31, 2023 and 2022, respectively.

For the year ended December 31, 2023, NRG's overall effective tax rate was lower than the federal statutory tax rate of 21%, primarily due to permanent differences and changes in state valuation allowances.

(In millions, except effective income tax rate)	Year Ended December 31,	
	2023	2022
(Loss)/Income before income taxes	\$ (213)	\$ 1,663
Tax at federal statutory tax rate	(45)	349
State taxes	(22)	69
Foreign rate differential	(10)	7
Changes in state valuation allowances	42	(3)
Permanent differences	31	17
Recognition of uncertain tax benefits	12	8
Deferred impact of state tax rate changes	3	14
Foreign tax refunds	(17)	—
Return to provision adjustments	(5)	—
Carbon capture tax credits	—	(19)
Income tax (benefit)/expense	\$ (11)	\$ 442
Effective income tax rate	5.2 %	26.6 %

The effective income tax rate may vary from period to period depending on, among other factors, the geographic and business mix of earnings and losses and changes in valuation allowances in accordance with ASC 740, *Income Taxes* ("ASC 740"). These factors and others, including the Company's history of pre-tax earnings and losses, are taken into account in assessing the ability to realize deferred tax assets.

Liquidity and Capital Resources

Liquidity Position

As of December 31, 2023 and 2022, NRG's liquidity, excluding collateral funds deposited by counterparties, was approximately \$4.8 billion and \$2.8 billion, respectively, comprised of the following:

(In millions)	As of December 31,	
	2023	2022
Cash and cash equivalents	\$ 541	\$ 430
Restricted cash - operating	21	5
Restricted cash - reserves ^(a)	3	35
Total	565	470
Total availability under Revolving Credit Facility and collective collateral facilities ^(b)	4,278	2,324
Total liquidity, excluding collateral funds deposited by counterparties	\$ 4,843	\$ 2,794

(a) Includes reserves primarily for debt service, performance obligations and capital expenditures

(b) Total capacity of Revolving Credit Facility and collective collateral facilities was \$7.4 billion and \$6.4 billion as of December 31, 2023 and December 31, 2022, respectively

As of December 31, 2023, total liquidity, excluding collateral funds deposited by counterparties, increased by \$2.0 billion. Changes in cash and cash equivalent balances are further discussed under the heading *Cash Flow Discussion*. Cash and cash equivalents at December 31, 2023, were predominantly held in bank deposits.

Management believes that the Company's liquidity position and cash flows from operations will be adequate to finance operating and maintenance capital expenditures, to fund dividends, and to fund other liquidity commitments in the short and long-term. Management continues to regularly monitor the Company's ability to finance the needs of its operating, financing and investing activity within the dictates of prudent balance sheet management.

The consolidated statement of cash flows includes certain draws from, and payments to, the revolving credit facility and other credit facilities which are not eligible for net reporting. These transactions are for short term liquidity purposes.

Credit Ratings

On March 1, 2023, following the Vivint Smart Home acquisition financing launch, Standard and Poor's downgraded the Company's issuer credit to BB with a Stable outlook from BB+. There was no change to Moody's and Fitch ratings at the time.

The following table summarizes the Company's current credit ratings:

	S&P	Moody's	Fitch
NRG Energy, Inc.	BB Stable	Ba1 Stable	BB+ Stable
3.75% Senior Secured Notes, due 2024	BBB-	Baa3	BBB-
2.00% Senior Secured Notes, due 2025	BBB-	Baa3	BBB-
2.45% Senior Secured Notes, due 2027	BBB-	Baa3	BBB-
6.625% Senior Notes, due 2027	BB	Ba2	BB+
6.75% Vivint Smart Home Senior Secured Notes, due 2027	BB	Ba2	n/a
5.75% Senior Notes, due 2028	BB	Ba2	BB+
3.375% Senior Notes, due 2029	BB	Ba2	BB+
4.45% Senior Secured Notes, due 2029	BBB-	Baa3	BBB-
5.25% Senior Notes, due 2029	BB	Ba2	BB+
5.75% Vivint Smart Home Senior Notes, due 2029	B	Ba3	n/a
3.625% Senior Notes, due 2031	BB	Ba2	BB+
3.875% Senior Notes, due 2032	BB	Ba2	BB+
7.00% Senior Secured Notes, due 2033	BBB-	Baa3	BBB-
Revolving Credit Facility, due 2028	BBB-	Baa3	BBB-
Vivint Smart Home Senior Secured Term Loan, due 2028	BB	Ba2	n/a

Liquidity

The principal sources of liquidity for NRG's operating and capital expenditures are expected to be derived from cash on hand, cash flows from operations and financing arrangements. As described in Item 15 — Note 13, *Long-term Debt and Finance Leases*, to the Consolidated Financial Statements, the Company's financing arrangements consist mainly of the Senior Notes, Convertible Senior Notes, Senior Secured First Lien Notes, Revolving Credit Facility, the Receivables Securitization Facilities and tax-exempt bonds. The Company also issues letters of credit through bilateral letter of credit facilities and the P-Caps letter of credit facility. As part of the acquisition of Vivint Smart Home on March 10, 2023, NRG acquired Vivint Smart Home's existing debt, which includes senior secured notes, senior notes and a senior secured term-loan.

The Company's requirements for liquidity and capital resources, other than for operating its facilities, can generally be categorized by the following: (i) market operations activities; (ii) debt service obligations, as described more fully in Item 15 — Note 13, *Long-term Debt and Finance Leases*, to the Consolidated Financial Statements; (iii) capital expenditures, including maintenance, environmental, and investments and integration; and (iv) allocations in connection with acquisition opportunities, debt repayments, share repurchases and dividend payments to stockholders, as described in Item 15 — Note 16, *Capital Structure*, to the Consolidated Financial Statements.

The Company remains committed to maintaining a strong balance sheet and continues to work to achieve investment grade credit metrics over time primarily through debt reduction and the realization of growth initiatives.

Sale of the 44% equity interest in STP

On November 1, 2023, the Company closed on the sale of its 44% equity interest in STP to Constellation. Proceeds of \$1.75 billion were reduced by working capital and other adjustments of \$96 million, resulting in net proceeds of \$1.654 billion.

Sale of Gregory

On October 2, 2023, the Company closed on the sale of its 100% ownership in the Gregory natural gas generating facility in Texas for \$102 million.

Debt Reduction

During 2023, the Company reduced its debt by \$900 million using funds from cash from operations. Additionally, the Company redeemed \$620 million in aggregate principal amount of its 3.875% Senior Notes, due 2032, for \$502 million using a portion of the proceeds from the sale of STP.

The Company intends to spend approximately \$500 million reducing debt during 2024 to maintain its targeted credit metrics. The Company intends to fund the debt reduction from cash from operations.

Vivint Smart Home Acquisition

On March 10, 2023, the Company completed the acquisition of Vivint Smart Home. The Company paid \$12 per share, or \$2.6 billion in cash. The Company funded the acquisition using a combination of \$740 million in newly-issued secured corporate debt, \$650 million in newly-issued preferred stock, \$900 million drawn from its Revolving Credit Facility and Receivables Facilities, and cash on hand.

Issuance of 2033 Senior Notes

On March 9, 2023, the Company issued \$740 million of aggregate principal amount of 7.000% senior notes due 2033. The 2033 Senior Notes are senior secured obligations of NRG and are guaranteed by certain of its subsidiaries. Interest is paid semi-annually beginning on September 15, 2023 until the maturity date of March 15, 2033. For further discussion, see Note 13, *Long-term Debt and Finance Leases*.

Series A Preferred Stock

On March 9, 2023, the Company issued 650,000 shares of 10.25% Series A Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock. For further discussion, see Note 16, *Capital Structure*.

Revolving Credit Facility

On February 14, 2023, the Company amended its Revolving Credit Facility to: (i) increase the existing revolving commitments thereunder by \$600 million, (ii) extend the maturity date of a portion of the revolving commitments thereunder to February 14, 2028, (iii) transition the benchmark rate applicable to revolving loans from LIBOR to SOFR and (iv) make certain other amendments to the terms of the Revolving Credit Facility for purposes of, among other things, providing additional flexibility.

On March 13, 2023, the Company further amended its Revolving Credit Facility to increase the existing revolving commitments by an additional \$45 million. As of December 31, 2023, there were no outstanding borrowings and there were \$883 million in letters of credit issued under the Revolving Credit Facility.

Receivables Securitization Facilities

On June 22, 2023, NRG Receivables amended its existing Receivables Facility to, among other things, (i) extend the scheduled termination date to June 21, 2024, (ii) increase the aggregate commitments from \$1.0 billion to \$1.4 billion (adjusted seasonally) and (iii) add a new originator. On October 6, 2023, the Receivables Facility was further amended to replace the benchmark interest rate of the Receivable Facility's subordinated note from LIBOR to SOFR. As of December 31, 2023, there were no outstanding borrowings and there were \$1.0 billion in letters of credit issued.

In addition, in connection with the amendments to the Receivables Facility, on June 22, 2023, the Company and the originators thereunder renewed the existing uncommitted Repurchase Facility that provides short-term financing secured by a subordinated note issued by NRG Receivables LLC. Such renewal, among other things, extends the maturity date to June 21, 2024 and joins an additional originator to the Repurchase Facility. On October 6, 2023, the Repurchase Facility was further amended to reflect the concurrent amendment to the Receivables Facility's subordinated note. As of December 31, 2023, there were no outstanding borrowings.

Bilateral Letter of Credit Facilities

On May 19, 2023, May 30, 2023 and October 17, 2023 the Company increased the size of its bilateral letter of credit facilities by \$25 million, \$100 million and \$50 million, respectively, to provide additional liquidity, allowing for the issuance of up to \$850 million of letters of credit. These facilities are uncommitted. As of December 31, 2023, \$671 million was issued under these facilities.

Pre-Capitalized Trust Securities Facility

On August 29, 2023, the Company entered into a Facility Agreement with the Trust, in connection with the sale by the Trust of \$500 million P-Caps. The P-Caps are to be redeemed by the Trust on July 31, 2028 or earlier upon an early redemption of the P-Caps Secured Notes. The P-Caps replaced the Company's existing pre-capitalized trust securities redeemable 2023 issued by Alexander Funding Trust, which matured on November 15, 2023.

The Facility Agreements allows for the issuance of the P-Caps Secured Notes by the Company to the Trust. In addition, the Company entered into a LC Agreement for the issuance of letters of credit in an aggregate amount not to exceed \$485 million.

Sale of Astoria

On January 6, 2023, the Company closed on the sale of land and related assets from the Astoria site, within the East region of operations, for proceeds of \$212 million, subject to transactions fees of \$3 million and certain indemnifications. As part of the transaction, NRG entered into an agreement to lease the land back for the purpose of operating the Astoria gas turbines. Decommissioning was completed in December 2023 and the lease agreement has been terminated.

Pension and Other postretirement benefit contributions

As of December 31, 2023, the Company's estimated pension minimum funding requirements for the next 5 years were \$142 million, of which \$43 million are required to be made within the next 12 months. As of December 31, 2023, the Company's estimated other postretirement benefits minimum funding requirements for the next 5 years were \$28 million, of which \$6 million are required to be made within the next 12 months. These amounts represent estimates based on assumptions that are subject to change. For further discussion, see Item 15 — Note 15, *Benefit Plans and Other Postretirement Benefits*, to the Consolidated Financial Statements.

Debt Service Obligations

Principal payments on debt and finance leases as of December 31, 2023, are due in the following periods:

(In millions)

Description	2024	2025	2026	2027	2028	Thereafter	Total
Recourse Debt:							
Senior Notes, due 2027	\$ —	\$ —	\$ —	\$ 375	\$ —	\$ —	\$ 375
Senior Notes, due 2028	—	—	—	—	821	—	821
Senior Notes, due 2029	—	—	—	—	—	733	733
Senior Notes, due 2029	—	—	—	—	—	500	500
Senior Notes, due 2031	—	—	—	—	—	1,030	1,030
Senior Notes, due 2032	—	—	—	—	—	480	480
Convertible Senior Notes, due 2048	—	—	—	—	—	575	575
Senior Secured First Lien Notes, due 2024	600	—	—	—	—	—	600
Senior Secured First Lien Notes, due 2025	—	500	—	—	—	—	500
Senior Secured First Lien Notes, due 2027	—	—	—	900	—	—	900
Senior Secured First Lien Notes, due 2029	—	—	—	—	—	500	500
Senior Secured First Lien Notes, due 2033	—	—	—	—	—	740	740
Tax-exempt bonds	—	247	—	—	59	160	466
Subtotal Recourse Debt	600	747	—	1,275	880	4,718	8,220
Non-Recourse Debt:							
Vivint Smart Home Senior Secured Notes, due 2027	—	—	—	600	—	—	600
Vivint Smart Home Senior Notes, due 2029	—	—	—	—	—	800	800
Vivint Smart Home Senior Secured Term Loan, due 2028	14	14	14	14	1,264	—	1,320
Subtotal Vivint Smart Home Non-Recourse Debt	14	14	14	614	1,264	800	2,720
Subtotal Debt	614	761	14	1,889	2,144	5,518	10,940
Finance Leases:							
Finance leases	6	8	2	1	1	1	19
Total Debt and Finance Leases	\$ 620	\$ 769	\$ 16	\$ 1,890	\$ 2,145	\$ 5,519	\$ 10,959
Interest Payments	\$ 609	\$ 595	\$ 587	\$ 521	\$ 403	\$ 806	\$ 3,521

For further discussion, see Item 15 — Note 13, *Long-term Debt and Finance Leases*.

Market Operations

The Company's market operations activities require a significant amount of liquidity and capital resources. These liquidity requirements are primarily driven by: (i) margin and collateral posted with counterparties; (ii) margin and collateral required to participate in physical markets and commodity exchanges; (iii) timing of disbursements and receipts (e.g. buying power before receiving retail revenues); and (iv) initial collateral for large structured transactions. As of December 31, 2023, market operations had total cash collateral outstanding of \$441 million and \$3.1 billion outstanding in letters of credit to third parties primarily to support its market activities. As of December 31, 2023, total funds deposited by counterparties were \$84 million in cash and \$478 million of letters of credit.

The Company has entered into long-term contractual arrangements related to energy purchases, gas transportation and storage, and fuel and transportation services. As of December 31, 2023, the Company had minimum payment obligations under such outstanding agreements of \$3.4 billion, with \$573 million payable within the next 12 months and an additional \$978 million of short-term purchase energy commitments. For further discussion, see Item 15 — Note 23, *Commitments and Contingencies*.

Future liquidity requirements may change based on the Company's hedging activities and structures, fuel purchases, and future market conditions, including forward prices for energy and fuel and market volatility. In addition, liquidity requirements are dependent on the Company's credit ratings and general perception of its creditworthiness.

First Lien Structure

NRG has the capacity to grant first liens to certain counterparties on a substantial portion of the Company's assets, subject to various exclusions including NRG's assets that have project-level financing and the assets of certain non-guarantor subsidiaries, to reduce the amount of cash collateral and letters of credit that it would otherwise be required to post from time to time to support its obligations under out-of-the-money hedge agreements. The first lien program does not limit the volume that can be hedged or the value of underlying out-of-the-money positions. The first lien program also does not require NRG to post collateral above any threshold amount of exposure. The first lien structure is not subject to unwind or termination upon a ratings downgrade of a counterparty and has no stated maturity date.

The Company's first lien counterparties may have a claim on its assets to the extent market prices exceed the hedged prices. As of December 31, 2023, all hedges under the first liens were in-the-money on a counterparty aggregate basis.

Capital Expenditures

The following table summarizes the Company's capital expenditures for maintenance, environmental and growth investments for the year ended December 31, 2023:

(In millions)	Maintenance	Environmental	Investments and Integration	Total
Texas	\$ 455	\$ 3	\$ 37	\$ 495
East	4	—	1	5
West/Services/Other	21	—	6	27
Vivint Smart Home ^(a)	17	—	1	18
Corporate	19	—	34	53
Total cash capital expenditures for 2023	516	3	79	598
Integration operating expenses and cost to achieve	—	—	81	81
Investments	—	—	164	164
Total cash capital expenditures and investments for the year ended December 31, 2023	\$ 516	\$ 3	\$ 324	\$ 843

(a) Includes expenditures following the acquisition date of March 10, 2023

Investments and Integration for the year ended December 31, 2023, include growth expenditures, integration, small book acquisitions and other investments.

Environmental Capital Expenditures Estimate

NRG estimates that environmental capital expenditures from 2024 through 2028 required to comply with environmental laws will be approximately \$66 million. The largest component is the cost of complying with ELG at the Company's coal units in Texas.

The table below summarizes the status of NRG's coal fleet with respect to air quality controls. NRG uses an integrated approach to fuels, controls and emissions markets to meet environmental requirements.

Units	State	SO ₂		NO _x		Mercury		Particulate	
		Control Equipment	Install Date	Control Equipment	Install Date	Control Equipment	Install Date	Control Equipment	Install Date
Indian River 4	DE	CDS	2011	LNBOFA/SCR	1999/2011	ACI/CDS/FF	2008/2011	ESP/FF	1980/2011
Limestone 1-2	TX	FGD	1985-86	LNBOFA	2002/2003	ACI	2015	ESP	1985-1986
Powerton 5	IL	DSI	2016	OFA/SNCR	2003/2012	ACI	2009	ESP/upgrade	1973/2016
Powerton 6	IL	DSI	2014	OFA/SNCR	2002/2012	ACI	2009	ESP/upgrade	1976/2014
W.A. Parish 5, 6, 7 ..	TX	FF co-benefit	1988	SCR	2004	ACI	2015	FF	1988
W.A. Parish 8	TX	FGD	1982	SCR	2004	ACI	2015	FF	1988

ACI - Activated Carbon Injection
CDS - Circulating Dry Scrubber
DSI - Dry Sorbent Injection with Trona
ESP - Electrostatic Precipitator
FGD - Flue Gas Desulfurization (wet)

FF - Fabric Filter
LNBOFA - Low NO_x Burner with Overfire Air
OFA - Overfire Air
SCR - Selective Catalytic Reduction
SNCR - Selective Non-Catalytic Reduction

The following table summarizes the estimated environmental capital expenditures by year:

(In millions)	Total
2024	\$ 28
2025	26
Thereafter	12
Total	<u>\$ 66</u>

Share Repurchases

In June 2023, NRG revised its long-term capital allocation policy to target allocating approximately 80% of cash available for allocation after debt reduction to be returned to shareholders. As part of the revised capital allocation framework, the Company announced an increase to its share repurchase authorization to \$2.7 billion, to be executed through 2025.

On November 6, 2023, the Company executed Accelerated Share Repurchase agreements to repurchase a total of \$950 million of NRG's outstanding common stock. Under the ASR, the Company paid a total of \$950 million and will receive shares of NRG's common stock on specified settlement dates.

During the year ended December 31, 2023, the Company completed \$1.2 billion of share repurchases, including the \$950 million ASR and \$200 million of open market repurchases, under the \$2.7 billion authorization. See Item 15 - Note 16, *Capital Structure*, to the Consolidated Financial Statements for additional discussion.

Dividend Increase on Common Stock

In the first quarter of 2023, NRG increased the annual dividend on its common stock to \$1.51 from \$1.40 per share. The Company returned \$352 million of capital to shareholders in the year ended 2023 through a \$1.51 dividend per common share. In 2024, NRG further increased the annual dividend to \$1.63 per share, representing an 8% increase from 2023. The Company expects to target an annual dividend growth rate of 7-9% per share in subsequent years.

On January 19, 2024, NRG declared a quarterly dividend on the Company's common stock of \$0.4075 per share, or \$1.63 per share on an annualized basis, payable on February 15, 2024, to stockholders of record as of February 1, 2024. The Company's common stock dividends are subject to available capital, market conditions, and compliance with associated laws and regulations.

Series A Preferred Stock Dividends

In September 2023, the Company declared and paid a semi-annual dividend of \$52.96 per share on its outstanding Series A Preferred Stock, totaling \$34 million. Cumulative cash dividends on the Series A Preferred Stock are payable semiannually, in arrears, on each March 15 and September 15, when, as and if declared by the Board of Directors.

Additional Material Cash Requirements Not Discussed Above

Operating leases — The Company leases generating facilities, land, office and equipment, railcars, fleet vehicles and storefront space at retail stores. As of December 31, 2023, the Company had lease payment obligations of \$311 million, of which \$118 million is payable within the next 12 months. For further discussion, see Item 15 — Note 10, *Leases*.

Other liabilities — Other liabilities includes water right agreements, service and maintenance agreements, stadium naming rights, stadium sponsorships, long-term service agreements and other contractual obligations. As of December 31, 2023, the Company had total of \$213 million under such commitments, of which \$40 million are payable within the next 12 months.

Contingent obligations for guarantees — NRG and its subsidiaries enter into various contracts that include indemnifications and guarantee provisions as a routine part of the Company's business activities. For further discussion, see Item 15 — Note 27, *Guarantees*.

Obligations Arising Out of a Variable Interest in an Unconsolidated Entity

Variable interest in Equity investments — NRG's investment in Ivanpah is a variable interest entity for which NRG is not the primary beneficiary. See also Item 15 — Note 17, *Investments Accounted for by the Equity Method and Variable Interest Entities*, to the Consolidated Financial Statements for additional discussion. NRG's pro-rata share of non-recourse debt was approximately \$461 million as of December 31, 2023. This indebtedness may restrict the ability of Ivanpah to issue dividends or distributions to NRG.

Cash Flow Discussion

2023 compared to 2022

The following table reflects the changes in cash flows for the comparative years:

(In millions)	Year ended December 31,		Change
	2023	2022	
Cash (used)/provided by operating activities	\$ (221)	\$ 360	\$ (581)
Cash used by investing activities	(910)	(332)	(578)
Cash (used)/provided by financing activities	(400)	1,043	(1,443)

Cash (used)/provided by operating activities

Changes to cash (used)/provided by operating activities were driven by:

	(In millions)
Increase in operating income adjusted for other non-cash items	\$ 2,892
Changes in cash collateral in support of risk management activities due to change in commodity prices	(2,702)
Decrease due to receipt of uplift securitization proceeds from ERCOT in 2022	(689)
Decrease in working capital primarily driven by Vivint Smart Home capitalized contract costs partially offset by deferred revenues	(361)
Increase in working capital related to accrued personnel costs primarily due to the Company's annual incentive plan reflecting financial outperformance for 2023	188
Increase in working capital related to accounts receivable and inventory primarily due to lower gas and power market pricing coupled with lower gas volumes, partially offset by a decrease in accounts payable	91
	<u>\$ (581)</u>

Cash used by investing activities

Changes to cash (used)/provided by investing activities were driven by:

	(In millions)
Increase in cash paid for acquisitions primarily due to the acquisition of Vivint Smart Home in March 2023 . . .	\$ (2,461)
Increase in proceeds from the sale of assets primarily due to the sale of the Company's 44% equity interest in STP in November 2023	1,898
Increase from insurance proceeds for property, plant and equipment, net, in 2023	240
Increase in capital expenditures	(231)
Decrease in proceeds from sales of emissions allowances, net of purchases	(18)
Increase due to fewer purchases of investments in nuclear decommissioning trust fund securities, net of sales . .	(6)
	<u>\$ (578)</u>

Cash (used)/provided by financing activities

Changes in cash (used)/provided by financing activities were driven by:

	(In millions)
Decrease in net receipts from settlement of acquired derivatives	\$ (1,653)
Increase in proceeds from issuance of long-term debt in 2023	731
Increase in proceeds from issuance of preferred stock in 2023	635
Increase in share repurchase activity	(566)
Increase of repayments of long-term debt and finance leases	(518)
Increase in payments of dividends primarily due to preferred stock issued in 2023	(49)
Increase in payments of deferred issuance costs	(23)
	<u>\$ (1,443)</u>

NOLs, Deferred Tax Assets and Uncertain Tax Position Implications

For the year ended December 31, 2023, the Company had domestic pre-tax book income of \$261 million and foreign pre-tax book loss of \$474 million. For the year ended December 31, 2023, the Company utilized U.S. federal NOLs of \$1.9 billion, and tax credits of \$73 million. As of December 31, 2023, the Company has cumulative U.S. federal NOL carryforwards of \$8.4 billion, of which \$6.4 billion do not have an expiration date, and cumulative state NOL carryforwards of \$6.4 billion for financial statement purposes. NRG also has cumulative foreign NOL carryforwards of \$411 million, most of which have no expiration date. In addition to the above NOLs, NRG has a \$517 million indefinite carryforward for interest deductions, as well as \$317 million of tax credits to be utilized in future years. As a result of the Company's tax position, including the utilization of federal and state NOLs, and based on current forecasts, the Company anticipates income tax payments, due to federal, state and foreign jurisdictions, of up to \$160 million in 2024. There is no impact on the Company's provision for income taxes from the CAMT for the year ended December 31, 2023.

The Company has \$73 million of tax effected uncertain federal, state and foreign tax benefits for which the Company has recorded a non-current tax liability of \$76 million (inclusive of accrued interest) until such final resolution with the related taxing authority.

The Company is no longer subject to U.S. federal income tax examinations for years prior to 2020. With few exceptions, state and Canadian income tax examinations are no longer open for years before 2015.

Guarantor Financial Information

As of December 31, 2023, the Company's outstanding registered senior notes consisted of \$375 million of the 2027 Senior Notes and \$821 million of the 2028 Senior Notes, as shown in Note 13, *Long-term Debt and Finance Leases*. These Senior Notes are guaranteed by certain of NRG's current and future 100% owned domestic subsidiaries, or guarantor subsidiaries (the "Guarantors"). See Exhibit 22.1 for a listing of the Guarantors. These guarantees are both joint and several.

NRG conducts much of its business through and derives much of its income from its subsidiaries. Therefore, the Company's ability to make required payments with respect to its indebtedness and other obligations depends on the financial results and condition of its subsidiaries and NRG's ability to receive funds from its subsidiaries. There are no restrictions on the ability of any of the Guarantors to transfer funds to NRG. Other subsidiaries of the Company do not guarantee the registered

debt securities of either NRG Energy, Inc. or the Guarantors (such subsidiaries are referred to as the “Non-Guarantors”). The Non-Guarantors include all of NRG's foreign subsidiaries and certain domestic subsidiaries.

The tables below present summarized financial information of NRG Energy, Inc. and the Guarantors in accordance with Rule 3-10 under the SEC's Regulation S-X. The financial information may not necessarily be indicative of results of operations or financial position of NRG Energy, Inc. and the Guarantors in accordance with U.S. GAAP.

The following table presents the summarized statement of operations:

(In millions)	For the Year Ended December 31, 2023
Revenue ^(a)	\$ 24,202
Operating income ^(b)	600
Total other expense	(286)
Income before income taxes	314
Net Income	182

(a) Intercompany transactions with Non-Guarantors include revenue of \$9 million during the year ended December 31, 2023

(b) Intercompany transactions with Non-Guarantors including cost of operations of \$50 million and selling, general and administrative of \$209 million during the year ended December 31, 2023

The following table presents the summarized balance sheet information:

(In millions)	December 31, 2023
Current assets ^(a)	\$ 7,239
Property, plant and equipment, net	1,217
Non-current assets	11,843
Current liabilities ^(b)	7,997
Non-current liabilities	9,706

(a) Includes intercompany receivables due from Non-Guarantors of \$92 million as of December 31, 2023

(b) Includes intercompany payables due to Non-Guarantors of \$4 million as of December 31, 2023

Fair Value of Derivative Instruments

NRG may enter into energy purchase and sales contracts, fuel purchase contracts and other energy-related financial instruments to mitigate variability in earnings due to fluctuations in spot market prices and to hedge fuel requirements at power plants or retail load obligations. In order to mitigate interest risk associated with the issuance of the Company's variable rate debt, NRG enters into interest rate swap agreements. In addition, in order to mitigate foreign exchange rate risk primarily associated with the purchase of USD denominated natural gas for the Company's Canadian business, NRG enters into foreign exchange contract agreements.

Under Flex Pay, offered by Vivint Smart Home, subscribers pay for smart home products by obtaining financing from a third-party financing provider under the Consumer Financing Program. Vivint Smart Home pays certain fees to the financing providers and shares in credit losses depending on the credit quality of the subscriber.

NRG's trading activities are subject to limits in accordance with the Company's Risk Management Policy. These contracts are recognized on the balance sheet at fair value and changes in the fair value of these derivative financial instruments are recognized in earnings.

The tables below disclose the activities that include both exchange and non-exchange traded contracts accounted for at fair value in accordance with ASC 820, *Fair Value Measurements and Disclosures* ("ASC 820"). Specifically, these tables disaggregate realized and unrealized changes in fair value; disaggregate estimated fair values at December 31, 2023, based on their level within the fair value hierarchy defined in ASC 820; and indicate the maturities of contracts at December 31, 2023. For a full discussion of the Company's valuation methodology of its contracts, see *Derivative Fair Value Measurements* in Item 15 — Note 5, *Fair Value of Financial Instruments*, to the Consolidated Financial Statements.

Derivative Activity Gains/(Losses)	(In millions)
Fair value of contracts as of December 31, 2022	\$ 3,553
Contracts realized or otherwise settled during the period	(1,629)
Vivint Smart Home contracts acquired during the period	(112)
Other changes in fair value	(1,164)
Fair value of contracts as of December 31, 2023	<u>\$ 648</u>

(In millions)	Fair Value of Contracts as of December 31, 2023				
	Maturity				Total Fair Value
	1 Year or Less	Greater Than 1 Year to 3 Years	Greater Than 3 Years to 5 Years	Greater Than 5 Years	
Fair Value Hierarchy (Losses)/Gains					
Level 1	\$ (120)	\$ 45	\$ (5)	\$ 1	\$ (79)
Level 2	(2)	424	172	148	742
Level 3	(35)	19	(3)	4	(15)
Total	<u>\$ (157)</u>	<u>\$ 488</u>	<u>\$ 164</u>	<u>\$ 153</u>	<u>\$ 648</u>

The Company has elected to disclose derivative assets and liabilities on a trade-by-trade basis and does not offset amounts at the counterparty master agreement level. Also, collateral received or posted on the Company's derivative assets or liabilities are recorded on a separate line item on the balance sheet. Consequently, the magnitude of the changes in individual current and non-current derivative assets or liabilities is higher than the underlying credit and market risk of the Company's portfolio. As discussed in Item 7A — *Quantitative and Qualitative Disclosures About Market Risk, Commodity Price Risk*, NRG measures the sensitivity of the Company's portfolio to potential changes in market prices using VaR, a statistical model which attempts to predict risk of loss based on market price and volatility. NRG's risk management policy places a limit on one-day holding period VaR, which limits the Company's net open position. As the Company's trade-by-trade derivative accounting results in a gross-up of the Company's derivative assets and liabilities, the net derivative assets and liability position is a better indicator of NRG's hedging activity. As of December 31, 2023, NRG's net derivative asset was \$648 million, a decrease to total fair value of \$2.9 billion as compared to December 31, 2022. This decrease was primarily driven by roll-off of trades that settled during the period, losses in fair value, and Vivint Smart Home contracts acquired during the period.

Based on a sensitivity analysis using simplified assumptions, the impact of a \$0.50 per MMBtu increase or decrease in natural gas prices across the term of the derivative contracts would result in a change of approximately \$2.0 billion in the net value of derivatives as of December 31, 2023.

Critical Accounting Estimates

The Company's discussion and analysis of the financial condition and results of operations are based upon the Consolidated Financial Statements, which have been prepared in accordance with GAAP. The preparation of these financial statements and related disclosures in compliance with GAAP requires the application of appropriate technical accounting rules and guidance as well as the use of estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosures of contingent assets and liabilities. The application of appropriate technical accounting rules and guidance involves judgments regarding future events, including the likelihood of success of particular projects, legal and regulatory challenges, and the fair value of certain assets and liabilities. These judgments, in and of themselves, could materially affect the financial statements and disclosures based on varying assumptions, which may be appropriate to use. In addition, the financial and operating environment may also have a significant effect, not only on the operation of the business, but on the results reported through the application of accounting measures used in preparing the financial statements and related disclosures, even if the accounting guidance has not changed.

NRG evaluates these estimates, on an ongoing basis, utilizing historic experience, consultation with experts and other methods the Company considers reasonable. In any event, actual results may differ substantially from the Company's estimates. Any effects on the Company's business, financial position or results of operations resulting from revisions to these estimates are recorded in the period in which the information that gives rise to the revision becomes known.

The Company identifies its most critical accounting estimates as those that are the most pervasive and important to the portrayal of the Company's financial position and results of operations, and require the most difficult, subjective, and/or complex judgments by management about matters that are inherently uncertain.

Such accounting estimates include:

Accounting Estimate	Judgments/Uncertainties Affecting Application
Derivative Instruments	Assumptions used in valuation techniques
	Market maturity and economic conditions
	Contract interpretation
	Market conditions in the energy industry, especially the effects of price volatility on contractual commitments
Income Taxes and Valuation Allowance for Deferred Tax Assets	Interpret existing tax statute and regulations upon application to transactions
	Ability to utilize tax benefits through carry backs to prior periods and carry forwards to future periods
Evaluation of Assets for Impairment	Regulatory and political environments and requirements
	Estimated useful lives of assets
	Environmental obligations and operational limitations
	Estimates of future cash flows
	Estimates of fair value
	Judgment about impairment triggering events
Goodwill and Other Intangible Assets	Estimated useful lives for finite-lived intangible assets
	Judgment about impairment triggering events
	Estimates of reporting unit's fair value
	Fair value estimate of intangible assets acquired in business combinations
Business Combinations	Fair value of assets acquired and liabilities assumed in business combinations
	Estimated future cash flow
	Estimated useful lives of assets
Contingencies	Estimated financial impact of event(s)
	Judgment about likelihood of event(s) occurring
	Regulatory and political environments and requirements

Derivative Instruments

The Company follows the guidance of ASC 815, *Derivatives and Hedging* "(ASC 815)", to account for derivative instruments. ASC 815 requires the Company to mark-to-market all derivative instruments on the balance sheet and recognize fair value change in earnings, unless they qualify for the NPNS exception. ASC 815 applies to NRG's energy related commodity contracts, interest rate swaps, foreign exchange contracts and Consumer Financing Program.

Energy-Related Commodities

As of December 31, 2023, for purposes of measuring the fair value of derivative instruments, the Company primarily uses quoted exchange prices and consensus pricing. Consensus pricing is provided by independent pricing services which are compiled from market makers with longer dated tenors as compared to broker quotes. Prior to the fourth quarter of 2023, the Company valued derivatives based on price quotes from brokers in active markets who regularly facilitate those transactions. The Company started using consensus pricing as it offers data from more market makers and for longer dated tenors as compared to broker quotes, enhances data integrity, and increases transparency. When external prices are not available, NRG uses internal models to determine the fair value. These internal models include assumptions of the future prices of energy commodities based on the specific market in which the energy commodity is being purchased or sold, using externally available forward market pricing curves for all periods possible under the pricing model. These estimations are considered to be critical accounting estimates.

Interest Rate Swaps

NRG is exposed to changes in interest rate through the Company's issuance of variable rate debt. To manage the Company's interest rate risk, NRG enters into interest rate swap agreements. In order to qualify the derivative instruments for hedged transactions, NRG estimates the forecasted borrowings for interest rate swaps occurring within a specified time period.

Foreign Exchange Contracts

In order to mitigate foreign exchange risk primarily associated with the purchase of USD denominated natural gas for the Company's Canadian business, the Company enters into foreign exchange contract agreements.

Consumer Financing Program

The derivative positions for the Company's Consumer Financing Program are valued using a discounted cash flow model, with inputs consisting of available market data, such as market yield discount rates, as well as unobservable internally derived assumptions, such as collateral prepayment rates, collateral default rates and credit loss rates. In summary, the fair value represents an estimate of the present value of the cash flows Vivint Smart Home will be obligated to pay to the third-party financing provider for each component of the derivative.

Certain derivative instruments that meet the criteria for derivative accounting treatment also qualify for a scope exception to derivative accounting, as they are considered to be NPNS. The availability of this exception is based upon the assumption that the Company has the ability and it is probable to deliver or take delivery of the underlying item. These assumptions are based on expected load requirements, internal forecasts of sales and generation and historical physical delivery on contracts. Derivatives that are considered to be NPNS are exempt from derivative accounting treatment and are accounted for under accrual accounting. If it is determined that a transaction designated as NPNS no longer meets the scope exception due to changes in estimates, the related contract would be recorded on the balance sheet at fair value combined with the immediate recognition through earnings.

Income Taxes and Valuation Allowance for Deferred Tax Assets

As of December 31, 2023, NRG's deferred tax assets were primarily the result of U.S. federal and state NOLs, the difference between book and tax basis in property, plant, and equipment, deferred revenues and tax credit carryforwards. The realization of deferred tax assets is dependent upon the Company's ability to generate sufficient future taxable income during the periods in which those temporary differences become deductible, prior to the expiration of the tax attributes. The evaluation of deferred tax assets requires judgment in assessing the likely future tax consequences of events that have been recognized in the Company's financial statements or tax returns and forecasting future profitability by tax jurisdiction.

The Company evaluates its deferred tax assets quarterly on a jurisdictional basis to determine whether adjustments to the valuation allowance are appropriate considering changes in facts or circumstances. As of each reporting date, management considers new evidence, both positive and negative, when determining the future realization of the Company's deferred tax assets. Given the Company's current level of pre-tax earnings and forecasted future pre-tax earnings, the Company expects to generate income before taxes in the U.S. in future periods at a level that would fully utilize its U.S. federal NOL carryforwards and the majority of its state NOL carryforwards prior to their expiration.

The Company continues to maintain a valuation allowance of \$275 million as of December 31, 2023 against deferred tax assets consisting of state NOL carryforwards and foreign NOL carryforwards in jurisdictions where the Company does not currently believe that the realization of deferred tax assets is more likely than not. As of December 31, 2022, the Company's valuation allowance balance was \$224 million.

Considerable judgment is required to determine the tax treatment of a particular item that involves interpretations of complex tax laws. The Company is subject to examination by taxing authorities for income tax returns filed in the U.S. federal jurisdiction and various state and foreign jurisdictions, including operations located in Australia and Canada. The Company continues to be under audit for multiple years by taxing authorities in various jurisdictions.

The Company is no longer subject to U.S. federal income tax examinations for years prior to 2020. With few exceptions, state and Canadian income tax examinations are no longer open for years before 2015.

NRG does not intend, nor currently foresee a need, to repatriate funds held at its international operations into the U.S. These funds are deemed to be indefinitely reinvested in its foreign operations and the Company has not changed its assertion with respect to distributions of funds that would require the accrual of U.S. income tax.

Evaluation of Assets for Impairment

In accordance with ASC 360, *Property, Plant, and Equipment* ("ASC 360"), the Company evaluates property, plant and equipment and certain intangible assets for impairment whenever indicators of impairment exist. Examples of such indicators or events include:

- Significant decrease in the market price of a long-lived asset;
- Significant adverse change in the manner an asset is being used or its physical condition;
- Adverse business climate;
- Accumulation of costs significantly in excess of the amounts originally expected for the construction or acquisition of an asset;
- Current period loss combined with a history of losses or the projection of future losses; and
- Change in the Company's intent about an asset from an intent to hold to a greater than 50% likelihood that an asset will be sold, or disposed of before the end of its previously estimated useful life.

Recoverability of assets to be held and used is measured by a comparison of the carrying amount of the assets to the future net cash flows expected to be generated by the asset, through considering project specific assumptions for long-term power and natural gas prices, escalated future project operating costs and expected plant operations. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets by factoring in the different courses of action available to the Company. Generally, fair value will be determined using valuation techniques, such as the present value of expected future cash flows. NRG uses its best estimates in making these evaluations and considers various factors, including forward price curves for energy, fuel and operating costs. However, actual future market prices and project costs could vary from the assumptions used in the Company's estimates and the impact of such variations could be material.

For assets to be held and used, if the Company determines that the undiscounted cash flows from the asset are less than the carrying amount of the asset, NRG must estimate fair value to determine the amount of any impairment loss. Assets held-for-sale are reported at the lower of the carrying amount or fair value less the cost to sell. The estimation of fair value, whether in conjunction with an asset to be held and used or with an asset held-for-sale, and the evaluation of asset impairment are, by their nature, subjective. The Company considers quoted market prices in active markets to the extent they are available. In the absence of such information, NRG may consider prices of similar assets, consult with brokers or employ other valuation techniques. The Company will also discount the estimated future cash flows associated with the asset using a single interest rate representative of the risk involved with such an investment or asset. The use of these methods involves the same inherent uncertainty of future cash flows as previously discussed with respect to undiscounted cash flows. Actual future market prices and project costs could vary from those used in NRG's estimates and the impact of such variations could be material.

Annually, during the fourth quarter, the Company revises its views of power and fuel prices including the Company's fundamental view for long-term prices, forecasted generation and operating and capital expenditures, in connection with the preparation of its annual budget. Changes to the Company's views of long-term power and fuel prices impact the Company's projections of profitability, based on management's estimate of supply and demand within the sub-markets for its operations and the physical and economic characteristics of each of its businesses.

For further discussion, see Item 15 — Note 11, *Asset Impairments*.

Goodwill and Other Intangible Assets

At December 31, 2023, the Company reported goodwill of \$5.1 billion, consisting of \$3.5 billion from the acquisition of Vivint in 2023, \$1.3 billion from the acquisition of Direct Energy in 2021 and \$0.3 billion from other retail acquisitions.

The Company applies ASC 805, *Business Combinations* ("ASC 805"), and ASC 350, *Intangibles-Goodwill and Other* ("ASC 350") to account for its goodwill and intangible assets. Under these standards, the Company amortizes all finite-lived intangible assets over their respective estimated weighted-average useful lives, while goodwill has an indefinite life and is not amortized. Goodwill is tested for impairment at least annually, or more frequently whenever an event or change in circumstances occurs that would more likely than not reduce the fair value of a reporting unit below its carrying amount. The Company tests goodwill for impairment at the reporting unit level, which is identified by assessing whether the components of the Company's operating segments constitute businesses for which discrete financial information is available and whether segment management regularly reviews the operating results of those components. The Company performs the annual goodwill impairment assessment as of December 31 or when events or changes in circumstances indicate that the fair value of the reporting unit may be below the carrying amount. The Company may first assess qualitative factors to determine whether it is more likely than not that an impairment has occurred. In the absence of sufficient qualitative factors, the Company performs a quantitative assessment by determining the fair value of the reporting unit and comparing to its book value. If it is determined that the fair value of a reporting unit is below its carrying amount, the Company's goodwill will be impaired at that time.

Fair value determinations require considerable judgment and are sensitive to changes in underlying assumptions and factors. As a result, there can be no assurance that the estimates and assumptions made for purposes of the annual goodwill impairment test will prove to be accurate predictions of the future.

For further discussion, see *Evaluation of Assets for Impairment* caption above, and Item 15 — Note 11, *Asset Impairments*.

Business Combinations

NRG accounts for business acquisitions using the acquisition method of accounting prescribed under ASC 805. Under this method, the Company is required to record on its Consolidated Balance Sheets the estimated fair values of the acquired company's assets and liabilities assumed at the acquisition date. The excess of the consideration transferred over the fair value of the net identifiable assets acquired and liabilities assumed is recorded as goodwill. Determining fair values of assets acquired and liabilities assumed requires significant estimates and judgments. Fair value is determined based on the estimated price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The acquired assets and assumed liabilities from the Vivint Smart Home acquisition that involved the most subjectivity in determining fair value consisted of customer relationships, developed technology, trade names, acquired debt and derivative instruments. NRG describes in detail its acquisitions in Item 15 — Note 4, *Acquisitions and Dispositions*, to the Consolidated Financial Statements.

The fair value of the customer relationships, technology and trade names are measured using income-based valuation methodologies, which include certain assumptions such as forecasted future cash flows, customer attrition rates, royalty rates and discount rates. Customer relationships and technology are amortized to depreciation and amortization, ratably based on discounted future cash flows. Trade names are amortized to depreciation and amortization, on a straight line basis.

The acquired Vivint Smart Home debt was measured at fair value using observable market inputs based on interest rates at the acquisition closing date. The difference between the fair value at the acquisition closing date and the principal outstanding is being amortized through interest expense over the remaining term of the debt.

The derivative liabilities in connection with the contractual future payment obligations with the financing providers under Vivint Smart Home's Consumer Financing Program were measured at fair value at the acquisition closing date using a discounted cash flow model, with inputs consisting of available market data, such as market yield discount rates, as well as unobservable internally derived assumptions, such as collateral prepayment rates, collateral default rates and credit loss rates. Changes to the fair value are recorded each period through other income, net in the consolidated statement of operations.

Contingencies

NRG records reserves for estimated losses from contingencies when information available indicates that a loss is probable and the amount of the loss, or range of loss, can be reasonably estimated. Gain contingencies are not recorded until management determines it is certain that the future event will become or does become a reality. Such determinations are subject to interpretations of current facts and circumstances, forecasts of future events, and estimates of the financial impacts of such events. NRG describes in detail its contingencies in Item 15 — Note 23, *Commitments and Contingencies*, to the Consolidated Financial Statements.

Recent Accounting Developments

See Item 15 — Note 2, *Summary of Significant Accounting Policies*, to the Consolidated Financial Statements for a discussion of recent accounting developments.

Item 7A — Quantitative and Qualitative Disclosures About Market Risk

NRG is exposed to several market risks in the Company's normal business activities. Market risk is the potential loss that may result from market changes associated with the Company's retail operations, merchant power generation, or with an existing or forecasted financial or commodity transactions. The types of market risks the Company is exposed to are commodity price risk, credit risk, liquidity risk, interest rate risk and currency exchange risk. In order to manage these risks, the Company uses various fixed-price forward purchase and sales contracts, futures and option contracts traded on NYMEX and other exchanges, and swaps and options traded in the over-the-counter financial markets to:

- Manage and hedge fixed-price purchase and sales commitments;
- Reduce exposure to the volatility of cash market prices, and
- Hedge fuel requirements for the Company's generating facilities.

Commodity Price Risk

Commodity price risks result from exposures to changes in spot prices, forward prices, volatilities, and correlations between various commodities, such as natural gas, electricity, coal, oil, and emissions credits. NRG manages the commodity price risk of the Company's load servicing obligations and merchant generation operations by entering into various derivative or non-derivative instruments to hedge the variability in future cash flows from forecasted sales and purchases of power and fuel. NRG measures the risk of the Company's portfolio using several analytical methods, including sensitivity tests, scenario tests, stress tests, position reports and VaR. NRG uses a Monte Carlo simulation based VaR model to estimate the potential loss in the fair value of its energy assets and liabilities, which includes generation assets, gas transportation and storage assets, load obligations and bilateral physical and financial transactions, based on historical and forward values for factors such as customer demand, weather, commodity availability and commodity prices. The Company's VaR model is based on a one-day holding period at a 95% confidence interval for the forward 36 months, not including the spot month. The VaR model is not a complete picture of all risks that may affect the Company's results. Certain events such as counterparty defaults, regulatory changes, and extreme weather and prices that deviate significantly from historically observed values are not reflected in the model.

The following table summarizes average, maximum and minimum VaR for NRG's commodity portfolio, calculated using the VaR model for the years ended December 31, 2023 and 2022:

(In millions)	2023	2022
VaR as of December 31,	\$ 51	\$ 74
For the year ended December 31,		
Average	\$ 62	\$ 51
Maximum	82	86
Minimum	41	26

The Company also uses VaR to estimate the potential loss of derivative financial instruments that are subject to mark-to-market accounting. These derivative instruments include transactions that were entered into for both asset management and trading purposes. The VaR for the derivative financial instruments calculated using the diversified VaR model for the entire term of these instruments entered into for both asset management and trading was \$185 million as of December 31, 2023, primarily driven by asset-backed transactions.

Credit Risk

Credit risk relates to the risk of loss resulting from non-performance or non-payment by counterparties pursuant to the terms of their contractual obligations. NRG is exposed to counterparty credit risk through various activities including wholesale sales, fuel purchases and retail supply arrangements, and retail customer credit risk through its retail load activities. Counterparty credit risk and retail customer credit risk are discussed below. See Note 6, *Accounting for Derivative Instruments and Hedging Activities*, to this Form 10-K for discussion regarding credit risk contingent features.

Counterparty Credit Risk

Credit risk relates to the risk of loss resulting from non-performance or non-payment by counterparties pursuant to the terms of their contractual obligations. The Company monitors and manages credit risk through credit policies that include: (i) an established credit approval process; (ii) a daily monitoring of counterparties' credit limits; (iii) the use of credit mitigation measures such as margin, collateral, prepayment arrangements, or volumetric limits; (iv) the use of payment netting agreements; and (v) the use of master netting agreements that allow for the netting of positive and negative exposures of various contracts associated with a single counterparty. Risks surrounding counterparty performance and credit could ultimately impact the amount and timing of expected cash flows. The Company seeks to mitigate counterparty risk by having a diversified portfolio of counterparties. The Company also has credit protection within various agreements to call on additional collateral support if and when necessary. Cash margin is collected and held at the Company to cover the credit risk of the counterparty until positions settle.

As of December 31, 2023, counterparty credit exposure, excluding credit exposure from RTOs, ISOs, registered commodity exchanges and certain long-term agreements, was \$1.6 billion, of which the Company held collateral (cash and letters of credit) against those positions of \$426 million resulting in a net exposure of \$1.2 billion. NRG periodically receives collateral from counterparties in excess of their exposure. Collateral amounts shown include such excess while net exposure shown excludes excess collateral received. Approximately 63% of the Company's exposure before collateral is expected to roll off by the end of 2025. The following table highlights the net counterparty credit exposure by industry sector and by counterparty credit quality. Net counterparty credit exposure is defined as the aggregate net asset position for NRG with counterparties where netting is permitted under the enabling agreement and includes all cash flow, mark-to-market, NPNS, and non-derivative transactions. As of December 31, 2023, the aggregate credit exposure is shown net of collateral held, and includes amounts net of receivables or payables.

<u>Category</u>	<u>Net Exposure ^{(a) (b)} (% of Total)</u>
Utilities, energy merchants, marketers and other	80 %
Financial institutions	20
Total	100 %

<u>Category</u>	<u>Net Exposure ^{(a) (b)} (% of Total)</u>
Investment grade	44 %
Non-Investment grade/Non-Rated	56
Total	100 %

(a) Counterparty credit exposure excludes coal transportation contracts because of the unavailability of market prices

(b) The figures in the tables above exclude potential counterparty credit exposure related to RTOs, ISOs, registered commodity exchanges and certain long-term contracts

The Company has exposure to one wholesale counterparty in excess of 10% of the total net exposure discussed above as of December 31, 2023. Changes in hedge positions and market prices will affect credit exposure and counterparty concentration.

RTOs and ISOs

The Company participates in the organized markets of CAISO, ERCOT, AESO, IESO, ISO-NE, MISO, NYISO and PJM, known as RTOs or ISOs. Trading in the majority of these markets is approved by FERC, whereas in the case of ERCOT, it is approved by the PUCT, and whereas in the case of AESO and IESO, both exist provincially with AESO primarily subject to Alberta Utilities Commission and the IESO subject to the Ontario Energy Board. These ISOs may include credit policies that, under certain circumstances, require that losses arising from the default of one member on spot market transactions be shared by the remaining participants. As a result, the counterparty credit risk to these markets is limited to NRG's share of the overall market and are excluded from the above exposures.

Exchange Traded Transactions

The Company enters into commodity transactions on registered exchanges, notably ICE, NYMEX and Nodal. These clearinghouses act as the counterparty and transactions are subject to extensive collateral and margining requirements. As a result, these commodity transactions have limited counterparty credit risk.

Long-Term Contracts

Counterparty credit exposure described above excludes credit risk exposure under certain long-term contracts, primarily solar under Renewable PPAs. As external sources or observable market quotes are not available to estimate such exposure, the Company values these contracts based on various techniques including, but not limited to, internal models based on a fundamental analysis of the market and extrapolation of observable market data with similar characteristics. Based on these valuation techniques, as of December 31, 2023, aggregate credit risk exposure managed by NRG to these counterparties was approximately \$882 million for the next five years.

Retail Customer Credit Risk

NRG is exposed to retail credit risk through the Company's retail electricity and gas providers as well as through Vivint Smart Home. Retail credit risk results in losses when a customer fails to pay for services rendered. The losses may result from both nonpayment of customer accounts receivable and the loss of in-the-money forward value. The Company manages retail credit risk through the use of established credit policies, which include monitoring of the portfolio and the use of credit mitigation measures such as deposits or prepayment arrangements.

As of December 31, 2023, the Company's retail customer credit exposure to Home and Business customers was diversified across many customers and various industries, as well as government entities. Current economic conditions may affect the Company's customers' ability to pay bills in a timely manner, which could increase customer delinquencies and may lead to an increase in credit losses. The Company's provision for credit losses resulting from credit risk was \$251 million, \$11 million and \$698 million for the years ended December 31, 2023, 2022 and 2021, respectively. During the year ended December 31, 2022, the provision for credit losses included the Company's loss mitigation efforts recognized as income of \$126 million related to Winter Storm Uri. During the year ended December 31, 2021, the provision for credit losses included \$596 million of expenses due to the impacts of Winter Storm Uri.

Liquidity Risk

Liquidity risk arises from the general funding needs of the Company's activities and the management of the Company's assets and liabilities. The Company is currently exposed to additional collateral posting if natural gas prices decline, primarily due to the long natural gas equivalent position at various exchanges used to hedge NRG's retail supply load obligations.

Based on a sensitivity analysis for power and gas positions under marginable contracts as of December 31, 2023, a \$0.50 per MMBtu decrease in natural gas prices across the term of the marginable contracts would cause an increase in margin collateral posted of approximately \$1.5 billion and a 1.00 MMBtu/MWh decrease in heat rates for heat rate positions would result in an increase in margin collateral posted of approximately \$350 million. This analysis uses simplified assumptions and is calculated based on portfolio composition and margin-related contract provisions as of December 31, 2023.

Interest Rate Risk

NRG is exposed to fluctuations in interest rates through its issuance of variable rate debt. Exposures to interest rate fluctuations may be mitigated by entering into derivative instruments known as interest rate swaps, caps, collars and put or call options. These contracts reduce exposure to interest rate volatility and result in primarily fixed rate debt obligations when taking into account the combinations of the variable rate debt and the interest rate derivative instrument. NRG's risk management policies allow the Company to reduce interest rate exposure from variable rate debt obligations. In the first quarter of 2023, the Company entered into \$1.0 billion of interest rate swaps through 2027 to hedge the floating rate on the Term Loan acquired with the Vivint Smart Home acquisition. Additionally, in the first quarter of 2023, the Company had entered into interest rate swaps to hedge the floating rate on the Revolving Credit Facility extending through 2024, which was fully terminated in conjunction with the pay down of the Revolving Credit Facility.

As of December 31, 2023, the Company's debt fair value was \$10.6 billion and carrying value was \$10.8 billion. NRG estimates that a 1% decrease in market interest rates would have increased the fair value of the Company's long-term debt by \$602 million.

Currency Exchange Risk

NRG is subject to transactional exchange rate risk from transactions with customers in countries outside of the U.S., primarily within Canada, as well as from intercompany transactions between affiliates. Transactional exchange rate risk arises from the purchase and sale of goods and services in currencies other than the Company's functional currency or the functional currency of an applicable subsidiary. NRG hedges a portion of its forecasted currency transactions with foreign exchange forward contracts. As of December 31, 2023, NRG is exposed to changes in foreign currency primarily associated with the purchase of U.S. dollar denominated natural gas for its Canadian business and entered into foreign exchange contracts with a notional amount of \$548 million.

The Company is subject to translation exchange rate risk related to the translation of the financial statements of its foreign operations into U.S. dollars. Costs incurred and sales recorded by subsidiaries operating outside of the U.S. are translated into U.S. dollars using exchange rates effective during the respective period. As a result, the Company is exposed to movements in the exchange rates of various currencies against the U.S. dollar, primarily the Canadian and Australian dollars. A hypothetical 10% appreciation in major currencies relative to the U.S. dollar as of December 31, 2023, would have resulted in a decrease of \$36 million to net income within the Consolidated Statement of Operations.

Item 8 — Financial Statements and Supplementary Data

The financial statements and schedules are included in Part IV, Item 15 of this Form 10-K.

Item 9 — Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None.

Item 9A — Controls and Procedures

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures and Internal Control Over Financial Reporting

Under the supervision and with the participation of NRG's management, including its principal executive officer, principal financial officer and principal accounting officer, NRG conducted an evaluation of the effectiveness of the design and operation of its disclosure controls and procedures, as such term is defined in Rules 13a-15(e) or 15d-15(e) of the Exchange Act. Based on this evaluation, the Company's principal executive officer, principal financial officer and principal accounting officer concluded that the disclosure controls and procedures were effective as of the end of the period covered by this Annual Report on Form 10-K. Management's report on the Company's internal control over financial reporting and the report of the Company's independent registered public accounting firm are incorporated under the caption "Management's Report on Internal Control over Financial Reporting" and under the caption "Report of Independent Registered Public Accounting Firm" in this Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

Changes in Internal Control over Financial Reporting

During the year ended December 31, 2023, the Company completed its acquisition of Vivint Smart Home, Inc. As part of integration, the Company designed and implemented a control structure over Vivint Smart Home's operations. Other than the Vivint Smart Home acquisition, there were no changes in NRG's internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that occurred in the fourth quarter of 2023 that materially affected, or are reasonably likely to materially affect, NRG's internal control over financial reporting.

Inherent Limitations over Internal Controls

NRG's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with GAAP. The Company's internal control over financial reporting includes those policies and procedures that:

1. Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Company's assets;
2. Provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with GAAP, and that the Company's receipts and expenditures are being made only in accordance with authorizations of its management and directors; and
3. Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the consolidated financial statements.

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations, including the possibility of human error and circumvention by collusion or overriding of controls. Accordingly, even an effective internal control system may not prevent or detect material misstatements on a timely basis. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

Management's Report on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of the Company's management, including its principal executive officer, principal financial officer and principal accounting officer, the Company conducted an evaluation of the effectiveness of its internal control over financial reporting based on the framework in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on the Company's evaluation under the framework in *Internal Control — Integrated Framework (2013)*, the Company's management concluded that its internal control over financial reporting was effective as of December 31, 2023.

On March 10, 2023, NRG acquired Vivint Smart Home, Inc., and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2023, Vivint Smart Home, Inc.'s internal control over financial reporting associated with total assets (excluding acquired goodwill and intangible assets) of 5% and total revenues of 5% included in the consolidated financial statements of the Company as of and for the year ended December 31, 2023.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2023 has been audited by KPMG LLP, the Company's independent registered public accounting firm, as stated in its report which is included in this Annual Report on Form 10-K.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders
NRG Energy, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited NRG Energy, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2023 and 2022, the related consolidated statements of operations, comprehensive (loss)/income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2023, and the related notes and financial statement schedule II (collectively, the consolidated financial statements), and our report dated February 28, 2024 expressed an unqualified opinion on those consolidated financial statements.

The Company acquired Vivint Smart Home, Inc. during 2023, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2023, Vivint Smart Home, Inc.'s internal control over financial reporting associated with total assets (excluding acquired goodwill and intangible assets) of 5% and total revenues of 5% included in the consolidated financial statements of the Company as of and for the year ended December 31, 2023. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of Vivint Smart Home, Inc.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

Philadelphia, Pennsylvania
February 28, 2024

Item 9B — Other Information***Director and Officer Trading Arrangements***

During the three months ended December 31, 2023, the following directors or officers of the Company adopted or terminated a 'Rule 10b5-1 trading arrangement' or 'non-Rule 10b5-1 trading arrangement,' as each term is defined in Item 408(a) of Regulation S-K, as described in the table below:

Name	Title	Date Adopted	Character of Trading Arrangement	Aggregate Number of Shares of Common Stock to be Purchased or Sold Pursuant to Trading Arrangement ^(a)	Duration	Date Terminated
Elizabeth Killinger	Executive Vice President	12/15/2023	Rule 10b5-1 Trading Arrangement	65,583 shares to be Sold ^(b)	3/15/2024-1/31/2025	N/A
Rasesh Patel	Executive Vice President, Smart Home	12/15/2023	Rule 10b5-1 Trading Arrangement	Up to 73,638 shares to be Sold	3/14/2024-11/01/2024	N/A

(a) Potential sales may be subject to certain price limitations set forth in the 10b5-1 plans and therefore actual number of shares sold could vary if certain minimum stock prices are not met

(b) Represents approximate number of shares to be sold based on outstanding awards expected to vest during the period, where any underlying performance share awards are being calculated at target. Actual number of shares to be sold will depend on actual vesting, the number of shares withheld by NRG to satisfy tax withholding obligations and vesting of dividend equivalent rights

Item 9C — Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10 — Directors, Executive Officers and Corporate Governance

Directors and Executive Officers

Information required by this Item is incorporated by reference to the similarly named section of NRG's Definitive Proxy Statement for its 2024 Annual Meeting of Stockholders.

Code of Ethics

NRG has adopted a code of ethics entitled "NRG Code of Conduct" that applies to directors, officers and employees, including the chief executive officer and senior financial officers of NRG. It may be accessed through the "Governance" section of the Company's website at www.nrg.com. NRG also elects to disclose the information required by Form 8-K, Item 5.05, "Amendments to the Registrant's Code of Ethics, or Waiver of a Provision of the Code of Ethics," through the Company's website, and such information will remain available on this website for at least a 12-month period. A copy of the "NRG Code of Conduct" is available in print to any stockholder who requests it.

Other information required by this Item is incorporated by reference to the similarly named section of NRG's Definitive Proxy Statement for its 2024 Annual Meeting of Stockholders.

Item 11 — Executive Compensation

Information required by this Item is incorporated by reference to the similarly named section of NRG's Definitive Proxy Statement for its 2024 Annual Meeting of Stockholders.

Item 12 — Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Securities Authorized for Issuance under Equity Compensation Plans

<u>Plan Category</u>	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	(b) Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
Equity compensation plans approved by security holders	2,997,640	(1) \$ —	14,419,264
Equity compensation plans not approved by security holders	3,970,872	(2) \$ —	12,749,736
Total	6,968,512	\$ —	27,169,000 (3)

(1) Consists of shares issuable under the NRG LTIP and the ESPP. On April 27, 2023, NRG stockholders approved an increase of 4,400,000 shares available for issuance under the ESPP. As of December 31, 2023, there were 6,702,125 shares reserved from the Company's treasury shares for the ESPP.

(2) Consists of shares issuable under the Vivint LTIP. On March 10, 2023, in connection with the Acquisition, NRG assumed the Vivint Smart Home, Inc. 2020 Omnibus Incentive Plan. While the Vivint Smart Home, Inc. 2020 Omnibus Incentive Plan was previously approved by stockholders of Vivint Smart Home, Inc., the plan is listed as "not approved" because it was assumed as part of the Acquisition and not subject to approval by NRG stockholders. The Company intends to make subsequent grants under the Vivint LTIP. See Note 21, *Stock-Based Compensation* for a discussion of the Vivint LTIP.

(3) Consists of 7,717,139 shares of common stock under the NRG LTIP, 12,749,736 shares of common stock under the Vivint LTIP and 6,702,125 shares of treasury stock reserved for issuance under the ESPP.

The NRG LTIP currently provides for grants of restricted stock units, relative performance stock units, deferred stock units and dividend equivalent rights. The Vivint LTIP currently provides for grants of restricted stock units and performance stock units. The Company's directors, officers and employees, as well as other individuals performing services for, or to whom an offer of employment has been extended by the Company, are eligible to receive grants under the LTIPs. The purpose of the LTIPs is to promote the Company's long-term growth and profitability by providing these individuals with incentives to maximize stockholder value and otherwise contribute to the Company's success and to enable the Company to attract, retain and reward the best available persons for positions of responsibility. The Compensation Committee of the Board of Directors administers the LTIPs.

Other information required by this Item is incorporated by reference to the similarly named section of NRG's Definitive Proxy Statement for its 2024 Annual Meeting of Stockholders.

Item 13 — Certain Relationships and Related Transactions, and Director Independence

Information required by this Item is incorporated by reference to the similarly named section of NRG's Definitive Proxy Statement for its 2024 Annual Meeting of Stockholders.

Item 14 — Principal Accounting Fees and Services

Information required by this Item is incorporated by reference to the similarly named section of NRG's Definitive Proxy Statement for its 2024 Annual Meeting of Stockholders.

PART IV

Item 15 — Exhibits, Financial Statement Schedules

(a)(1) Financial Statements

The following consolidated financial statements of NRG Energy, Inc. and related notes thereto, together with the reports thereon of KPMG LLP, Philadelphia, PA, Auditor Firm ID: 185, are included herein:

Consolidated Statements of Operations — Years ended December 31, 2023, 2022, and 2021

Consolidated Statements of Comprehensive (Loss)/Income — Years ended December 31, 2023, 2022, and 2021

Consolidated Balance Sheets — As of December 31, 2023 and 2022

Consolidated Statements of Cash Flows — Years ended December 31, 2023, 2022, and 2021

Consolidated Statements of Stockholders' Equity — Years ended December 31, 2023, 2022, and 2021

Notes to Consolidated Financial Statements

(a)(2) Financial Statement Schedule

The following Consolidated Financial Statement Schedule of NRG Energy, Inc. is filed as part of Item 15 of this report and should be read in conjunction with the Consolidated Financial Statements.

Schedule II — Valuation and Qualifying Accounts

All other schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable, and therefore, have been omitted.

(a)(3) Exhibits: See Exhibit Index submitted as a separate section of this report.

(b) Exhibits

See Exhibit Index submitted as a separate section of this report.

(c) Not applicable

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders
NRG Energy, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of NRG Energy, Inc. and subsidiaries (the Company) as of December 31, 2023 and 2022, the related consolidated statements of operations, comprehensive (loss)/income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2023, and the related notes and financial statement schedule II (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2023, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 28, 2024 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Evaluation of the sufficiency of audit evidence over revenues

As discussed in Note 3 to the consolidated financial statements, the Company had \$28,823 million of revenues. Revenue is derived from various revenue streams in different geographic markets and the Company's processes and related information technology (IT) systems used to record revenue differ for each of these revenue streams.

We identified the evaluation of the sufficiency of audit evidence over revenues as a critical audit matter which required a high degree of auditor judgment due to the number of revenue streams and IT systems involved in the revenue recognition process. This included determining the revenue streams over which procedures were to be performed and evaluating the nature and extent of evidence obtained over the individual revenue streams as well as revenue in the aggregate. It also included the involvement of IT professionals with specialized skills and knowledge to assist in the performance of certain procedures.

The following are the primary procedures we performed to address this critical audit matter. We, with the assistance of IT professionals, applied auditor judgment to determine the revenue streams over which procedures were performed as well as the nature and extent of such procedures. For certain revenue streams over which procedures were performed,

we evaluated the design and tested the operating effectiveness of certain internal controls over the Company's revenue recognition processes. For certain revenue streams, we involved IT professionals, who assisted in testing certain IT applications used by the Company in its revenue recognition processes. In addition, we assessed recorded revenue for a selection of transactions by comparing the amounts recognized to underlying documentation, including contracts with customers, and for certain revenue streams, we performed a software-assisted data analysis to assess certain relationships among revenue transactions. In addition, we evaluated the sufficiency of audit evidence obtained over revenues by assessing the results of procedures performed, including the appropriateness of such evidence.

Fair value of certain acquired intangible assets

As discussed in Note 4 to the consolidated financial statements, the Company acquired Vivint Smart Home, Inc. on March 10, 2023 for total consideration of \$2,623 million. In connection with the business combination, the Company recorded various intangible assets, which included customer relationships and technology intangible assets with an acquisition-date fair value of \$1,740 million and \$860 million, respectively.

We identified the evaluation of the acquisition-date fair value of the customer relationships and technology intangible assets as a critical audit matter. A high degree of subjective and complex auditor judgment was required to evaluate key assumptions used to value these acquired intangible assets. We performed sensitivity analyses to determine the key assumptions used to value the intangible assets acquired which required challenging auditor judgment. Specifically, key assumptions included the customer attrition for the customer relationships intangible asset and the discount rate for the customer relationships and technology intangible assets. Changes to these assumptions could have had a significant impact on the fair value of such assets. In addition, valuation professionals with specialized skills and knowledge were needed to assist in the evaluation of the discount rate.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's acquisition-date valuation process, including controls related to the selection of the customer attrition used in the customer relationships intangible asset and the discount rate used in the customer relationships and technology intangible assets. We evaluated the customer attrition used by the Company by comparing it to historical attrition experienced by the acquired company and comparable company attrition. We involved valuation professionals with specialized skills and knowledge, who assisted in evaluating the discount rate by assessing the relative risk profile of the customer relationships and technology intangible assets compared to the required rate of return of all acquired assets in the business combination.

/s/ KPMG LLP

We have served as the Company's auditor since 2004.

Philadelphia, Pennsylvania
February 28, 2024

NRG ENERGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

(In millions, except per share amounts)	For the Year Ended December 31,		
	2023	2022	2021
Revenue			
Revenue	\$ 28,823	\$ 31,543	\$ 26,989
Operating Costs and Expenses			
Cost of operations (excluding depreciation and amortization shown below)	26,526	27,446	20,482
Depreciation and amortization	1,127	634	785
Impairment losses	26	206	544
Selling, general and administrative costs	1,968	1,228	1,293
Provision for credit losses	251	11	698
Acquisition-related transaction and integration costs	119	52	93
Total operating costs and expenses	30,017	29,577	23,895
Gain on sale of assets	1,578	52	247
Operating Income	384	2,018	3,341
Other Income/(Expense)			
Equity in earnings of unconsolidated affiliates	16	6	17
Impairment losses on investments	(102)	—	—
Other income, net	47	56	63
Gain/(Loss) on debt extinguishment	109	—	(77)
Interest expense	(667)	(417)	(485)
Total other expense	(597)	(355)	(482)
(Loss)/Income Before Income Taxes	(213)	1,663	2,859
Income tax (benefit)/expense	(11)	442	672
Net (Loss)/Income	(202)	1,221	2,187
Less: Cumulative dividends attributable to Series A Preferred Stock	54	—	—
Net (Loss)/Income Available for Common Stockholders	\$ (256)	\$ 1,221	\$ 2,187
(Loss)/Income Per Share			
Weighted average number of common shares outstanding — basic and diluted	228	236	245
(Loss)/Income per Weighted Average Common Share — Basic and Diluted	\$ (1.12)	\$ 5.17	\$ 8.93

See notes to Consolidated Financial Statements

NRG ENERGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS)/INCOME

(In millions)	For the Year Ended December 31,		
	2023	2022	2021
Net (Loss)/Income	\$ (202)	\$ 1,221	\$ 2,187
Other Comprehensive Income/(Loss), net of tax			
Foreign currency translation adjustments	9	(35)	(5)
Defined benefit plans	30	(16)	85
Other comprehensive income/(loss)	39	(51)	80
Comprehensive (Loss)/Income	<u>\$ (163)</u>	<u>\$ 1,170</u>	<u>\$ 2,267</u>

See notes to Consolidated Financial Statements

NRG ENERGY, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(In millions)	As of December 31,	
	2023	2022
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 541	\$ 430
Funds deposited by counterparties	84	1,708
Restricted cash	24	40
Accounts receivable, net	3,542	4,773
Inventory	607	751
Derivative instruments	3,862	7,886
Cash collateral paid in support of energy risk management activities	441	260
Prepayments and other current assets	626	383
Total current assets	9,727	16,231
Property, plant and equipment, net	1,763	1,692
Other Assets		
Equity investments in affiliates	42	133
Operating lease right-of-use assets, net	179	225
Goodwill	5,079	1,650
Customer relationships, net	2,164	943
Other intangible assets, net	1,763	1,189
Nuclear decommissioning trust fund	—	838
Derivative instruments	2,293	4,108
Deferred income taxes	2,251	1,881
Other non-current assets	777	256
Total other assets	14,548	11,223
Total Assets	\$ 26,038	\$ 29,146

NRG ENERGY, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS (Continued)

(In millions, except share data)	As of December 31,	
	2023	2022
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Current portion of long-term debt and finance leases	\$ 620	\$ 63
Current portion of operating lease liabilities	90	83
Accounts payable	2,325	3,643
Derivative instruments	4,019	6,195
Cash collateral received in support of energy risk management activities	84	1,708
Deferred revenue current	720	176
Accrued expenses and other current liabilities	1,642	1,114
Total current liabilities	9,500	12,982
Other Liabilities		
Long-term debt and finance leases	10,133	7,976
Non-current operating lease liabilities	128	180
Nuclear decommissioning reserve	—	340
Nuclear decommissioning trust liability	—	477
Derivative instruments	1,488	2,246
Deferred income taxes	22	134
Deferred revenue non-current	914	10
Other non-current liabilities	947	973
Total other liabilities	13,632	12,336
Total Liabilities	23,132	25,318
Commitments and Contingencies		
Stockholders' Equity		
Preferred stock; 10,000,000 shares authorized; 650,000 Series A shares issued and outstanding at December 31, 2023 (aggregate liquidation preference \$650); 0 shares issued and outstanding at December 31, 2022	650	—
Common stock; \$0.01 par value; 500,000,000 shares authorized; 267,330,470 and 423,897,001 shares issued; and 208,130,950 and 229,561,030 shares outstanding at December 31, 2023 and 2022, respectively	3	4
Additional paid-in capital	3,416	8,457
Retained earnings	820	1,408
Treasury stock, at cost; 59,199,520 and 194,335,971 shares at December 31, 2023 and 2022, respectively	(1,892)	(5,864)
Accumulated other comprehensive loss	(91)	(177)
Total Stockholders' Equity	2,906	3,828
Total Liabilities and Stockholders' Equity	\$ 26,038	\$ 29,146

See notes to Consolidated Financial Statements

NRG ENERGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions)	For the Year Ended December 31,		
	2023	2022	2021
Cash Flows from Operating Activities			
Net (loss)/income	\$ (202)	\$ 1,221	\$ 2,187
Adjustments to reconcile net income to net cash provided by operating activities:			
Equity in and distributions from (earnings)/losses of unconsolidated affiliates	(6)	7	20
Depreciation and amortization	1,127	634	785
Accretion of asset retirement obligations	27	55	30
Provision for credit losses	251	11	698
Amortization of nuclear fuel	47	54	51
Amortization of financing costs and debt discounts	52	23	39
(Gain)/Loss on debt extinguishment	(109)	—	77
Amortization of in-the-money contracts and emissions allowances	137	158	106
Amortization of unearned equity compensation	101	28	21
Net gain on sale of assets and disposal of assets	(1,559)	(102)	(261)
Impairment losses	128	206	544
Changes in derivative instruments	2,455	(3,221)	(3,626)
Changes in deferred income taxes and liability for uncertain tax benefits	(92)	382	604
Changes in collateral deposits in support of risk management activities	(1,806)	896	797
Changes in nuclear decommissioning trust liability	—	9	40
Uplift securitization proceeds received/(receivable) from ERCOT	—	689	(689)
Cash (used)/provided by changes in other working capital, net of acquisition and disposition effects:			
Accounts receivable - trade	840	(1,560)	(1,232)
Inventory	189	(252)	(61)
Prepayments and other current assets	(233)	17	31
Accounts payable	(1,455)	1,295	476
Accrued expenses and other current liabilities	360	(29)	(55)
Other assets and liabilities	(473)	(161)	(89)
Cash (used)/provided by operating activities	\$ (221)	\$ 360	\$ 493
Cash Flows from Investing Activities			
Payments for acquisitions of businesses and assets, net of cash acquired	\$ (2,523)	\$ (62)	\$ (3,559)
Capital expenditures	(598)	(367)	(269)
Net purchases of emissions allowances	(24)	(6)	—
Investments in nuclear decommissioning trust fund securities	(367)	(454)	(751)
Proceeds from sales of nuclear decommissioning trust fund securities	355	448	710
Proceeds from sale of assets, net of cash disposed	2,007	109	830
Proceeds from insurance recoveries for property, plant and equipment, net	240	—	—
Cash used by investing activities	\$ (910)	\$ (332)	\$ (3,039)

(In millions)	For the Year Ended December 31,		
	2023	2022	2021
Cash Flows from Financing Activities			
Proceeds from issuance of preferred stock, net of fees	\$ 635	\$ —	\$ —
Net receipts from settlement of acquired derivatives that include financing elements	342	1,995	938
Payments for share repurchase activity ^(a)	(1,172)	(606)	(48)
Payments of dividends to preferred and common stockholders	(381)	(332)	(319)
Proceeds from issuance of long-term debt	731	—	1,100
Payments for short and long-term debt	(523)	(5)	(1,861)
Payments for debt extinguishment costs	—	—	(65)
Payments of debt issuance costs	(32)	(9)	(18)
Proceeds from issuance of common stock	—	—	1
Proceeds from credit facilities	3,020	—	1,415
Repayments to credit facilities	(3,020)	—	(1,415)
Cash (used)/provided by financing activities	\$ (400)	\$ 1,043	\$ (272)
Effect of exchange rate changes on cash and cash equivalents	2	(3)	(2)
Net (Decrease)/Increase in Cash and Cash Equivalents, Funds Deposited by Counterparties and Restricted Cash	(1,529)	1,068	(2,820)
Cash and Cash Equivalents, Funds Deposited by Counterparties and Restricted Cash at Beginning of Period	2,178	1,110	3,930
Cash and Cash Equivalents, Funds Deposited by Counterparties and Restricted Cash at End of Period	\$ 649	\$ 2,178	\$ 1,110

(a) Includes \$(22) million, \$(6) million and \$(9) million of equivalent shares purchased in lieu of tax withholdings on equity compensation issuances for the years ended December 31, 2023, 2022 and 2021, respectively

For further discussion of supplemental cash flow information see Note 26, *Cash Flow Information*

See notes to Consolidated Financial Statements

NRG ENERGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In millions)	Preferred Stock	Common Stock	Additional Paid-In Capital	(Accumulated Deficit)/ Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
Balance at December 31, 2020	\$ —	\$ 4	\$ 8,517	\$ (1,403)	\$ (5,232)	\$ (206)	\$ 1,680
Net income				2,187			2,187
Other comprehensive income						80	80
Shares reissuance for ESPP			1		3		4
Share repurchases					(44)		(44)
Equity-based awards activity, net ^(a)			12				12
Issuance of common stock			1				1
Common stock dividends and dividend equivalents declared ^(b)				(320)			(320)
Balance at December 31, 2021	\$ —	\$ 4	\$ 8,531	\$ 464	\$ (5,273)	\$ (126)	\$ 3,600
Net income				1,221			1,221
Other comprehensive loss						(51)	(51)
Shares reissuance for ESPP			2		4		6
Share repurchases					(595)		(595)
Equity-based awards activity, net ^(a)			24				24
Common stock dividends and dividend equivalents declared ^(b)				(334)			(334)
Adoption of ASU 2020-06			\$ (100)	57			(43)
Balance at December 31, 2022	\$ —	\$ 4	\$ 8,457	\$ 1,408	\$ (5,864)	\$ (177)	\$ 3,828
Net loss				(202)			(202)
Issuance of Series A Preferred Stock	650		(15)				635
Other comprehensive income						39	39
Shares reissuance for ESPP			2		6		8
Share repurchases ^(c)			(117)		(1,043)		(1,160)
Retirement of treasury stock		(1)	(5,008)		5,009		—
Equity-based awards activity, net ^(a)			97				97
Common stock dividends and dividend equivalents declared ^(b)				(352)			(352)
Series A Preferred Stock dividends ^(d)				(34)			(34)
Sale of the 44% equity interest in STP						47	47
Balance at December 31, 2023	<u>\$ 650</u>	<u>\$ 3</u>	<u>\$ 3,416</u>	<u>\$ 820</u>	<u>\$ (1,892)</u>	<u>\$ (91)</u>	<u>\$ 2,906</u>

(a) Includes \$(22) million, \$(6) million and \$(9) million of equivalent shares purchased in lieu of tax withholding on equity compensation issuances for the years ended December 31, 2023, 2022 and 2021, respectively

(b) Dividends per common share were \$1.51, \$1.40 and \$1.30 for each of the years ended December 31, 2023, 2022 and 2021, respectively

(c) Includes excise tax accrued of \$10 million as of December 31, 2023

(d) Dividend per Series A Preferred Stock was \$52.96

See notes to Consolidated Financial Statements

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — Nature of Business

General

NRG Energy, Inc., or NRG or the Company, sits at the intersection of energy and home services. NRG is a leading energy and home services company fueled by market-leading brands, proprietary technologies, and complementary sales channels. Across the United States and Canada, NRG delivers innovative, sustainable solutions, predominately under the brand names such as NRG, Reliant, Direct Energy, Green Mountain Energy and Vivint, while also advocating for competitive energy markets and customer choice. The Company has a customer base that includes approximately 8 million residential consumers in addition to commercial, industrial, and wholesale customers, supported by approximately 13 GW of generation.

The Company's business is segmented as follows:

- Texas, which includes all activity related to customer, plant and market operations in Texas, other than Cottonwood;
- East, which includes all activity related to customer, plant and market operations in the East;
- West/Services/Other, which includes the following assets and activities: (i) all activity related to customer, plant and market operations in the West and Canada, (ii) the Services businesses (iii) activity related to the Cottonwood facility and other investments;
- Vivint Smart Home; and
- Corporate activities.

Note 2 — Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The Company's consolidated financial statements have been prepared in accordance with U.S. GAAP. The ASC, established by the FASB, is the source of authoritative U.S. GAAP to be applied by nongovernmental entities. In addition, the rules and interpretative releases of the SEC under authority of federal securities laws are also sources of authoritative U.S. GAAP for SEC registrants.

The consolidated financial statements include NRG's accounts and operations and those of its subsidiaries in which the Company has a controlling interest. All significant intercompany transactions and balances have been eliminated in consolidation. The usual condition for a controlling financial interest is ownership of a majority of the voting interests of an entity. However, a controlling financial interest may also exist through arrangements that do not involve controlling voting interests. As such, NRG applies the guidance of ASC 810, *Consolidations*, or ASC 810, to determine when an entity that is insufficiently capitalized or not controlled through its voting interests, referred to as a VIE, should be consolidated.

The Company identified an error in the previously issued consolidated financial statements for the year ended December 31, 2021 related to the presentation of cash flows associated with certain borrowings and repayments related to the Revolving Credit Facility. The statement of cash flows for the year ended December 31, 2021 has been adjusted to present on a gross basis the borrowings from the Revolving Credit Facility of \$1.4 billion and the related repayments of \$1.4 billion. The change had no impact to the total cash used by financing activities for the year ended December 31, 2021. We evaluated the materiality of this error both qualitatively and quantitatively and have concluded it is immaterial to the impacted period.

Winter Storm Uri Uplift Securitization Proceeds

The Texas Legislature passed HB 4492 in May 2021 for ERCOT to mitigate exceptionally high price adders and ancillary service costs incurred by LSEs during Winter Storm Uri. HB 4492 authorized ERCOT to obtain \$2.1 billion of financing to distribute to LSEs that were charged and paid to ERCOT those highly priced ancillary service and ORDPA during Winter Storm Uri.

In December 2021, ERCOT filed with the PUCT a calculation of each LSE's share of proceeds based on the settlement methodology. The Company accounted for the proceeds by analogy to the contribution model within ASC 958-605, *Not-for-Profit Entities- Revenue Recognition* and the grant model within IAS 20, *Accounting for Government Grants and Disclosure of Government Assistance*, as a reduction to expenses in the consolidated statements of operations in the 2021 annual period for which the proceeds were intended to compensate. The Company received proceeds of \$689 million from ERCOT in June 2022.

Credit Losses

In accordance with ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, or ASU No. 2016-13, retail trade receivables are reported on the balance sheet net of the allowance for credit losses within accounts receivables, net. Long-term receivables are recorded net in other non-current assets on the consolidated balance sheet. The Company accrues an allowance for current expected credit losses based on (i) estimates of uncollectible revenues by analyzing accounts receivable aging and current and reasonable forecasts of expected economic factors including, but not limited to, unemployment rates and weather-related events, (ii) historical collections and delinquencies, and (iii) counterparty credit ratings for commercial and industrial customers. The Company writes off customer contract receivable balances against the allowance for credit losses when it is determined a receivable is uncollectible.

The following table represents the activity in the allowance for credit losses for the years ended December 31, 2023, 2022, and 2021:

(In millions)	Year Ended December 31,		
	2023	2022	2021
Beginning balance	\$ 133	\$ 683	\$ 67
Acquired balance from Vivint Smart Home	22	—	—
Acquired balance from Direct Energy	—	—	112
Provision for credit losses ^(a)	251	11	698
Write-offs	(313)	(593)	(224)
Recoveries collected	39	32	30
Other	13	—	—
Ending balance^(a)	\$ 145	\$ 133	\$ 683

(a) Includes bilateral finance hedging risk of \$(70) million and \$403 million accounted for under ASC 815 for the years ended December 31, 2022 and December 31, 2021, respectively

During the year ended December 31, 2022, the provision for credit losses included the Company's loss mitigation efforts recognized as income of \$126 million related to Winter Storm Uri. During the year ended December 31, 2021, the provision for credit losses included \$596 million of expense due to the impacts of Winter Storm Uri. The increase in write-offs for the periods ended December 31, 2022 and 2021 were primarily due to the resolution of credit losses that occurred during Winter Storm Uri.

Cash and Cash Equivalents

Cash and cash equivalents include highly liquid investments with an original maturity of three months or less at the time of purchase.

Funds Deposited by Counterparties

Funds deposited by counterparties consist of cash held by the Company as a result of collateral posting obligations from its counterparties related to NRG's hedging program. The decrease in funds deposited by counterparties is driven by the significant decrease in forward positions as a result of decreases in natural gas and power prices compared to December 31, 2022. Though some amounts are segregated into separate accounts, not all funds are contractually restricted. Based on the Company's intention, these funds are not available for the payment of general corporate obligations; however, they are available for liquidity management. Depending on market fluctuations and the settlement of the underlying contracts, the Company will refund this collateral to the hedge counterparties pursuant to the terms and conditions of the underlying trades. Since collateral requirements fluctuate daily and the Company cannot predict if any collateral will be held for more than twelve months, the funds deposited by counterparties are classified as a current asset on the Company's balance sheet, with an offsetting liability for this cash collateral received within current liabilities.

Restricted Cash

The following table provides a reconciliation of cash and cash equivalents, restricted cash and funds deposited by counterparties reported within the consolidated balance sheets that sum to the total of the same such amounts shown in the statements of cash flows.

(In millions)	Year Ended December 31,		
	2023	2022	2021
Cash and cash equivalents	\$ 541	\$ 430	\$ 250
Funds deposited by counterparties	84	1,708	845
Restricted cash	24	40	15
Cash and cash equivalents, funds deposited by counterparties and restricted cash shown in the statements of cash flows	<u>\$ 649</u>	<u>\$ 2,178</u>	<u>\$ 1,110</u>

Restricted cash consists primarily of funds held to satisfy the requirements of certain financing agreements and funds held within the Company's projects that are restricted in their use.

Inventory

Inventory is valued at the lower of weighted average cost or market, and consists principally of natural gas, fuel oil, coal, spare parts and finished goods. The Company removes natural gas inventory as goods are delivered to customers and as they are used in the production of electricity or steam. The Company removes fuel oil and coal inventories as they are used in the production of electricity. The Company removes spare parts inventories when they are used for repairs, maintenance or capital projects. The Company expects to recover the natural gas, fuel oil, coal and spare parts costs in the ordinary course of business. Inventory is valued at the lower of cost or net realizable value with cost being determined on a first in first out basis for finished goods and weighted average cost method for all other inventories. The Company removes finished goods inventories as they are sold to customers. Inventories sold to customers as part of a smart home system are generally capitalized as contract costs. Sales of inventory are classified as an operating activity in the consolidated statements of cash flows.

Property, Plant and Equipment

Property, plant and equipment are stated at cost or, in the case of business acquisitions, fair value; however, impairment adjustments are recorded whenever events or changes in circumstances indicate that their carrying values may not be recoverable. Significant additions or improvements extending asset lives are capitalized as incurred, while repairs and maintenance that do not improve or extend the life of the respective asset are charged to expense as incurred. Depreciation, other than nuclear fuel, is computed using the straight-line method, while nuclear fuel was amortized based on units of production over the estimated useful lives. Certain assets and their related accumulated depreciation amounts are adjusted for asset retirements and disposals with the resulting gain or loss included in cost of operations in the consolidated statements of operations. For further discussion, see Note 9, *Property, Plant and Equipment*.

Business Interruption Insurance

The Company carries insurance policies to cover insurable risks including, but not limited to, business interruption. As a result of damage at the Limestone 1 and W.A. Parish 8 units, the Company recorded business interruption insurance settlements of \$7 million and \$81 million during the year ended December 31, 2023 and December 31, 2022, respectively. Business interruption insurance is recorded to cost of operations in the consolidated statements of operations and cash provided by operating activities in the consolidated statement of cash flows.

Asset Impairments

Long-lived assets that are held and used are reviewed for impairment whenever events or changes in circumstances indicate carrying values may not be recoverable. Such reviews are performed in accordance with ASC 360. An impairment loss is indicated if the total future estimated undiscounted cash flows expected from an asset are less than its carrying value. An impairment charge is measured by the difference between an asset's carrying amount and fair value with the difference recorded in operating costs and expenses in the consolidated statements of operations. Fair values are determined by a variety of valuation methods, including third-party appraisals, sales prices of similar assets and present value techniques.

Investments accounted for by the equity method are reviewed for impairment in accordance with ASC 323, *Investments-Equity Method and Joint Ventures*, or ASC 323, which requires that a loss in value of an investment that is an other-than-temporary decline should be recognized. The Company identifies and measures losses in the value of equity method investments based upon a comparison of fair value to carrying value. For further discussion of these matters, refer to Note 11, *Asset Impairments*.

Debt Issuance Costs

Debt issuance costs are capitalized and amortized as interest expense on a basis that approximates the effective interest method over the term of the related debt. Debt issuance costs are presented as a direct deduction from the carrying amount of the related debt, or as an asset if the issuance costs relate to revolving debt agreements or certain other financing arrangements.

Intangible Assets

Intangible assets represent contractual rights held by the Company. The Company recognizes specifically identifiable intangible assets including emissions allowances, customer and supply contracts, customer relationships, marketing partnerships, technologies, trade names and fuel contracts when specific rights and contracts are acquired. These intangible assets are amortized based on expected volumes, expected delivery, expected discounted future net cash flows, straight line or units of production basis. As of December 31, 2023 and 2022, the Company had accumulated amortization related to its intangible assets of \$3.0 billion and \$2.1 billion, respectively.

Emission allowances held-for-sale, which are included in other non-current assets on the Company's consolidated balance sheet, are not amortized; they are carried at the lower of cost or fair value and reviewed for impairment in accordance with ASC 360.

For further discussion, see Note 12, *Goodwill and Other Intangibles*.

Goodwill

In accordance with ASC 350, *Intangibles-Goodwill and Other*, or ASC 350, the Company recognizes goodwill for the excess cost of an acquired entity over the net value assigned to assets acquired and liabilities assumed. NRG performs goodwill impairment tests annually, during the fourth quarter, and when events or changes in circumstances indicate that the carrying value may not be recoverable.

The Company may first assesses qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. The more-likely-than-not threshold is defined as having a likelihood of more than 50 percent. If it is not more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, there is no goodwill impairment.

In the absence of sufficient qualitative factors indicating that it is more-likely-than-not that no impairment occurred, the Company performs a quantitative assessment by determining the fair value of the reporting unit and comparing the fair value to its book value. If the fair value of the reporting unit exceeds its book value, goodwill of the reporting unit is not considered impaired. If the book value exceeds fair value, the Company recognizes an impairment loss equal to the difference between book value and fair value.

For further discussion of goodwill impairment losses recognized refer to Note 11, *Asset Impairments*.

Capitalized Contract Costs

Capitalized contract costs represent the costs directly related and incremental to the origination of new contracts, modification of existing contracts or to the fulfillment of the related subscriber contracts. These costs include installed products, commissions, other compensation and the cost of installation of new or upgraded customer contracts. The Company calculates amortization by accumulating all deferred contract costs into separate portfolios based on the initial month of service and amortizes those deferred contract costs on a straight-line basis over the expected period of benefit, consistent with the pattern in which the Company provides services to its customers. The expected period of benefit for customers is approximately five years. The Company updates its estimate of the expected period of benefit periodically and whenever events or circumstances indicate that the expected period of benefit could change significantly. Such changes, if any, are accounted for prospectively as a change in estimate. Amortization of capitalized contract costs related to fulfillment are included in cost of operations and amortization of capitalized contract costs related to customer acquisition are included in selling, general and administrative costs in the consolidated statements of operations. Contract costs not directly related and incremental to the origination of new contracts, modification of existing contracts or to the fulfillment of the related subscriber contracts are expensed as incurred.

Income Taxes

The Company accounts for income taxes using the liability method in accordance with ASC 740, *Income Taxes*, or ASC 740, which requires that the Company use the asset and liability method of accounting for deferred income taxes and provide deferred income taxes for all significant temporary differences.

The Company has two categories of income tax expense or benefit — current and deferred, as follows:

- Current income tax expense or benefit consists solely of current taxes payable less applicable tax credits, and
- Deferred income tax expense or benefit is the change in the net deferred income tax asset or liability, excluding amounts charged or credited to accumulated other comprehensive income

The Company reports some of its revenues and expenses differently for financial statement purposes than for income tax return purposes, resulting in temporary and permanent differences between the Company's financial statements and income tax returns. The tax effects of such temporary differences are recorded as either deferred income tax assets or deferred income tax liabilities in the Company's consolidated balance sheets. The Company measures its deferred income tax assets and deferred income tax liabilities using income tax rates that are expected to be in effect when the deferred tax is realized.

The Company accounts for uncertain tax positions in accordance with ASC 740, which applies to all tax positions related to income taxes. Under ASC 740, tax benefits are recognized when it is more-likely-than-not that a tax position will be sustained upon examination by the authorities. The benefit recognized from a position is the amount of benefit that has surpassed the more-likely-than-not threshold, as it is more than 50% likely to be realized upon settlement. The Company recognizes interest and penalties accrued related to uncertain tax benefits as a component of income tax expense.

In accordance with ASC 740 and as discussed further in Note 20, *Income Taxes*, changes to existing net deferred tax assets or valuation allowances or changes to uncertain tax benefits, are recorded to income tax (benefit)/expense.

Contract and Emission Credit Amortization

Assets and liabilities recognized through acquisitions related to the purchase and sale of energy and energy-related products in future periods for which the fair value has been determined to be significantly less or more than market are amortized to revenues or cost of operations over the term of each underlying contract based on actual generation and/or contracted volumes.

Emission credits represent the right to emit a specified amount of certain pollutants, including sulfur dioxide, nitrogen oxides and carbon dioxide, over a compliance period. Emission credits held for use are amortized to cost of operations based on the weighted average cost of the allowances held.

Gross Receipts and Sales Taxes

In connection with its retail sales, the Company records gross receipts taxes on a gross basis in revenues and cost of operations in its consolidated statements of operations. During the years ended December 31, 2023, 2022, and 2021, the Company's revenues and cost of operations included gross receipts taxes of \$212 million, \$218 million, and \$184 million, respectively. Additionally, the Company records sales taxes collected from its taxable retail customers and remitted to the various governmental entities on a net basis; thus, there is no impact on the Company's consolidated statement of operations.

Cost of Operations

Cost of operations includes cost of fuel, purchased energy and other costs of sales, mark-to-market for economic hedging activities, contract and emission credit amortization, operations and maintenance, and other cost of operations.

Cost of Fuel, Purchased Energy and Other Cost of Sales

Cost of fuel is primarily the costs associated with procurement, transportation and storage of natural gas, nuclear fuel, oil and coal to operate the generation portfolio, which is expensed as the fuel is consumed. Purchased energy primarily relates to purchases to supply the Company's customer base, which includes spot market purchases, as well as contracts of various quantities and durations, including Renewable PPAs with third-party developers, which are primarily accounted for as NPNS (see further discussion in Derivative Instruments below). Other cost of sales primarily consists of TDSP expenses.

The cost of fuel is based on actual and estimated fuel usage for the applicable reporting period. The cost to deliver energy and related services to customers is based on actual and estimated supply volumes for the applicable reporting period. A portion of the cost of energy, \$240 million, \$202 million, and \$189 million as of December 31, 2023, 2022, and 2021, respectively, was accrued and consisted of estimated transmission and distribution charges not yet billed by the transmission and distribution utilities.

In estimating supply volumes, the Company considers the effects of historical customer volumes, weather factors and usage by customer class. Transmission and distribution delivery fees are estimated using the same method used for electricity sales and services to retail customers. In addition, ISO fees are estimated based on historical trends, estimated supply volumes and initial ISO settlements. Volume estimates are then multiplied by the supply rate and recorded as cost of operations in the applicable reporting period.

Vivint Smart Home Flex Pay

Under the Flex Pay plan ("Flex Pay"), offered by Vivint Smart Home, subscribers pay separately for smart home products and services (smart home and security). The subscriber has the ability to pay for Vivint Smart Home products in the following three ways: (i) qualified subscribers may finance the purchase through third-party financing providers ("Consumer Financing Program" or "CFP"), (ii) Vivint Smart Home generally offers a limited number of subscribers not eligible for the CFP, but who qualify under Vivint Smart Home underwriting criteria, the option to enter into a retail installment contract directly with Vivint Smart Home or (iii) subscribers may conduct purchases by check, automatic clearing house payments, credit or debit card or by obtaining short term financing (generally no more than six-month installment terms) through Vivint Smart Home.

Although subscribers pay separately for products and services under Flex Pay, the Company has determined that the sale of products and services are one single performance obligation resulting in deferred revenue for the gross amount of products sold. For products financed through the CFP, gross deferred revenues are reduced by (i) any fees the third-party financing provider ("Financing Provider") is contractually entitled to receive at the time of loan origination, and (ii) the present value of expected future payments due to the Financing Providers. Loans are issued on either an installment or revolving basis with repayment terms ranging from 6 to 60 months.

For certain Financing Provider loans:

- Vivint Smart Home pays a monthly fee based on either the average daily outstanding balance of the installment loans, or the number of outstanding loans.
- Vivint Smart Home incurs fees at the time of the loan origination and receives proceeds that are net of these fees.
- Vivint Smart Home also shares liability for credit losses, with Vivint Smart Home being responsible for between 2.6% and 100% of lost principal balances.

Due to the nature of these provisions, the Company records a derivative liability ("CFP Derivative") at its fair value when the Financing Provider originates loans to subscribers, which reduces the amount of estimated revenue recognized on the provision of the services. The derivative liability is reduced as payments are made by Vivint Smart Home to the Financing Provider. Subsequent changes to the fair value of the derivative liability are realized through other income, net in the consolidated statements of operations. For further discussion, see Note 6, *Accounting for Derivative Instruments and Hedging Activities*.

Derivative Instruments

The Company accounts for derivative instruments under ASC 815, which requires the Company to record all derivatives on the balance sheet at fair value and changes in fair value in earnings, unless they qualify for the NPNS exception. The Company's primary derivative instruments are power and natural gas purchase or sales contracts, fuels purchase contracts, the CFP and other energy related commodities used to mitigate variability in earnings due to fluctuation in market prices. In order to mitigate interest rate risk associated with the issuance of the Company's variable rate debt, NRG enters into interest rate swap agreements. In addition, in order to mitigate foreign exchange risk associated with the purchase of USD denominated natural gas for the Company's Canadian business, NRG enters into foreign exchange contract agreements.

As of December 31, 2023 and 2022 the Company did not have derivative instruments that were designated as cash flow or fair value hedges.

Revenues and expenses on contracts that qualify for the NPNS exception are recognized when the underlying physical transaction is delivered. While these contracts are considered derivative instruments under ASC 815, they are not recorded at fair value, but on an accrual basis of accounting. If it is determined that a transaction designated as NPNS no longer meets the scope exception, the fair value of the related contract is recorded on the balance sheet and immediately recognized through earnings.

NRG's trading activities are subject to limits in accordance with the Company's Risk Management Policy. These contracts are recognized on the balance sheet at fair value and changes in the fair value of these derivative instruments are recognized in earnings.

Mark-to-Market for Economic Hedging Activities

NRG enters into derivative instruments to manage price and delivery risk, optimize physical and contractual assets in the portfolio and manage working capital requirements. The mark-to-market for economic hedging activities are recognized to revenues or cost of operations during the reporting period.

Operations and Maintenance and Other Cost of Operations

Operations and maintenance costs include major and other routine preventative (planned outage) and corrective (forced outage) maintenance activities to ensure the safe and reliable operation of the Company's generation portfolio in compliance

with all local, state and federal requirements. Operations and maintenance costs are also costs associated with retaining and maintaining the Company's customer base, such as call center support, portfolio maintenance and data analytics. Other cost of operations primarily includes gross receipts taxes, insurance, property taxes and asset retirement obligation expense.

Foreign Currency Translation and Transaction Gains and Losses

The local currencies are generally the functional currency of NRG's foreign operations. Foreign currency denominated assets and liabilities are translated at end-of-period rates of exchange. Revenues, expenses, and cash flows are translated at the weighted-average rates of exchange for the period. The resulting currency translation adjustments are not included in the Company's consolidated statements of operations for the period, but are accumulated and reported as a separate component of stockholders' equity until sale or complete or substantially complete liquidation of the net investment in the foreign entity takes place. Foreign currency transaction gains or losses are reported within other income, net in the Company's consolidated statements of operations. For the years ended December 31, 2023, 2022 and 2021, amounts recognized as foreign currency transaction gains/(losses) were immaterial. The Company's cumulative translation adjustment balances as of December 31, 2023, 2022, and 2021 were \$(43) million, \$(55) million, and \$(8) million, respectively.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of trust funds, accounts receivable, notes receivable, derivatives and investments in debt securities. Trust funds are held in accounts managed by experienced investment advisors. Certain accounts receivable, notes receivable, and derivative instruments are concentrated within entities engaged in the energy industry. These industry concentrations may impact the Company's overall exposure to credit risk, either positively or negatively, in that the customers may be similarly affected by changes in economic, industry or other conditions. Receivables and other contractual arrangements are subject to collateral requirements under the terms of enabling agreements. However, the Company believes that the credit risk posed by industry concentration is offset by the diversification and creditworthiness of its customer base. See Note 5, *Fair Value of Financial Instruments*, for a further discussion of derivative concentrations.

Asset Retirement Obligations

The Company accounts for AROs in accordance with ASC 410-20, *Asset Retirement Obligations*, or ASC 410-20. Retirement obligations associated with long-lived assets included within the scope of ASC 410-20 are those for which a legal obligation exists under enacted laws, statutes, and written or oral contracts, including obligations arising under the doctrine of promissory estoppel, and for which the timing and/or method of settlement may be conditional on a future event. ASC 410-20 requires an entity to recognize the fair value of a liability for an ARO in the period in which it is incurred and a reasonable estimate of fair value can be made.

Upon initial recognition of a liability for an ARO, the Company capitalizes the asset retirement cost by increasing the carrying amount of the related long-lived asset by the same amount. Over time, the liability is accreted to its future value, while the capitalized cost is depreciated over the useful life of the related asset. See Note 14, *Asset Retirement Obligations*, for a further discussion of AROs.

Pensions and Other Postretirement Benefits

The Company offers pension benefits through a defined benefit pension plan. In addition, the Company provides postretirement health and welfare benefits for certain groups of employees. The Company accounts for pension and other postretirement benefits in accordance with ASC 715, *Compensation — Retirement Benefits*, or ASC 715. The Company recognizes the funded status of the Company's defined benefit plans in the statement of financial position and records an offset for gains and losses as well as all prior service costs that have not been included as part of the Company's net periodic benefit cost to other comprehensive income. The determination of the Company's obligation and expenses for pension benefits is dependent on the selection of certain assumptions. These assumptions determined by management include the discount rate, the expected rate of return on plan assets and the rate of future compensation increases. The Company's actuarial consultants assist in determining assumptions for such items as retirement age. The assumptions used may differ materially from actual results, which may result in a significant impact to the amount of pension obligation or expense recorded by the Company.

The Company measures the fair value of its pension assets in accordance with ASC 820, *Fair Value Measurements and Disclosures*, or ASC 820. For further discussion, see Note 15, *Benefit Plans and Other Postretirement Benefits*.

Stock-Based Compensation

The Company accounts for its stock-based compensation in accordance with ASC 718, *Compensation — Stock Compensation*, or ASC 718. The fair value of the Company's performance stock units is estimated on the date of grant using a Monte Carlo valuation model. NRG uses the Company's common stock price on the date of grant as the fair value of the Company's deferred stock units. Forfeiture rates are estimated based on an analysis of the Company's historical forfeitures, employment turnover, and expected future behavior. The Company recognizes compensation expense for both graded and cliff

vesting awards on a straight-line basis over the requisite service period for the entire award. For further discussion, see Note 21, *Stock-Based Compensation*.

Investments Accounted for by the Equity Method

The Company has investments in various domestic energy projects, as well as one Australian project. The equity method of accounting is applied to such investments in affiliates, which include joint ventures and partnerships, because the ownership structure prevents the Company from exercising a controlling influence over the operating and financial policies of the projects. Under this method, equity in pre-tax income or losses of domestic partnerships and, generally, in the net income or losses of its Australian project, are reflected as equity in earnings of unconsolidated affiliates. Distributions from equity method investments that represent earnings on the Company's investment are included within cash flows from operating activities and distributions from equity method investments that represent a return of the Company's investment are included within cash flows from investing activities. For further discussion, see Note 17, *Investments Accounted for by the Equity Method and Variable Interest Entities*.

Sale-Leaseback Arrangements

NRG is party to sale-leaseback arrangements that provide for the sale of certain assets to a third-party and simultaneously leases back the same asset to the Company. If the seller-lessee transfers control of the underlying assets to the buyer-lessor, the arrangement is accounted for under ASC 842-40, *Sale-Leaseback Transactions*. These arrangements are classified as operating leases on the Company's consolidated balance sheets.

Marketing and Advertising Costs

The Company expenses its marketing and advertising costs as incurred and includes them within selling, general and administrative costs. The costs of tangible assets used in advertising campaigns are recorded as fixed assets or deferred advertising costs and amortized as advertising costs over the shorter of the useful life of the asset or the advertising campaign. The Company has several long-term sponsorship arrangements. Payments related to these arrangements are deferred and expensed over the term of the arrangement. Advertising expenses for the years ended December 31, 2023, 2022, and 2021 were \$185 million, \$82 million, and \$109 million, respectively.

Business Combinations

The Company accounts for its business combinations in accordance with ASC 805, *Business Combinations*, or ASC 805, which requires an acquirer to recognize and measure in its financial statements the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree at fair value at the acquisition date. The Company also recognizes and measures the goodwill acquired or a gain from a bargain purchase in the business combination. In addition, transaction costs are expensed as incurred.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

In recording transactions and balances resulting from business operations, the Company uses estimates based on the best information available. Estimates are used for such items as plant depreciable lives, tax provisions, uncollectible accounts, actuarially determined benefit costs, the valuation of energy commodity contracts, environmental liabilities, legal costs incurred in connection with recorded loss contingencies, and assets acquired and liabilities assumed in business combinations, among others. In addition, estimates are used to test long-lived assets and goodwill for impairment and to determine the fair value of impaired assets. As better information becomes available or actual amounts are determinable, the recorded estimates are revised. Consequently, operating results can be affected by revisions to prior accounting estimates.

Reclassifications

Certain prior period amounts have been reclassified for comparative purposes. The reclassifications did not affect results from operations, net assets or cash flows.

Recent Accounting Developments - Guidance Adopted in 2023

ASU 2021-08 — In October 2021, the FASB issued ASU No. 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, or ASU 2021-08, which requires that an entity recognize and measure contract assets and contract liabilities acquired in a business combination as if it had originated the contracts in accordance with ASC 606, *Revenue from Contracts with Customers*. As a result, an acquirer should recognize and measuring the acquired contract assets and contract liabilities consistently with how they were recognized and measured in the

acquiree's financial statements. The amendments per ASU 2021-08 apply only to contract assets and contract liabilities from contracts with customers, as defined in Topic 606, such as refund liabilities and upfront payments to customers. Assets and liabilities under related Topics, such as deferred costs under Subtopic 340-40, *Other Assets and Deferred Costs — Contracts with Customers*, are not within the scope of amendments per ASU 2021-08. The Company adopted ASU 2021-08 prospectively effective January 1, 2023 and applied the amended requirements to the acquisition of Vivint Smart Home.

Recent Accounting Developments - Guidance Not Yet Adopted

ASU 2023-07 – In November 2023, the FASB issued ASU No. 2023-07, *Segment Reporting (Topic 280) – Improvements to Reportable Segment Disclosures*, or ASU 2023-07. The guidance in ASU 2023-07 enhances reportable segment disclosure requirements by requiring disclosure of significant segment expenses that are regularly provided to the chief operating decision maker and included within each reported measure of segment profit and loss, an amount and description of its composition for other segment items and interim disclosures of a reportable segment's profit or loss and assets. The amendments of ASU 2023-07 are effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted and should be applied retrospectively for all prior periods presented in the financial statements. The Company is currently evaluating the impact of adopting ASU 2023-07 on its disclosures.

ASU 2023-09 – In December 2023, the FASB issued ASU No. 2023-09, *Income Taxes (Topic 740) – Improvements to Income Tax Disclosures*, or ASU 2023-09. The guidance in ASU 2023-09 enhances income tax disclosures by requiring disclosure of specific categories in the effective tax rate reconciliation and additional information for reconciling items that meet a quantitative threshold. Further the amendments of ASU 2023-09 require certain disclosures on income tax expense and income taxes paid. ASU 2023-09 is effective for annual periods beginning after December 15, 2024, with early adoption permitted. The amendments of ASU 2023-09 may be applied on a prospective or retrospective basis. The Company is currently evaluating the impact of adopting ASU 2023-09 on its disclosures.

Note 3 — Revenue Recognition

The Company's policies with respect to its various revenue streams are detailed below. The Company generally applies the invoicing practical expedient to recognize revenue for the revenue streams detailed below, except in circumstances where the invoiced amount does not represent the value transferred to the customer.

Retail Revenue

Gross revenues for energy sales and services to retail customers are recognized as the Company transfers the promised goods and services to the customer. Payment terms are generally 15 to 60 days. For the majority of its electricity and natural gas contracts, the Company's performance obligation with the customer is satisfied over time and performance obligations for its electricity and natural gas products are recognized as the customer takes possession of the product. The Company also allocates the contract consideration to distinct performance obligations in a contract for which the timing of the revenue recognized is different. Additionally, customer discounts and incentives reduce the contract consideration and are recognized over the term of the contract.

Energy sales and services that have been delivered but not billed by period end are estimated. Accrued unbilled revenues are based on estimates of customer usage since the date of the last meter reading provided by the independent system operators, utilities, or electric distribution companies. Volume estimates are based on daily forecasted volumes and estimated customer usage by class. Unbilled revenues are calculated by multiplying these volume estimates by the applicable rate by customer class. Estimated amounts are adjusted when actual usage is known and billed.

As contracts for retail electricity and natural gas can be for multi-year periods, the Company has performance obligations under these contracts that have not yet been satisfied. These performance obligations have transaction prices that are both fixed and variable, and that vary based on the contract duration, customer type, inception date and other contract-specific factors. For the fixed price contracts, the amount of any unsatisfied performance obligations will vary based on customer usage, which will depend on factors such as weather and customer activity and therefore it is not practicable to estimate such amounts.

Vivint Smart Home Retail Revenue

Vivint Smart Home offers its subscribers combinations of smart home products and services, which together create an integrated smart home system that allows the Company's subscribers to monitor, control and protect their homes. As the products and services included in the subscriber's contract are integrated and highly interdependent, and because the products (including installation) and services must work together to deliver the monitoring, controlling and protection of their home, the Company has concluded that the products and services contracted for by the subscriber are generally not distinct within the context of the contract and, therefore, constitute a single, combined performance obligation. Revenues for this single, combined performance obligation are recognized on a straight-line basis over the subscriber's contract term, which is the period in which the parties to the contract have enforceable rights and obligations. The Company has determined that certain contracts that do not require a long-term commitment for monitoring services by the subscriber contain a material right to renew the contract,

because the subscriber does not have to purchase the products upon renewal. Proceeds allocated to the material right are recognized over the expected period of benefit. The majority of Vivint Smart Home's subscription contracts are five years and are generally non-cancelable. These contracts generally convert into month-to-month agreements at the end of the initial term, while some subscribers are month-to-month from inception. Payment for Vivint Smart Home services is generally due in advance on a monthly basis, with payment terms up to 30 days. Product sales and other one-time fees are invoiced to subscribers at time of sale. Revenues for any products or services that are considered separate performance obligations are recognized upon delivery. Payments received or billed in advance are reported as deferred revenues.

Energy Revenue

Both physical and financial transactions consist of revenues billed to a third-party at either market or negotiated contract terms to optimize the financial performance of the Company's generating facilities. Payment terms vary from 5 to 55 days. Electric energy revenue is recognized upon transmission to the customer over time, using the output method for measuring progress of satisfaction of performance obligations. Physical transactions, or the sale of generated electricity to meet supply and demand, are recorded on a gross basis in the Company's consolidated statements of operations. The Company applies the invoicing practical expedient in recognizing energy revenue. Under the practical expedient, revenue is recognized based on the invoiced amount which is equal to the value to the customer of NRG's performance obligation completed to date. Financial transactions used to hedge the sale of electricity are recorded net within revenues in the consolidated statements of operations in accordance with ASC 815.

Ancillary revenues, included in Other revenue, are recognized over time as the obligation is fulfilled, using the output method for measuring progress of satisfaction of performance obligations.

Capacity Revenue

The Company's largest sources of capacity revenues are capacity auctions in PJM and NYISO. Capacity revenues also include revenues billed to a third-party at either market or negotiated contract terms for making installed generation and demand response capacity available in order to satisfy system integrity and reliability requirements. Payment terms vary from 15 to 55 days. Capacity revenues are recognized over time, using the output method for measuring progress of satisfaction of performance obligations. The Company applies the invoicing practical expedient in recognizing capacity revenue. Under the practical expedient, revenue is recognized based on the invoiced amount which is equal to the value to the customer of NRG's performance obligation completed to date.

Performance Obligations

As of December 31, 2023, estimated future fixed fee performance obligations are \$1.4 billion, \$1.0 billion, \$756 million, \$468 million and \$176 million for fiscal years 2024, 2025, 2026, 2027 and 2028, respectively. These performance obligations include Vivint Smart Home products and services as well as cleared auction MWs in the PJM, NYISO and MISO capacity auctions. The cleared auction MWs are subject to penalties for non-performance.

Disaggregated Revenue

The following tables represent the Company's disaggregation of revenue from contracts with customers for the years ended December 31, 2023, 2022, and 2021:

(In millions)	For the Year Ended December 31, 2023					
	Texas	East	West/Services/ Other	Vivint Smart Home ^(a)	Corporate/ Eliminations	Total
Retail revenue						
Home ^(b)	\$ 6,538	\$ 2,195	\$ 1,890	\$ 1,549	\$ (1)	\$ 12,171
Business	3,492	9,751	2,053	—	—	15,296
Total retail revenue ^(b)	10,030	11,946	3,943	1,549	(1)	27,467
Energy revenue ^(c)	77	291	185	—	—	553
Capacity revenue ^(c)	—	197	2	—	(2)	197
Mark-to-market for economic hedging activities ^(d)	—	57	103	—	(16)	144
Contract amortization	—	(32)	—	—	—	(32)
Other revenue ^(c)	369	88	48	—	(11)	494
Total revenue	10,476	12,547	4,281	1,549	(30)	28,823
Less: Revenues accounted for under topics other than ASC 606 and ASC 815	—	17	35	—	—	52
Less: Realized and unrealized ASC 815 revenue	29	364	138	—	(16)	515
Total revenue from contracts with customers	\$ 10,447	\$ 12,166	\$ 4,108	\$ 1,549	\$ (14)	\$ 28,256

(a) Includes results of operations following the acquisition date of March 10, 2023

(b) Home includes Services and Vivint Smart Home

(c) The following amounts of retail, energy, capacity and other revenue relate to derivative instruments and are accounted for under ASC 815:

(In millions)	Texas	East	West/Services/ Other	Vivint Smart Home	Corporate/ Eliminations	Total
Retail revenue	\$ —	\$ 74	\$ —	\$ —	\$ —	\$ 74
Energy revenue	—	162	13	—	1	176
Capacity revenue	—	73	—	—	—	73
Other revenue	29	(2)	22	—	(1)	48

(d) Revenue relates entirely to unrealized gains and losses on derivative instruments accounted for under ASC 815

For the Year Ended December 31, 2022

(In millions)	Texas	East	West/Services/ Other	Corporate/ Eliminations	Total
Retail revenue					
Home ^(a)	\$ 6,388	\$ 2,088	\$ 2,286	\$ (1)	\$ 10,761
Business	3,229	13,768	1,964	—	18,961
Total retail revenue ^(b)	9,617	15,856	4,250	(1)	29,722
Energy revenue ^(b)	111	641	466	32	1,250
Capacity revenue ^(b)	—	232	40	—	272
Mark-to-market for economic hedging activities ^(c)	2	(30)	(56)	1	(83)
Contract amortization	—	(40)	1	—	(39)
Other revenue ^(b)	327	104	5	(15)	421
Total revenue	10,057	16,763	4,706	17	31,543
Less: Revenues accounted for under topics other than ASC 606 and ASC 815	—	(7)	41	1	35
Less: Realized and unrealized ASC 815 revenue	(2)	84	(93)	31	20
Total revenue from contracts with customers	\$ 10,059	\$ 16,686	\$ 4,758	\$ (15)	\$ 31,488

(a) Home includes Services

(b) The following amounts of energy, capacity and other revenue relate to derivative instruments and are accounted for under ASC 815:

(In millions)	Texas	East	West/Services/ Other	Corporate/ Eliminations	Total
Retail revenue	\$ —	\$ 110	\$ —	\$ —	\$ 110
Energy revenue	—	(31)	(8)	31	(8)
Capacity revenue	—	33	—	—	33
Other revenue	(4)	2	(29)	(1)	(32)

(c) Revenue relates entirely to unrealized gains and losses on derivative instruments accounted for under ASC 815

(In millions)	For the Year Ended December 31, 2021				
	Texas	East	West/Services/ Other	Corporate/ Eliminations	Total
Retail revenue					
Home ^(a)	\$ 5,659	\$ 1,832	\$ 2,059	\$ (1)	\$ 9,549
Business	2,745	10,030	1,237	—	14,012
Total retail revenue	8,404	11,862	3,296	(1)	23,561
Energy revenue ^(c)	329	508	371	7	1,215
Capacity revenue ^(c)	—	718	57	—	775
Mark-to-market for economic hedging activities ^(d)	(3)	(88)	(86)	13	(164)
Contract amortization	—	(26)	(4)	—	(30)
Other revenue ^{(b)(c)}	1,565	51	25	(9)	1,632
Total revenue	10,295	13,025	3,659	10	26,989
Less: Revenues accounted for under topics other than ASC 606 and ASC 815	—	(25)	3	—	(22)
Less: Realized and unrealized ASC 815 revenue	130	184	(96)	16	234
Total revenue from contracts with customers	\$ 10,165	\$ 12,866	\$ 3,752	\$ (6)	\$ 26,777

(a) Home includes Services

(b) Other Revenue in Texas includes ancillary revenues of \$1.3 billion driven by high pricing during Winter Storm Uri

(c) The following amounts of energy, capacity and other revenue relate to derivative instruments and are accounted for under ASC 815:

(In millions)	Texas	East	West/Services/ Other	Corporate/ Eliminations	Total
Energy revenue	\$ —	\$ 131	\$ 2	\$ 3	\$ 136
Capacity revenue	—	149	—	—	149
Other revenue	133	(8)	(12)	—	113

(d) Revenue relates entirely to unrealized gains and losses on derivative instruments accounted for under ASC 815

Contract Balances

The following table reflects the contract assets and liabilities included in the Company's balance sheet as of December 31, 2023 and 2022:

(In millions)	December 31, 2023	December 31, 2022
Capitalized contract costs ^(a)	\$ 706	\$ 126
Accounts receivable, net - Contracts with customers	3,395	4,704
Accounts receivable, net - Accounted for under topics other than ASC 606	136	64
Accounts receivable, net - Affiliate	11	5
Total accounts receivable, net	\$ 3,542	\$ 4,773
Unbilled revenues (included within Accounts receivable, net - Contracts with customers)	\$ 1,493	\$ 1,952
Deferred revenues ^(b)	\$ 1,634	\$ 186

(a) Amortization of capitalized contract costs for the years ended December 31, 2023, 2022 and 2021 were \$168 million, \$86 million and \$95 million, respectively

(b) Deferred revenues from contracts with customers for the years ended December 31, 2023 and 2022 were approximately \$1.6 billion and \$175 million, respectively. The increase in deferred revenue balances from December 31, 2023 to 2022 was primarily due to the acquisition of Vivint Smart Home

The revenue recognized from contracts with customers during the years ended December 31, 2023 and 2022 relating to the deferred revenue balance at the beginning of each period was \$168 million and \$184 million, respectively. The change in the revenue recognized from contracts with customers relating to the deferred revenue balances at the beginning of the years ended December 31, 2023 and 2022 was primarily due to the timing difference of when consideration was received and when the performance obligation was transferred.

The Company's capitalized contract costs consist of commission payments, broker fees and other costs that represent incremental costs of obtaining the contract with customers for which the Company expects to recover. Capitalized contract costs are amortized on a straight-line basis over the expected period of benefit of five years. As a practical expedient, the Company expenses the incremental costs of obtaining a contract if the amortization period of the asset would have been one year or less.

When the Company receives consideration from the customer that is in excess of the amount due, such consideration is reclassified to deferred revenue, which represents a contract liability. Smart home products and services performance obligations are recognized over the customer's contract term, which is generally three to five years. Energy contract liabilities are generally recognized to revenue in the next period as the Company satisfies its performance obligations.

Note 4 —Acquisitions and Dispositions

Acquisitions

2023 Acquisitions

Vivint Smart Home Acquisition

On March 10, 2023 (the "Acquisition Closing Date"), the Company completed the acquisition of Vivint Smart Home, Inc., pursuant to the Agreement and Plan of Merger, dated as of December 6, 2022, by and among the Company, Vivint Smart Home, Inc. and Jetson Merger Sub, Inc., a wholly-owned subsidiary of the Company ("Merger Sub") pursuant to which Merger Sub merged with and into Vivint Smart Home, Inc., with Vivint Smart Home, Inc. surviving the merger as a wholly-owned subsidiary of the Company. Dedicated to redefining the home experience with intelligent products and services, Vivint Smart Home brought approximately two million subscribers to NRG. Vivint Smart Home's single, expandable platform incorporates artificial intelligence and machine learning into its operating system and its vertically integrated business model includes hardware, software, sales, installation, customer service and technical support and professional monitoring, enabling superior subscriber experiences and a complete end-to-end smart home experience. The acquisition accelerated the realization of NRG's consumer-focused growth strategy and creates a leading essential home services platform fueled by market-leading brands, unparalleled insights, proprietary technologies and complementary sales channels.

NRG paid \$12 per share, or approximately \$2.6 billion in cash. The Company funded the acquisition using:

- proceeds of \$724 million from newly issued \$740 million 7.000% Senior Secured First Lien Notes due 2033, net of issuance costs and discount;
- proceeds of \$635 million from newly issued \$650 million 10.25% Series A Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock, net of issuance costs;
- proceeds of approximately \$900 million drawn from its Revolving Credit Facility and Receivables Securitization Facilities; and
- cash on hand.

In February 2023, the Company increased its Revolving Credit Facility by \$600 million to meet the additional liquidity requirements related to the acquisition. For further discussion, see Note 13, *Long-term Debt and Finance Leases*.

Acquisition costs of \$38 million and \$17 million for the years ended December 31, 2023 and 2022, respectively, are included in acquisition-related transaction and integration costs in the Company's consolidated statement of operations.

The acquisition has been recorded as a business combination under ASC 805, with identifiable assets and liabilities acquired recorded at their estimated Acquisition Closing Date fair value. The total consideration of \$2.623 billion includes:

	(In millions)
Vivint Smart Home, Inc. common shares outstanding as of March 10, 2023 of 216,901,639 at \$12.00 per share	\$ 2,603
Other Vivint Smart Home, Inc. equity instruments (Cash out RSUs and PSUs, Stock Appreciation Rights, Private Placement Warrants)	6
Total Cash Consideration	\$ 2,609
Fair value of acquired Vivint Smart Home, Inc. equity awards attributable to pre-combination service	14
Total Consideration	\$ 2,623

The purchase price was allocated as follows as of December 31, 2023:

	(In millions)
Current Assets	
Cash and cash equivalents	\$ 120
Accounts receivable, net	60
Inventory	113
Prepayments and other current assets	37
Total current assets	330
Property, plant and equipment, net	49
Other Assets	
Operating lease right-of-use assets, net	35
Goodwill ^(a)	3,494
Intangible assets, net ^(b) :	
Customer relationships	1,740
Technology	860
Trade names	160
Sales channel contract	10
Intangible assets, net	2,770
Deferred income taxes	382
Other non-current assets	14
Total other assets	6,695
Total Assets	\$ 7,074
Current Liabilities	
Current portion of long-term debt and finance leases	\$ 14
Current portion of operating lease liabilities	13
Accounts payable	109
Derivative instruments	80
Deferred revenue current	518
Accrued expenses and other current liabilities	207
Total current liabilities	941
Other Liabilities	
Long-term debt and finance leases	2,572
Non-current operating lease liabilities	28
Derivative instruments	32
Deferred income taxes	18
Deferred revenue non-current	837
Other non-current liabilities	23
Total other liabilities	3,510
Total Liabilities	\$ 4,451
Vivint Smart Home Purchase Price	\$ 2,623

(a) Goodwill arising from the acquisition is attributed to the value of the platform acquired, cross-selling opportunities, subscriber growth and the synergies expected from combining the operations of Vivint Smart Home with NRG's existing businesses. None of the goodwill recorded will be deductible for tax purposes

(b) The weighted average amortization period for total amortizable intangible assets is approximately ten years

Fair Value Measurement of Intangible Assets

The fair values of intangible assets as of the Acquisition Closing Date were measured primarily based on significant inputs that are observable and unobservable in the market and thus represent Level 2 and Level 3 measurements, respectively. Significant inputs were as follows:

Customer relationships – Customer relationships, reflective of Vivint Smart Home's subscriber base, were valued using an excess earning method of the income approach, and is classified as Level 3. Under this approach, the Company estimated the present value of expected future cash flows resulting from existing subscriber relationships, considering attrition and charges for contributory assets (such as net working capital, fixed assets, workforce, trade names and technology) utilized in the business, discounted based on the required rate of return on the acquired intangible asset. The subscriber relationships are amortized to depreciation and amortization, ratably based on discounted future cash flows. The weighted average amortization period is twelve years.

Technology – Developed technology was valued using a "relief from royalty" method of the income approach, and is classified as Level 3. Under this approach, the fair value was estimated to be the present value of royalties saved which assumed the value of the asset based on discounted cash flows of the amount that would be paid by a hypothetical market participant had they not owned the asset and instead licensed the asset from another company. The estimated cash flows from the developed technology considered the obsolescence factor and was discounted based on the required rate of return on the acquired intangible asset. The developed technology is amortized to depreciation and amortization, ratably based on discounted future cash flows. The weighted average amortization period is five years.

Trade names – Trade names were valued using a "relief from royalty" method of the income approach, and is classified as Level 3. Under this approach, the fair value is estimated to be the present value of royalties saved which assumed the value of the asset based on discounted cash flows of the amount that would be paid by a hypothetical market participant had they not owned the asset and instead licensed the asset from another company. The estimated cash flows from the trade names considered the expected probable use of the asset and was discounted based on the required rate of return on the acquired intangible asset. The trade names are amortized to depreciation and amortization, on a straight line basis, over an amortization period of ten years.

Fair Value Measurement of Acquired Vivint Smart Home Debt

The Company acquired \$2.7 billion in aggregate principal of Vivint Smart Home's 2027 Senior Secured Notes, 2029 Senior notes and 2028 Senior Secured Term Loan (together, the "Acquired Vivint Smart Home Debt") which were recorded at fair value as of the Acquisition Closing Date. The difference between the fair value at the Acquisition Closing Date and the principal outstanding of the Acquired Vivint Smart Home Debt, of \$152 million, is being amortized through interest expense over the remaining term of the debt. The Acquired Vivint Smart Home Debt is classified as Level 2 and were measured at fair value using observable market inputs based on interest rates at the Acquisition Closing Date. For additional discussion, see Note 13, *Long-term Debt and Finance Leases*.

Fair Value Measurement of Derivatives Liabilities

The derivative liabilities are recorded in connection with the contractual future payment obligations with the financing providers under Vivint Smart Home's Consumer Financing Program. The fair values of the derivatives liabilities as of the Acquisition Closing Date were valued using a discounted cash flow model, with inputs consisting of available market data, such as market yield discount rates, as well as unobservable internally derived assumptions, such as collateral prepayment rates, collateral default rates and credit loss rates. These derivatives are classified as Level 3 and changes to the fair value are recorded through other income, net in the consolidated statement of operations. For additional discussion, see Note 6, *Accounting for Derivative Instruments and Hedging Activities*.

Supplemental Pro Forma Financial Information

The following table provides unaudited pro forma combined financial information of NRG and Vivint Smart Home, after giving effect to the Vivint Smart Home acquisition and related financing transactions as if they had occurred on January 1, 2021. The pro forma financial information has been prepared for illustrative and informational purposes only, and is not intended to project future operating results or be indicative of what the Company's financial performance would have been had the transactions occurred on the date indicated. No effect has been given to prospective operating synergies.

(In millions)	For the Year Ended December 31,		
	2023	2022	2021
Total operating revenues	\$ 29,109	\$ 33,225	\$ 28,468
Net (loss)/income	(3)	1,136	1,574

Amounts above reflect certain pro forma adjustments that were directly attributable to the Vivint Smart Home acquisition. These adjustments include the following:

- (i) Income statement effects of fair value adjustments based on the purchase price allocation including amortization of intangible assets, reversal of historical Vivint Smart Home amortization of capitalized contract costs and reversal of historical Vivint Smart Home other income recorded for the change in fair value of warrant derivative liabilities, as the warrants are assumed to be cashed out upon the Acquisition Closing Date.
- (ii) One-time expenses directly related to the acquisition.
- (iii) Adjustments to reflect all acquisition and related transactions costs in the year ended December 31, 2021.
- (iv) Interest expense assumes the financing transactions directly attributable to the Vivint Smart Home acquisition occurred on January 1, 2021.
- (v) Adjustments related to recording Vivint Smart Home's historical debt at Acquisition Closing Date fair value.
- (vi) Adjustments to reflect the write-off of short-term deferred financing costs related to the bridge facility put in place for the acquisition prior to securing permanent financing during the year ended December 31, 2021 instead of the year ended December 31, 2023.
- (vii) Income tax effect of the acquisition accounting adjustments and financing adjustments (adjusted for permanent book/tax differences) based on combined blended federal/state tax rate for all periods presented.

2021 Acquisitions

Direct Energy Acquisition

On January 5, 2021, the Company acquired all of the issued and outstanding common shares of Direct Energy, which had been a North American subsidiary of Centrica plc. Direct Energy is a leading retail provider of electricity, natural gas, and home and business energy related products and services in North America, with operations in all 50 U.S. states and 8 Canadian provinces. The acquisition increased NRG's retail portfolio by over 3 million customers and strengthened its integrated model. It also broadened the Company's presence in the Northeast and into states and locales where it did not previously operate, supporting NRG's objective to diversify its business.

The Company paid an aggregate purchase price of \$3.625 billion in cash and total purchase price adjustment of \$99 million, resulting in an adjusted purchase price of \$3.724 billion.

Acquisition costs of \$25 million for the year ended December 31, 2021 are included in acquisition-related transaction and integration costs in the Company's consolidated statement of operations.

The acquisition has been recorded as a business combination under ASC 805 with identifiable assets acquired and liabilities assumed recorded at their estimated fair values on the acquisition date. The purchase price was allocated as follows as of December 31, 2021:

	(In millions)
Current Assets	
Cash and cash equivalents	\$ 152
Funds deposited by counterparties	21
Restricted cash	9
Accounts receivable, net	1,802
Inventory	106
Derivative instruments	1,014
Cash collateral paid in support of energy risk management activities	233
Prepayments and other current assets	173
Total current assets	3,510
Property, plant and equipment, net	151
Other Assets	
Goodwill ^(a)	1,250
Intangible assets, net:	
Customer relationships ^(b)	1,277
Customer and supply contracts ^(b)	610
Trade names ^(b)	310
Renewable energy credits	124
Total intangible assets, net	2,321
Derivative instruments	531
Other non-current assets	31
Total other assets	4,133
Total Assets	\$ 7,794
Current Liabilities	
Accounts payable	\$ 1,116
Derivative instruments	1,266
Cash collateral received in support of energy risk management activities	21
Accrued expenses and other current liabilities	670
Total current liabilities	3,073
Other Liabilities	
Derivative instruments	562
Deferred income taxes	320
Other non-current liabilities	115
Total other liabilities	997
Total Liabilities	\$ 4,070
Direct Energy Purchase Price	\$ 3,724

(a) Goodwill arising from the acquisition was attributed to the value of the platform acquired and the synergies expected from combining the operations of Direct Energy with NRG's existing businesses. Goodwill was allocated to the Texas, East, and West/Services/Other segments of \$427 million, \$648 million and \$175 million, respectively. Goodwill deductible for tax purposes was \$322 million

(b) As of January 5, 2021, the weighted average amortization period for total amortizable intangible assets was 12 years

Dispositions

2023 Dispositions

Sale of the 44% equity interest in STP

On November 1, 2023, the Company closed on the sale of its 44% equity interest in STP to Constellation Energy Generation ("Constellation"). Proceeds of \$1.75 billion were reduced by working capital and other adjustments of \$96 million, resulting in net proceeds of \$1.654 billion. The Company recorded a gain on the sale of \$1.2 billion within the Texas region of operations. For discussion of the litigation matter related to the transaction, see Note 23, *Commitments and Contingencies*.

The Company recorded income before income taxes from its 44% equity interest in STP as follows:

(In millions)	For the Year Ended December 31,		
	2023	2022	2021
Income before income taxes ^(a)	\$ 206	\$ 362	\$ 829

(a) Excludes the impact of the Company's hedges at the portfolio level

Sale of Gregory

On October 2, 2023, the Company closed on the sale of its 100% ownership in the Gregory natural gas generating facility in Texas for \$102 million. The Company recorded a gain on the sale of \$82 million.

Sale of Astoria

On January 6, 2023, the Company closed on the sale of land and related generation assets from the Astoria site, within the East region of operations, for proceeds of \$212 million, subject to transaction fees of \$3 million and certain indemnifications, resulting in a \$199 million gain. As part of the transaction, NRG entered into an agreement to lease the land back for the purpose of operating the Astoria gas turbines. Decommissioning was completed in December 2023 and the lease agreement has been terminated.

2022 Dispositions

Sale of Watson

On June 1, 2022, the Company closed on the sale of its 49% ownership in the Watson natural gas generating facility for \$59 million. The Company recorded a gain on the sale of \$46 million.

2021 Dispositions

Sale of 4,850 MW of Fossil generating assets

On December 1, 2021, the Company closed the previously announced sale of approximately 4,850 MWs of fossil generating assets from its East and West regions to Generation Bridge, an affiliate of ArcLight Capital Partners. Proceeds of \$760 million were reduced by working capital and other adjustments of \$140 million, resulting in net proceeds of \$620 million. The Company recorded a gain of \$207 million from the sale, which includes the \$39 million indemnification liability recorded as discussed below. As part of the transaction, NRG entered into a tolling agreement for the 866 MW Arthur Kill plant in New York City through April 2025.

As part of the agreement to sell the fossil generating assets, NRG has agreed to indemnify Generation Bridge for certain future environmental compliance costs up to \$39 million. The indemnity term will expire on December 1, 2028. The Company has recorded the liability within accrued expenses and other current liabilities and other non-current liabilities.

Sale of Agua Caliente

On February 3, 2021, the Company closed on the sale of its 35% ownership in the Agua Caliente solar project to Clearway Energy, Inc. for \$202 million. NRG recognized a gain on the sale of \$17 million, including cash disposed of \$7 million.

Note 5 — Fair Value of Financial Instruments

For cash and cash equivalents, funds deposited by counterparties, restricted cash, accounts and other receivables, accounts payable and cash collateral paid and received in support of energy risk management activities, the carrying amount approximates fair value because of the short-term maturity of those instruments and are classified as Level 1 within the fair value hierarchy.

The estimated carrying value and fair value of the Company's long-term debt, including current portion, is as follows:

(In millions)	As of December 31,			
	2023		2022	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Convertible Senior Notes	\$ 575	\$ 739	\$ 575	\$ 576
Other long-term debt, including current portion	10,219	9,835	7,523	6,432
Total long-term debt, including current portion ^(a)	\$ 10,794	\$ 10,574	\$ 8,098	\$ 7,008

(a) Excludes deferred financing costs, which are recorded as a reduction to long-term debt on the Company's consolidated balance sheets

The fair value of the Company's publicly-traded long-term debt and the Vivint Smart Home Senior Secured Term Loan are based on quoted market prices and are classified as Level 2 within the fair value hierarchy.

Fair Value Accounting under ASC 820

ASC 820 establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three levels as follows:

- Level 1 — quoted prices (unadjusted) in active markets for identical assets or liabilities that the Company has the ability to access as of the measurement date. NRG's financial assets and liabilities utilizing Level 1 inputs include active exchange-traded securities, energy derivatives, and trust fund investments.
- Level 2 — inputs other than quoted prices included within Level 1 that are directly observable for the asset or liability or indirectly observable through corroboration with observable market data. NRG's financial assets and liabilities utilizing Level 2 inputs include fixed income securities, exchange-based derivatives, and over the counter derivatives such as swaps, options and forward contracts.
- Level 3 — unobservable inputs for the asset or liability only used when there is little, if any, market activity for the asset or liability at the measurement date. NRG's financial assets and liabilities utilizing Level 3 inputs include infrequently-traded, non-exchange-based derivatives and commingled investment funds, and are measured using present value pricing models.

In accordance with ASC 820, the Company determines the level in the fair value hierarchy within which each fair value measurement in its entirety falls, based on the lowest level input that is significant to the fair value measurement in its entirety.

Recurring Fair Value Measurements

Derivative assets and liabilities, debt securities, equity securities and trust fund investments, which were comprised of various U.S. debt and equity securities, are carried at fair market value.

The following tables present assets and liabilities measured and recorded at fair value on the Company's consolidated balance sheets on a recurring basis and their level within the fair value hierarchy:

(In millions)	As of December 31, 2023			
	Fair Value			
	Total	Level 1	Level 2	Level 3
Investments in securities (classified within other current and non-current assets)	\$ 21	\$ —	\$ 21	\$ —
Derivative assets:				
Interest rate contracts	12	—	12	—
Foreign exchange contracts	5	—	5	—
Commodity contracts	6,138	1,334	4,470	334
Equity securities measured using net asset value practical expedient (classified within other non-current assets)	6			
Total assets	<u>\$ 6,182</u>	<u>\$ 1,334</u>	<u>\$ 4,508</u>	<u>\$ 334</u>
Derivative liabilities:				
Interest rate contracts	\$ 8	\$ —	\$ 8	\$ —
Foreign exchange contracts	9	—	9	—
Commodity contracts	5,356	1,413	3,728	215
Consumer Financing Program	134	—	—	134
Total liabilities	<u>\$ 5,507</u>	<u>\$ 1,413</u>	<u>\$ 3,745</u>	<u>\$ 349</u>

(In millions)	As of December 31, 2022			
	Fair Value			
	Total	Level 1	Level 2	Level 3
Investments in securities (classified within other current and non-current assets)	\$ 19	\$ —	\$ 19	\$ —
Nuclear trust fund investments:				
Cash and cash equivalents	15	15	—	—
U.S. government and federal agency obligations	86	84	2	—
Federal agency mortgage-backed securities	101	—	101	—
Commercial mortgage-backed securities	35	—	35	—
Corporate debt securities	114	—	114	—
Equity securities	403	403	—	—
Foreign government fixed income securities	1	—	1	—
Other trust fund investments (classified within other non-current assets):				
U.S. government and federal agency obligations	1	1	—	—
Derivative assets:				
Foreign exchange contracts	18	—	18	—
Commodity contracts	11,976	1,929	8,796	1,251
Measured using net asset value practical expedient:				
Equity securities - nuclear trust fund investments	83			
Equity securities (classified within other non-current assets)	6			
Total assets	<u>\$ 12,858</u>	<u>\$ 2,432</u>	<u>\$ 9,086</u>	<u>\$ 1,251</u>
Derivative liabilities:				
Foreign exchange contracts	\$ 2	\$ —	\$ 2	\$ —
Commodity contracts	8,439	1,244	6,449	746
Total liabilities	<u>\$ 8,441</u>	<u>\$ 1,244</u>	<u>\$ 6,451</u>	<u>\$ 746</u>

The following table reconciles, for the years ended December 31, 2023 and 2022, the beginning and ending balances for financial instruments that are recognized at fair value in the consolidated financial statements using significant unobservable inputs, for commodity derivatives:

(In millions)	Fair Value Measurement Using Significant Unobservable Inputs (Level 3)	
	Commodity Derivatives ^(a)	
	For the Year Ended December 31,	
	2023	2022
Beginning balance	\$ 505	\$ 293
Total (losses)/gains realized/unrealized included in earnings	(164)	53
Purchases	42	(110)
Transfers into Level 3 ^(b)	78	264
Transfers out of Level 3 ^{(b)(c)}	(342)	5
Ending balance	<u>\$ 119</u>	<u>\$ 505</u>
(Losses)/gains for the period included in earnings attributable to the change in unrealized gains or losses relating to assets or liabilities still held as of year-end	<u>\$ (46)</u>	<u>\$ 204</u>

- (a) Consists of derivatives assets and liabilities, net, excluding derivative liabilities from Consumer Financing Program, which are presented in a separate table below
- (b) Transfers into/out of Level 3 are related to the availability of consensus pricing and external broker quotes, and are valued as of the end of the reporting period. All transfers into/out of Level 3 are from/to Level 2
- (c) For the year ended December 31, 2023, due to the change to use consensus pricing, there was a decrease in the number of contracts valued with prices provided by models and other valuation techniques, which resulted in a large transfer out of Level 3

Realized and unrealized gains and losses included in earnings that are related to the commodity derivatives are recorded in revenues and cost of operations.

The following table reconciles, for the year ended December 31, 2023, the beginning and ending balances of the contractual obligations from the Consumer Financing Program that are recognized at fair value in the condensed consolidated financial statements, using significant unobservable inputs:

(In millions)	Fair Value Measurement Using Significant Unobservable Inputs (Level 3)	
	Consumer Financing Program	
	For the Year Ended December 31, 2023	
Beginning balance	\$	—
Contractual obligations added from the acquisition of Vivint Smart Home		(112)
New contractual obligations		(68)
Settlements		62
Total losses included in earnings		(16)
Ending balance	\$	(134)

Gains and losses that are related to the Consumer Financing Program derivative are recorded in other income, net.

Non-derivative fair value measurements

For the year ended December 31, 2022 and through the sale of STP on November 1, 2023, the trust fund investments were held primarily to satisfy NRG's nuclear decommissioning obligations. These trust fund investments held debt and equity securities directly and equity securities indirectly through commingled funds. The fair values of equity securities held directly by the trust funds were based on quoted prices in active markets and were categorized in Level 1. In addition, U.S. government and federal agency obligations were categorized as Level 1 because they traded in a highly liquid and transparent market. The fair values of corporate debt securities were based on evaluated prices that reflected observable market information, such as actual trade information of similar securities, adjusted for observable differences and were categorized in Level 2. Certain equity securities, classified as commingled funds, were analogous to mutual funds, were maintained by investment companies, and held certain investments in accordance with a stated set of fund objectives. The fair value of the equity securities classified as commingled funds were based on net asset values per fund share (the unit of account), derived from the quoted prices in active markets of the underlying equity securities. However, because the shares in the commingled funds were not publicly quoted and not traded in an active market, the commingled funds were measured using net asset value practical expedient. See also Note 7, *Nuclear Decommissioning Trust Fund*.

Derivative fair value measurements

The Company's contracts consist of non-exchange-traded contracts valued using prices provided by external sources and exchange-traded contracts with readily available quoted market prices. Beginning in of the fourth quarter of 2023 and as of December 31, 2023, the fair value of non-exchange traded contracts were based on consensus pricing provided by independent pricing services. The pricing data was compiled from market makers with longer dated tenors as compared to broker quotes, enhancing reliability and increasing transparency.

Prior to the fourth quarter of 2023, the Company valued derivatives based on price quotes from brokers in active markets who regularly facilitate those transactions. For the majority of markets that NRG participates in, the Company would receive broker quotes from multiple sources and reflected the average of the bid-ask mid-point prices. The terms for which such price information is available vary by commodity, region and product. The Company believes both sources of price quotes are executable.

The remainder of the assets and liabilities represents contracts for which external sources or observable market quotes are not available. These contracts are valued based on various valuation techniques including but not limited to internal models based on a fundamental analysis of the market and extrapolation of observable market data with similar characteristics. As of December 31, 2023, contracts valued with prices provided by models and other valuation techniques make up 5% of derivative assets and 6% of derivative liabilities. As a result of NRG switching to consensus pricing as of December 31, 2023, there was a significant decrease in the number of contracts valued with prices provided by models and other valuation techniques. The fair value of each contract is discounted using a risk free interest rate. In addition, the Company applies a credit reserve to reflect credit risk, which for foreign exchange contracts and interest rate swaps is calculated utilizing the bilateral method based on published default probabilities. For commodities, to the extent that NRG's net exposure under a specific master agreement is an asset, the Company uses the counterparty's default swap rate. If the exposure under a specific master agreement is a liability, the Company uses NRG's default swap rate. For foreign exchange contracts, interest rate swaps, and commodities, the credit reserve is added to the discounted fair value to reflect the exit price that a market participant would be willing to receive to assume NRG's liabilities or that a market participant would be willing to pay for NRG's assets. As of December 31, 2023, the credit reserve resulted in a \$18 million decrease primarily within cost of operations. As of December 31, 2022, the credit reserve resulted in \$9 million decrease primarily within cost of operations.

The fair values in each category reflect the level of forward prices and volatility factors as of December 31, 2023 and may change as a result of changes in these factors. Management uses its best estimates to determine the fair value of commodity and derivative contracts NRG holds and sells. These estimates consider various factors including closing exchange, consensus and over-the-counter price quotations, time value, volatility factors and credit exposure. It is possible, however, that future market prices could vary from those used in recording assets and liabilities from energy marketing and trading activities and such variations could be material.

NRG's significant positions classified as Level 3 include physical and financial natural gas, power, capacity contracts and renewable energy certificates executed in illiquid markets as well as financial transmission rights ("FTRs"). The significant unobservable inputs used in developing fair value include illiquid natural gas and power location pricing, which is derived as a basis to liquid locations. The basis spread is based on observable market data when available or derived from historic prices and forward market prices from similar observable markets when not available. Forward capacity prices are based on market information, forecasted future electricity demand and supply, past auctions and internally developed pricing models. Renewable energy certificate prices are based on market information and internally developed pricing models. For FTRs, NRG uses the most recent auction prices to derive the fair value. The Consumer Financing Program derivatives are valued using a discounted cash flow model, with inputs consisting of available market data, such as market yield discount rates, as well as unobservable internally derived assumptions, such as collateral prepayment rates, collateral default rates and credit loss rates.

The following tables quantify the significant unobservable inputs used in developing the fair value of the Company's Level 3 positions as of December 31, 2023 and 2022:

Significant Unobservable Inputs							
December 31, 2023							
(in millions, except as noted)	Fair Value		Valuation Technique	Significant Unobservable Input	Input/Range		
	Assets	Liabilities			Low	High	Weighted Average
Natural Gas Contracts	\$ 39	\$ 65	Discounted Cash Flow	Forward Market Price (\$ per MMBtu)	\$ 1	\$ 15	\$ 3
Power Contracts	197	66	Discounted Cash Flow	Forward Market Price (\$ per MWh)	1	210	47
Capacity Contracts	21	33	Discounted Cash Flow	Forward Market Price (\$ per MW/Day)	49	658	285
Renewable Energy Certificates	58	14	Discounted Cash Flow	Forward Market Price (\$ per Certificate)	2	320	15
FTRs	19	37	Discounted Cash Flow	Auction Prices (\$ per MWh)	(58)	252	0
Consumer Financing Program	—	134	Discounted Cash Flow	Collateral Default Rates	0.43%	93.30%	8.12%
			Discounted Cash Flow	Collateral Prepayment Rates	2.00%	3.00%	2.95%
			Discounted Cash Flow	Credit Loss Rates	6.00%	60.00%	12.57%
	<u>\$ 334</u>	<u>\$ 349</u>					

Significant Unobservable Inputs							
December 31, 2022							
(in millions, except as noted)	Fair Value			Significant Unobservable Input	Input/Range		
	Assets	Liabilities	Valuation Technique		Low	High	Weighted Average
Natural Gas Contracts	\$ 340	\$ 448	Discounted Cash Flow	Forward Market Price (\$ per MMBtu)	\$ 2	\$ 48	\$ 6
Power Contracts	843	216	Discounted Cash Flow	Forward Market Price (\$ per MWh)	3	431	48
FTRs	68	82	Discounted Cash Flow	Auction Prices (\$ per MWh)	(32)	610	0
	<u>\$ 1,251</u>	<u>\$ 746</u>					

The following table provides sensitivity of fair value measurements to increases/(decreases) in significant unobservable inputs as of December 31, 2023 and 2022:

Significant Unobservable Input	Position	Change In Input	Impact on Fair Value Measurement
Forward Market Price Natural Gas/Power/Capacity/Renewable Energy Certificates	Buy	Increase/(Decrease)	Higher/(Lower)
Forward Market Price Natural Gas/Power/Capacity/Renewable Energy Certificates	Sell	Increase/(Decrease)	Lower/(Higher)
FTR Prices	Buy	Increase/(Decrease)	Higher/(Lower)
FTR Prices	Sell	Increase/(Decrease)	Lower/(Higher)
Collateral Default Rates	n/a	Increase/(Decrease)	Higher/(Lower)
Collateral Prepayment Rates	n/a	Increase/(Decrease)	Lower/(Higher)
Credit Loss Rates	n/a	Increase/(Decrease)	Higher/(Lower)

Under the guidance of ASC 815, entities may choose to offset cash collateral posted or received against the fair value of derivative positions executed with the same counterparties under the same master netting agreements. The Company has chosen not to offset positions as defined in ASC 815. As of December 31, 2023, the Company recorded \$441 million of cash collateral posted and \$84 million of cash collateral received on its balance sheet.

Concentration of Credit Risk

In addition to the credit risk discussion as disclosed in Note 2, *Summary of Significant Accounting Policies*, the following item is a discussion of the concentration of credit risk for the Company's financial instruments. Credit risk relates to the risk of loss resulting from non-performance or non-payment by counterparties pursuant to the terms of their contractual obligations. The Company monitors and manages credit risk through credit policies that include: (i) an established credit approval process; (ii) a daily monitoring of counterparties' credit limits; (iii) the use of credit mitigation measures such as margin, collateral, prepayment arrangements, or volumetric limits; (iv) the use of payment netting agreements; and (v) the use of master netting agreements that allow for the netting of positive and negative exposures of various contracts associated with a single counterparty. Risks surrounding counterparty performance and credit could ultimately impact the amount and timing of expected cash flows. The Company seeks to mitigate counterparty risk by having a diversified portfolio of counterparties. The Company also has credit protection within various agreements to call on additional collateral support if and when necessary. Cash margin is collected and held at the Company to cover the credit risk of the counterparty until positions settle.

Counterparty Credit Risk

As of December 31, 2023, counterparty credit exposure, excluding credit exposure from RTOs, ISOs, and registered commodity exchanges and certain long-term agreements, was \$1.6 billion and NRG held collateral (cash and letters of credit) against those positions of \$426 million, resulting in a net exposure of \$1.2 billion. NRG periodically receives collateral from counterparties in excess of their exposure. Collateral amounts shown include such excess while net exposure shown excludes excess collateral received. Approximately 63% of the Company's exposure before collateral is expected to roll off by the end of 2025. Counterparty credit exposure is valued through observable market quotes and discounted at a risk free interest rate. The following tables highlight net counterparty credit exposure by industry sector and by counterparty credit quality. Net counterparty credit exposure is defined as the aggregate net asset position for NRG with counterparties where netting is permitted under the enabling agreement and includes all cash flow, mark-to-market and NPNS, and non-derivative transactions. The exposure is shown net of collateral held and includes amounts net of receivables or payables.

Category	Net Exposure ^{(a) (b)} (% of Total)
Utilities, energy merchants, marketers and other	80 %
Financial institutions	20
Total	100 %

Category	Net Exposure ^{(a) (b)} (% of Total)
Investment grade	44 %
Non-Investment grade/Non-Rated	56
Total	100 %

(a) Counterparty credit exposure excludes coal transportation contracts because of the unavailability of market prices

(b) The figures in the tables above exclude potential counterparty credit exposure related to RTOs, ISOs, registered commodity exchanges and certain long term contracts

The Company currently has exposure to one wholesale counterparty in excess of 10% of the total net exposure discussed above as of December 31, 2023. Changes in hedge positions and market prices will affect credit exposure and counterparty concentration.

RTOs and ISOs

The Company participates in the organized markets of CAISO, ERCOT, AESO, IESO, ISO-NE, MISO, NYISO and PJM, known as RTOs or ISOs. Trading in the majority of these markets is approved by FERC, whereas in the case of ERCOT, it is approved by the PUCT, and whereas in the case of AESO and IESO, both exist provincially with AESO primarily subject to Alberta Utilities Commission and the IESO subject to the Ontario Energy Board. These ISOs may include credit policies that, under certain circumstances, require that losses arising from the default of one member on spot market transactions be shared by the remaining participants. As a result, the counterparty credit risk to these markets is limited to NRG's share of the overall market and are excluded from the above exposures.

Exchange Traded Transactions

The Company enters into commodity transactions on registered exchanges, notably ICE, NYMEX and Nodal. These clearinghouses act as the counterparty and transactions are subject to extensive collateral and margining requirements. As a result, these commodity transactions have limited counterparty credit risk.

Long-Term Contracts

Counterparty credit exposure described above excludes credit risk exposure under certain long term contracts, primarily solar under Renewable PPAs. As external sources or observable market quotes are not always available to estimate such exposure, the Company values these contracts based on various techniques including, but not limited to, internal models based on a fundamental analysis of the market and extrapolation of observable market data with similar characteristics. Based on these valuation techniques, as of December 31, 2023, aggregate credit risk exposure managed by NRG to these counterparties was approximately \$882 million for the next five years.

Retail Customer Credit Risk

The Company is exposed to retail credit risk through the Company's retail electricity and gas providers, which serve Home and Business customers. Retail credit risk results in losses when a customer fails to pay for services rendered. The losses may result from both nonpayment of customer accounts receivable and the loss of in-the-money forward value. The Company manages retail credit risk through the use of established credit policies that include monitoring of the portfolio and the use of credit mitigation measures such as deposits or prepayment arrangements.

As of December 31, 2023, the Company's retail customer credit exposure to Home and Business customers was diversified across many customers and various industries, as well as government entities. Current economic conditions may affect the Company's customers' ability to pay bills in a timely manner, which could increase customer delinquencies and may lead to an increase in credit losses. The Company's provision for credit losses was \$251 million, \$11 million, and \$698 million for the years ended December 31, 2023, 2022, and 2021, respectively. During the year ended December 31, 2022, the provision for credit losses included the Company's loss mitigation efforts recognized as income of \$126 million related to Winter Storm Uri. During the year ended December 31, 2021, the provision for credit losses included \$596 million of expenses due to the impacts of Winter Storm Uri.

Note 6 — Accounting for Derivative Instruments and Hedging Activities

ASC 815 requires the Company to recognize all derivative instruments on the balance sheet as either assets or liabilities and to measure them at fair value each reporting period unless they qualify for a NPNS exception. The Company may elect to designate certain derivatives as cash flow hedges, if certain conditions are met, and defer the change in fair value of the derivatives to accumulated OCI, until the hedged transactions occur and are recognized in earnings.

For derivatives that are not designated as cash flow hedges or do not qualify for hedge accounting treatment, the changes in the fair value will be immediately recognized in earnings. Certain derivative instruments may qualify for the NPNS exception and are therefore exempt from fair value accounting treatment. ASC 815 applies to NRG's energy related commodity contracts, foreign exchange contracts, interest rate swaps and Consumer Financing Program.

As the Company engages principally in the trading and marketing of its generation assets and retail operations, some of NRG's commercial activities qualify for NPNS accounting. Most of the retail load contracts either qualify for the NPNS exception or fail to meet the criteria for a derivative and the majority of the retail supply and fuels supply contracts are recorded under mark-to-market accounting. All of NRG's hedging and trading activities are subject to limits within the Company's Risk Management Policy.

Energy-Related Commodities

To manage the commodity price risk associated with the Company's competitive supply activities and the price risk associated with wholesale power sales from the Company's electric generation facilities and retail power and gas sales from NRG's retail operations, NRG enters into a variety of derivative and non-derivative hedging instruments, utilizing the following:

- Forward contracts, which commit NRG to purchase or sell energy commodities or fuels in the future;
- Futures contracts, which are exchange-traded standardized commitments to purchase or sell a commodity or financial instrument;
- Swap agreements, which require payments to or from counterparties based upon the differential between two prices for a predetermined contractual, or notional, quantity;
- Option contracts, which convey to the option holder the right but not the obligation to purchase or sell a commodity; and
- Weather derivative products used to mitigate a portion of lost revenue due to weather.

The objectives for entering into derivative contracts designated as hedges include:

- Fixing the price of a portion of anticipated power and gas purchases for the Company's retail sales;
- Fixing the price for a portion of anticipated future electricity sales that provides an acceptable return on the Company's electric generation operations; and
- Fixing the price of a portion of anticipated fuel purchases for the operation of the Company's power plants.

These contracts are recognized on the balance sheet at fair value and changes in the fair value of these derivative financial instruments are recognized in earnings.

As of December 31, 2023, NRG's derivative assets and liabilities consisted primarily of the following:

- Forward and financial contracts for the purchase/sale of electricity and related products economically hedging NRG's generation assets' forecasted output or NRG's retail load obligations through 2036;
- Forward and financial contracts for the purchase of fuel commodities relating to the forecasted usage of NRG's generation assets through 2025;
- Other energy derivatives instruments extending through 2029.

Also, as of December 31, 2023, NRG had other energy-related contracts that did not meet the definition of a derivative instrument or qualified for the NPNS exception and were therefore exempt from fair value accounting treatment as follows:

- Load-following forward electric sale contracts extending through 2036;
- Load-following forward natural gas purchase and sale contracts extending through 2032;
- Power tolling contracts through 2036;
- Coal purchase contracts through 2024;
- Power transmission contracts through 2029;
- Natural gas transportation contracts through 2034;
- Natural gas storage agreements through 2030; and
- Coal transportation contracts through 2029.

Foreign Exchange Contracts

In order to mitigate foreign exchange risk primarily associated with the purchase of USD denominated natural gas for the Company's Canadian business, NRG enters into foreign exchange contract agreements through 2027.

Interest Rate Swaps

NRG is exposed to changes in interest rate through the Company's issuance of variable rate debt. To manage the Company's interest rate risk, NRG enters into interest rate swap agreements. In the first quarter of 2023, the Company entered into \$1.0 billion of interest rate swaps through 2027 to hedge the floating rate on the Term Loan acquired with the Vivint Smart Home acquisition. Additionally, in the first quarter of 2023, the Company had entered into interest rate swaps to hedge the floating rate on the Revolving Credit Facility extending through 2024, which was fully terminated in conjunction with the pay down of the Revolving Credit Facility.

Consumer Financing Program

Under the Consumer Financing Program, Vivint Smart Home pays a monthly fee to Financing Providers based on either the average daily outstanding balance of the loans or the number of outstanding loans. For certain loans, Vivint Smart Home incurs fees at the time of the loan origination and receives proceeds that are net of these fees. Vivint Smart Home also shares the liability for credit losses, depending on the credit quality of the subscriber. Due to the nature of certain provisions under the Consumer Financing Program, the Company records a derivative liability that is not designated as a hedging instrument and is adjusted to fair value, measured using the present value of the estimated future payments. Changes to the fair value are recorded through other income, net in the consolidated statement of operations. The following represent the contractual future payment obligations with the Financing Providers under the Consumer Financing Program that are components of the derivative:

- Vivint Smart Home pays either a monthly fee based on the average daily outstanding balance of the loans, or the number of outstanding loans, depending on the Financing Provider;
- Vivint Smart Home shares the liability for credit losses depending on the credit quality of the subscriber; and
- Vivint Smart Home pays transactional fees associated with subscriber payment processing.

The derivative is classified as a Level 3 instrument. The derivative positions are valued using a discounted cash flow model, with inputs consisting of available market data, such as market yield discount rates, as well as unobservable internally derived assumptions, such as collateral prepayment rates, collateral default rates and credit loss rates. In summary, the fair value represents an estimate of the present value of the cash flows Vivint Smart Home will be obligated to pay to the Financing Provider for each component of the derivative.

Volumetric Underlying Derivative Transactions

The following table summarizes the net notional volume buy/(sell) of NRG's open derivative transactions broken out by commodity, excluding those derivatives that qualified for the NPNS exception as of December 31, 2023 and 2022. Option contracts are reflected using delta volume. Delta volume equals the notional volume of an option adjusted for the probability that the option will be in-the-money at its expiration date.

Category	Units	Total Volume (In millions)	
		December 31, 2023	December 31, 2022
Emissions	Short Ton	—	1
Renewables Energy Certificates	Certificates	12	15
Coal	Short Ton	9	11
Natural Gas	MMBtu	838	422
Oil	Barrels	—	1
Power	MWh	201	192
Interest	Dollars	1,000	—
Foreign Exchange	Dollars	548	569
Consumer Financing Program	Dollars	1,116	—

Fair Value of Derivative Instruments

The following table summarizes the fair value within the derivative instrument valuation on the balance sheet:

(In millions)	Fair Value			
	Derivative Assets		Derivative Liabilities	
	December 31, 2023	December 31, 2022	December 31, 2023	December 31, 2022
Derivatives Not Designated as Cash Flow or Fair Value Hedges:				
Interest rate contracts - current	\$ 12	\$ —	\$ —	\$ —
Interest rate contracts - long-term	—	—	8	—
Foreign exchange contracts - current	3	11	4	1
Foreign exchange contracts - long-term	2	7	5	1
Commodity contracts- current	3,847	7,875	3,922	6,194
Commodity contracts- long-term	2,291	4,101	1,434	2,245
Consumer Financing Program - current	—	—	93	—
Consumer Financing Program - long-term	—	—	41	—
Total Derivatives Not Designated as Cash Flow or Fair Value Hedges	\$ 6,155	\$ 11,994	\$ 5,507	\$ 8,441

The Company has elected to present derivative assets and liabilities on the balance sheet on a trade-by-trade basis and does not offset amounts at the counterparty master agreement level. In addition, collateral received or paid on the Company's derivative assets or liabilities are recorded on a separate line item on the balance sheet. The following table summarizes the offsetting derivatives by counterparty master agreement level and collateral received or paid:

(In millions)	Gross Amounts Not Offset in the Statement of Financial Position			
	Gross Amounts of Recognized Assets/ Liabilities	Derivative Instruments	Cash Collateral (Held)/Posted	Net Amount
As of December 31, 2023				
Interest rate contracts:				
Derivative assets	\$ 12	\$ (8)	\$ —	\$ 4
Derivative liabilities	(8)	8	—	—
Total interest rate contracts	4	—	—	4
Foreign exchange contracts:				
Derivative assets	\$ 5	\$ (5)	\$ —	\$ —
Derivative liabilities	(9)	5	—	(4)
Total foreign exchange contracts ...	(4)	—	—	(4)
Commodity contracts:				
Derivative assets	\$ 6,138	\$ (4,926)	\$ (74)	\$ 1,138
Derivative liabilities	(5,356)	4,926	145	(285)
Total commodity contracts	782	—	71	853
Consumer Financing Program:				
Derivative liabilities	\$ (134)	\$ —	\$ —	\$ (134)
Total derivative instruments	648	—	71	719

(In millions)	Gross Amounts Not Offset in the Statement of Financial Position			
	Gross Amounts of Recognized Assets/ Liabilities	Derivative Instruments	Cash Collateral (Held)/Posted	Net Amount
As of December 31, 2022				
Foreign exchange contracts:				
Derivative assets	\$ 18	\$ (2)	\$ —	\$ 16
Derivative liabilities	(2)	2	—	—
Total foreign exchange contracts ...	16	—	—	16
Commodity contracts:				
Derivative assets	\$ 11,976	\$ (7,897)	\$ (1,659)	\$ 2,420
Derivative liabilities	(8,439)	7,897	20	(522)
Total commodity contracts	3,537	—	(1,639)	1,898
Total derivative instruments	3,553	—	(1,639)	1,914

Impact of Derivative Instruments on the Statement of Operations

Unrealized gains and losses associated with changes in the fair value of derivative instruments that are not accounted for as cash flow hedges are reflected in current period results of operations.

The following table summarizes the pre-tax effects of economic hedges that have not been designated as cash flow hedges or fair value hedges and trading activity on the Company's statement of operations. The effect of foreign exchange and commodity hedges is included within revenues and cost of operations. The effect of the interest rate contracts are included within interest expense. The effect of the Consumer Financing Program is included in other income, net.

(In millions)	Year Ended December 31,		
	2023	2022	2021
Unrealized mark-to-market results			
Reversal of previously recognized unrealized (gains) on settled positions related to economic hedges	\$ (1,734)	\$ (1,232)	\$ (41)
Reversal of acquired loss positions related to economic hedges	20	2	256
Net unrealized (losses)/gains on open positions related to economic hedges	(1,149)	2,478	2,501
Total unrealized mark-to-market (losses)/gains for economic hedging activities	(2,863)	1,248	2,716
Reversal of previously recognized unrealized losses/(gains) on settled positions related to trading activity	13	13	(18)
Reversal of acquired (gain) positions related to trading activity	—	—	(1)
Net unrealized gains/(losses) on open positions related to trading activity	25	(17)	(13)
Total unrealized mark-to-market gains/(losses) for trading activity	38	(4)	(32)
Total unrealized (losses)/gains - commodities and foreign exchange	\$ (2,825)	\$ 1,244	\$ 2,684

(In millions)	Year Ended December 31,		
	2023	2022	2021
Total impact to statement of operations - interest rate contracts	\$ 4	\$ —	\$ —
Unrealized gains/(losses) included in revenues - commodities	\$ 182	\$ (87)	\$ (196)
Unrealized (losses)/gains included in cost of operations - commodities	(2,988)	1,315	2,880
Unrealized (losses)/gains included in cost of operations - foreign exchange	(19)	16	—
Total impact to statement of operations - commodities and foreign exchange	\$ (2,825)	\$ 1,244	\$ 2,684
Total impact to statement of operations - Consumer Financing Program	\$ (16)	\$ —	\$ —

The reversals of acquired loss/(gain) positions were valued based upon the forward prices on the acquisition date. The roll-off amounts were offset by realized gains or losses at the settled prices and are reflected in revenue or cost of operations during the same period.

The loss from open economic hedge positions of \$1.1 billion for the year ended December 31, 2023 was primarily the result of a decrease in the value of forward positions as a result of decreases in natural gas and power prices in the East and West.

The gains from open economic hedge positions of \$2.5 billion for the years ended December 31, 2022 and 2021 were primarily the result of an increase in value of forward positions as a result of increases in natural gas and power prices.

Credit Risk Related Contingent Features

Certain of the Company's hedging and trading agreements contain provisions that entitle the counterparty to demand that the Company post additional collateral if the counterparty determines that there has been deterioration in the Company's credit quality, generally termed "adequate assurance" under the agreements, or require the Company to post additional collateral if there were a downgrade in the Company's credit rating. The collateral potentially required for contracts with adequate assurance clauses that are in net liability positions as of December 31, 2023 was \$600 million. The Company is also a party to certain marginable agreements under which it has a net liability position, but the counterparty has not called for the collateral due, which was approximately \$80 million as of December 31, 2023. In the event of a downgrade in the Company's credit rating and

if called for by the counterparty, \$8 million of additional collateral would be required for all contracts with credit rating contingent features as of December 31, 2023.

See Note 5, *Fair Value of Financial Instruments*, for discussion regarding concentration of credit risk.

Note 7—Nuclear Decommissioning Trust Fund

Through the sale of the Company's 44% equity interest in STP on November 1, 2023, NRG's Nuclear Decommissioning Trust Fund assets, which were for the decommissioning of STP, were comprised of securities classified as available-for-sale and recorded at fair value based on actively quoted market prices. NRG accounted for the Nuclear Decommissioning Trust Fund in accordance with ASC 980, *Regulated Operations*, or ASC 980, because the Company's nuclear decommissioning activities were subject to approval by the PUCT, with regulated rates that are designed to recover all decommissioning costs and that can be charged to and collected from the ratepayers per PUCT mandate. Since the Company was in compliance with PUCT rules and regulations regarding decommissioning trusts and the cost of decommissioning was the responsibility of the Texas ratepayers, not NRG, all realized and unrealized gains or losses (including other-than-temporary impairments) related to the Nuclear Decommissioning Trust Fund were recorded to the Nuclear Decommissioning Trust liability and were not included in net income or accumulated other comprehensive income, consistent with regulatory treatment.

Following the sale of the Company's 44% equity interest in STP on November 1, 2023, the Company is no longer responsible for the decommissioning of STP and no longer holds the Nuclear Decommissioning Trust Fund assets. For further discussion of the sale, see Note 4, *Acquisitions and Dispositions*.

The following table summarizes the aggregate fair values and unrealized gains and losses for the securities held in the trust funds as of December 31, 2022, as well as information about the contractual maturities of those securities as of that date.

(In millions, except otherwise noted)	As of December 31, 2022			
	Fair Value	Unrealized Gains	Unrealized Losses	Weighted-average maturities (in years)
Cash and cash equivalents	\$ 15	\$ —	\$ —	—
U.S. government and federal agency obligations	86	—	5	11
Federal agency mortgage-backed securities	101	—	11	26
Commercial mortgage-backed securities	35	—	4	30
Corporate debt securities	114	—	13	12
Equity securities	486	346	3	—
Foreign government fixed income securities	1	—	—	17
Total	<u>\$ 838</u>	<u>\$ 346</u>	<u>\$ 36</u>	

The following table summarizes proceeds from sales of available-for-sale securities and the related realized gains and losses from these sales for the ten months ended October 31, 2023, and for the years ended December 31, 2022 and 2021. The cost of securities sold was determined using the specific identification method.

(In millions)	2023	2022	2021
Realized gains	\$ 11	\$ 14	\$ 47
Realized losses	(19)	(25)	(9)
Proceeds from sale of securities	355	448	710

Note 8 — Inventory

Inventory consisted of:

(In millions)	As of December 31,	
	2023	2022
Fuel oil	\$ 8	\$ 8
Coal	178	114
Natural gas	189	385
Spare parts	68	136
Finished goods	164	108
Total Inventory	<u>\$ 607</u>	<u>\$ 751</u>

Note 9 — Property, Plant and Equipment

The Company's major classes of property, plant, and equipment were as follows:

(In millions)	As of December 31,		Depreciable Lives
	2023	2022	
Facilities and equipment	\$ 1,918	\$ 1,727	1-40 years
Land and improvements	256	263	
Nuclear fuel	—	271	5 years
Hardware and office equipment and furnishings	732	712	2-10 years
Construction in progress	152	197	
Total property, plant, and equipment	3,058	3,170	
Accumulated depreciation	(1,295)	(1,478)	
Net property, plant, and equipment	<u>\$ 1,763</u>	<u>\$ 1,692</u>	

Depreciation expense of property, plant and equipment recorded during the years ended December 31, 2023, 2022 and 2021 was \$257 million, \$291 million and \$384 million, respectively.

Note 10 — Leases

The Company leases generating facilities, land, office and equipment, railcars, fleet vehicles and storefront space at retail stores. Operating leases with an initial term greater than twelve months are recognized as right-of-use assets and lease liabilities in the consolidated balance sheets. The Company made an accounting policy election, as permitted by ASC 842, for all asset classes not to recognize right-of-use assets and lease liabilities in the consolidated balance sheets for its short-term leases, which are leases that have a lease term of twelve months or less. For the initial measurement of lease liabilities, the discount rate that the Company uses is either the rate implicit in the lease, if known, or its incremental borrowing rate, which is the rate of interest that the Company would have to pay to borrow, on a collateralized basis, over a similar term an amount equal to the payments for the lease. The Company recognizes lease expense for all operating leases on a straight-line basis over the lease term. In the future, should another systematic basis become more representative of the pattern in which the lessee expects to consume the remaining economic benefit of the right-of-use asset, the Company will use that basis for lease expense.

The Company considers a contract to be or to contain a lease when both of the following conditions apply: 1) an asset is either explicitly or implicitly identified in the contract and 2) the contract conveys to the Company the right to control the use of the identified asset for a period of time. The Company has the right to control the use of the identified asset when the Company has both the right to obtain substantially all the economic benefits from the use of the identified asset and the right to direct how and for what purpose the identified asset is used throughout the period of use.

Lease payments are typically fixed and payable on a monthly, quarterly, semi-annual or annual basis. Lease payments under certain agreements may escalate over the lease term either by a fixed percentage or a fixed dollar amount. Certain leases may provide for variable lease payments in the form of payments based on unit availability, usage, a percentage of sales from the location under lease, or index-based (e.g., the U.S. Consumer Price Index) adjustments to lease payments. The Company has no leases which contain residual value guarantees provided by the Company as a lessee.

Lease Cost:

(In millions)	For the Year Ended December 31,		
	2023	2022	2021
Finance lease cost	\$ 8	\$ 4	\$ 4
Amortization of right-of-use assets	7	4	4
Interest on lease liabilities	1	—	—
Operating lease cost	93	85	91
Short-term lease cost	42	7	3
Variable lease cost	91	86	9
Sublease income	(2)	(2)	(2)
Total lease cost	\$ 232	\$ 180	\$ 105

Other information:

(In millions)	For the Year Ended December 31,		
	2023	2022	2021
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	\$ 195	\$ 183	\$ 102
Financing cash flows from finance leases	7	5	6
Right-of-use assets obtained in exchange for new finance lease liabilities	17	3	16
Right-of-use assets obtained in exchange for new operating lease liabilities	52	28	47

Lease Term and Discount Rate for leases:

	December 31, 2023	December 31, 2022
Finance leases:		
Weighted average remaining lease term (in years)	2.9	2.6
Weighted average discount rate	4.87 %	2.82 %
Operating leases:		
Weighted average remaining lease term (in years)	3.6	4.3
Weighted average discount rate	6.00 %	5.37 %

As of December 31, 2023, annual payments based on the maturities of the Company's operating leases are expected to be as follows:

	In millions
2024	\$ 118
2025	86
2026	34
2027	24
2028	17
Thereafter	32
Total undiscounted lease payments	\$ 311
Less: present value adjustment	(93)
Total discounted lease payments	\$ 218

Note 11 — Asset Impairments

2023 Impairment Losses

During the fourth quarter of 2023, the Company completed its annual budget and analyzed the corresponding impact on estimated cash flows associated with its long-lived assets. The fair value of the assets was determined using an income approach by applying a discounted cash flow methodology to the long-term budget for each facility. The income approach utilized estimates of after-tax cash flows, which were Level 3 fair value measurements, and included key inputs such as forecasted power prices, fuel costs, operating and maintenance costs, plant investment capital expenditures and discount rates.

Gladstone — The Company recorded impairment losses of \$102 million on its equity method investment in Gladstone within the West/Services/Other segment as a result of changes in the long-term outlook of the Gladstone facility, prompted by evolving energy policy conditions in Australia and an assessment of the long-term operational landscape of the facility, which concluded with the annual budget process. For further discussion of the Gladstone investment, see Note 17, Investments Accounted for by the Equity Method and Variable Interest Entities.

Other Impairments — The Company additionally recorded impairment losses related to property plant and equipment and leases of \$2 million, \$4 million and \$20 million in the Texas, East and West/Services/Other segments, respectively.

2022 Impairment Losses

Astoria Redevelopment Impairment — During the third quarter of 2022, the Company entered into a purchase and sale agreement for the sale of the land and related assets at the Astoria generating site and the planned withdrawal and cancellation of its proposed Astoria redevelopment project. As a result, the Company impaired \$43 million of Astoria project spend in the East segment. For further discussion of the transaction, see Note 4, *Acquisitions and Dispositions*.

PJM Asset Impairments — During the second quarter of 2022, the results of the PJM Base Residual Auction for the 2023/2024 delivery year were released leading the Company to revise its long-term view of certain facilities and announce the planned retirement of the Joliet generating facility. The Company considered the near-term retirement date of Joliet and the decline in PJM capacity prices to be a trigger for impairment and performed impairment tests on the PJM generating assets and the goodwill associated with Midwest Generation. The Company measured the impairment losses on the PJM generating assets and Midwest Generation goodwill as the difference between the carrying amount and the fair value of the PJM generating assets and Midwest Generation reporting unit, respectively. Fair values were determined using an income approach in which the Company applied a discounted cash flow methodology to the long-term budgets for the plants and reporting unit. Significant inputs impacting the income approach include the Company's long-term view of capacity and fuel prices, projected generation, the physical and economic characteristics of each plant and the reporting unit as a whole, and the discount rate applied to the after-tax cash flow projections. Impairment losses of \$20 million and \$130 million were recorded in the East segment on the PJM generating assets and Midwest Generation goodwill, respectively.

Other Impairments — The Company additionally recorded impairment losses of \$13 million in the East segment.

2021 Impairment Losses

During the fourth quarter of 2021, the Company completed its annual budget and analyzed the corresponding impact on estimated cash flows associated with its long-lived assets. The fair value of the assets was determined using an income approach by applying a discounted cash flow methodology to the long-term budget for the facility. The income approach utilized estimates of after-tax cash flows, which were Level 3 fair value measurements, and included key inputs such as forecasted power prices, fuel costs, operating and maintenance costs, plant investment capital expenditures and discount rates.

Joliet — The Company recognized an impairment loss of \$213 million in the East segment as a result of changes in the long-term outlook of the Joliet facility prompted by market conditions and an assessment of various alternatives for the long-term operational landscape of the facility including the impact of the CEJA in Illinois, which concluded with the annual budget process.

Other Impairments — The Company additionally recorded impairment losses of \$16 million and \$9 million related to various power plants in the East and West/Service/Other segments, respectively.

The Company also recorded the following impairment in 2021 based on a specific triggering event that occurred using the same methodology previously discussed:

PJM Asset Impairments — During the second quarter of 2021, the results of the PJM Base Residual Auction for the 2022/2023 delivery year were released leading the Company to announce the near-term retirement of a significant portion of its PJM coal generating assets in June 2022. The Company considered the decline in PJM capacity prices and the near-term retirement dates of certain assets to be a trigger for impairment and performed impairment tests on the PJM generating assets and the goodwill associated with Midwest Generation. Impairment losses of \$271 million and \$35 million were recorded in the East segment on the PJM generating assets and Midwest Generation goodwill, respectively.

Note 12 — Goodwill and Other Intangibles

Goodwill

The table below presents the changes of goodwill for the years ended December 31, 2023 and 2022 based on the Company's reportable segments.

(in millions)	Texas	East	West/Services/ Other	Vivint Smart Home	Total
Balance as of January 1, 2022	\$ 716	\$ 853	\$ 226	\$ —	\$ 1,795
Impairment losses	—	(130)	—	—	(130)
Asset sales	(6)	—	—	—	(6)
Foreign currency translation	—	—	(9)	—	(9)
Balance as of December 31, 2022	\$ 710	\$ 723	\$ 217	\$ —	\$ 1,650
Goodwill resulted from the acquisition of Vivint	—	—	—	3,494	3,494
Asset sales	(67)	(2)	—	—	(69)
Foreign currency translation	—	—	4	—	4
Balance as of December 31, 2023	\$ 643	\$ 721	\$ 221	\$ 3,494	\$ 5,079

Intangible Assets

The Company's intangible assets as of December 31, 2023, primarily reflect intangible assets established with the acquisitions of various companies, including Vivint Smart Home, Direct Energy, Stream Energy, other retail acquisitions and Texas Genco. Intangible assets are comprised of the following:

- *Emission Allowances* — These intangibles primarily consist of SO₂ emission allowances, including those established with the 2006 acquisition of Texas Genco, RGGI emission credits and California carbon allowances. These emission allowances are held-for-use and are amortized to cost of operations based on units of production.
- *Customer and supply contracts* — These intangibles include the fair value at the acquisition date of in-market and out-of-market customer and supply contracts from the acquisition of Direct Energy and are amortized to revenue and cost of operations, respectively, based upon the fair market value, as of the acquisition date, for each delivery month.
- *Customer relationships* — These intangibles represent the fair value at the acquisition date of acquired businesses' customer base from the acquisition of Vivint, Direct Energy and other acquisitions. Customer relationships are amortized to depreciation and amortization expense based on the expected discounted future net cash flows by year.
- *Marketing partnerships* — These intangibles represent the fair value at the acquisition date of existing agreements with marketing vendors and loyalty and affinity partners for customer acquisition. Marketing partnerships are amortized to depreciation and amortization expense based on the expected discounted future net cash flows by year.
- *Technology* — These intangibles represent the fair value at the acquisition date of developed technology for Vivint Smart Home integrated software and products. Technology is amortized to depreciation and amortization expense, ratably based on the expected discounted future net cash flows by year.
- *Trade names* — These intangibles are amortized to depreciation and amortization expense on a straight-line basis.
- *Other* — These intangibles primarily include renewable energy credits. RECs are retired, as required, for the applicable compliance period. RECs are expensed to cost of operations based on NRG's customer usage. Other also included in-market nuclear fuel contracts established from the Texas Genco acquisition in 2006 which were amortized to cost of operations over expected volumes over the life of each contract, costs to extend the operating license for STP Units 1 and 2 and intellectual property related to Goal Zero, which is amortized to depreciation and amortization expense.

The following tables summarize the components of NRG's intangible assets:

(In millions)

Year Ended December 31, 2023	Emission Allowances	Customer and Supply Contracts	Customer Relationships	Marketing Partnerships	Technology	Trade Names	Other^(a)	Total
January 1, 2023	\$ 624	\$ 635	\$ 1,730	\$ 284	\$ —	\$ 679	\$ 292	\$ 4,244
Purchases	10	—	—	—	—	—	465	475
Acquisition of businesses ^(b)	—	—	1,773	10	860	160	—	2,803
Usage/Sales/Retirements	—	—	—	—	—	—	(474)	(474)
Write-off of fully amortized balances	(1)	(28)	(43)	—	—	—	—	(72)
Sale of STP ^(c)	—	—	—	—	—	—	(59)	(59)
Other	(5)	2	4	1	—	2	—	4
December 31, 2023	628	609	3,464	295	860	841	224	6,921
Less accumulated amortization	(533)	(328)	(1,300)	(170)	(230)	(401)	(32)	(2,994)
Net carrying amount	\$ 95	\$ 281	\$ 2,164	\$ 125	\$ 630	\$ 440	\$ 192	\$ 3,927

(a) RECs are not subject to amortization and had a carrying value of \$177 million

(b) The weighted average amortization period for total amortizable intangible assets is approximately 10 years. See Note 4, *Acquisitions and Dispositions*, for weighted average life of acquired amortizable intangibles for each intangible asset type

(c) Includes \$47 million of intangibles that were amortized

(In millions)

Year Ended December 31, 2022	Emission Allowances	Customer and Supply Contracts	Customer Relationships	Marketing Partnerships	Trade Names	Other^(a)	Total
January 1, 2022	\$ 634	\$ 638	\$ 1,679	\$ 284	\$ 683	\$ 229	\$ 4,147
Purchases	26	—	—	—	—	404	430
Acquisition of businesses ^(b)	—	—	55	—	—	—	55
Usage/Retirements	(33)	—	—	—	—	(341)	(374)
Write-off of fully amortized balances	(14)	—	—	—	—	—	(14)
Other	11	(3)	(4)	—	(4)	—	—
December 31, 2022	624	635	1,730	284	679	292	4,244
Less accumulated amortization	(528)	(235)	(787)	(146)	(341)	(75)	(2,112)
Net carrying amount	\$ 96	\$ 400	\$ 943	\$ 138	\$ 338	\$ 217	\$ 2,132

(a) RECs are not subject to amortization and had a carrying value of \$186 million

(b) The weighted average life of acquired amortizable intangibles was six years for customer relationships

The following table presents NRG's amortization of intangible assets for each of the past three years:

(In millions)	Years Ended December 31,		
	2023	2022	2021
Emission allowances	\$ 6	\$ 6	\$ 24
Customer and supply contracts	121	141	66
Customer relationships	556	269	327
Marketing partnerships	24	23	24
Technology	230	—	—
Trade names	60	47	47
Other ^(a)	4	4	7
Total amortization	<u>\$ 1,001</u>	<u>\$ 490</u>	<u>\$ 495</u>

(a) For the year ended December 31, 2023, 2022 and 2021, other intangibles amortized to depreciation and amortization expense were de minimis, \$4 million and \$3 million, respectively

The following table presents estimated amortization of NRG's intangible assets as of December 31, 2023 for each of the next five years:

(In millions)								
Year Ended December 31,	Emission Allowances	Customer and Supply Contracts	Customer Relationships	Marketing Partnerships	Technology	Trade Names	Other	Total
2024	\$ 17	\$ 73	\$ 478	\$ 24	\$ 227	\$ 54	\$ 3	\$ 876
2025	14	50	371	23	176	47	3	684
2026	9	52	300	23	130	39	3	556
2027	8	30	233	23	89	39	3	425
2028	9	13	189	15	9	39	2	276

Intangible assets held-for-sale — From time to time, management may authorize the transfer from the Company's emission bank of emission allowances held-for-use to intangible assets held-for-sale. Emission allowances held-for-sale are included in other non-current assets on the Company's consolidated balance sheet and are not amortized, but rather expensed as sold. As of December 31, 2023 and 2022, the value of emission allowances held-for-sale was \$4 million and \$8 million, respectively, within the Corporate segment. Once transferred to held-for-sale, these emission allowances are prohibited from moving back to held-for-use.

Note 13 — Long-term Debt and Finance Leases

Long-term debt and finance leases consisted of the following:

(In millions, except rates)	As of December 31,		Interest rate %
	2023	2022	
Recourse debt:			
Senior Notes, due 2027	\$ 375	\$ 375	6.625
Senior Notes, due 2028	821	821	5.750
Senior Notes, due 2029	733	733	5.250
Senior Notes, due 2029	500	500	3.375
Senior Notes, due 2031	1,030	1,030	3.625
Senior Notes, due 2032	480	1,100	3.875
Convertible Senior Notes, due 2048 ^(a)	575	575	2.750
Senior Secured First Lien Notes, due 2024	600	600	3.750
Senior Secured First Lien Notes, due 2025	500	500	2.000
Senior Secured First Lien Notes, due 2027	900	900	2.450
Senior Secured First Lien Notes, due 2029	500	500	4.450
Senior Secured First Lien Notes, due 2033	740	—	7.000
Tax-exempt bonds	466	466	1.250 - 4.750
Subtotal recourse debt	8,220	8,100	
Non-recourse debt:			
Vivint Smart Home Senior Notes, due 2029	800	—	5.750
Vivint Smart Home Senior Secured Notes, due 2027	600	—	6.750
Vivint Smart Home Senior Secured Term Loan, due 2028	1,320	—	SOFR + 3.51
Subtotal all non-recourse debt	2,720	—	
Subtotal long-term debt (including current maturities)	10,940	8,100	
Finance leases	19	11	various
Subtotal long-term debt and finance leases (including current maturities)	10,959	8,111	
Less current maturities	(620)	(63)	
Less debt issuance costs	(60)	(70)	
Discounts	(146)	(2)	
Total long-term debt and finance leases	\$ 10,133	\$ 7,976	

(a) As of the ex-dividend date of January 31, 2024, the Convertible Senior Notes were convertible at a price of \$41.53, which is equivalent to a conversion rate of approximately 24.0763 shares of common stock per \$1,000 principal amount

Debt includes the following discounts:

(In millions)	As of December 31,	
	2023	2022
Senior Secured First Lien Notes, due 2024, 2025, 2027, 2029 and 2033	\$ (10)	\$ (2)
Vivint Smart Home Senior Notes, due 2029	(103)	—
Vivint Smart Home Senior Secured Notes, due 2027	(12)	—
Vivint Smart Home Senior Secured Term Loan, due 2028	(21)	—
Total discounts	\$ (146)	\$ (2)

Consolidated Annual Maturities

As of December 31, 2023, annual payments based on the maturities of NRG's debt and finance leases are expected to be as follows:

	(In millions)
2024	\$ 620
2025	769
2026	16
2027	1,890
2028	2,145
Thereafter	5,519
Total	<u>\$ 10,959</u>

Recourse Debt

Revolving Credit Facility

On February 14, 2023 (the "Revolving Credit Facility Sixth Amendment Effective Date"), the Company amended its Revolving Credit Facility to: (i) increase the existing revolving commitments thereunder by \$600 million (the "Initial Incremental Commitment"), (ii) extend the maturity date of a portion of the revolving commitments thereunder to February 14, 2028, (iii) transition the benchmark rate applicable to revolving loans from LIBOR to SOFR and (iv) make certain other amendments to the terms of the Revolving Credit Facility for purposes of, among other things, providing additional flexibility.

On March 13, 2023 (the "Revolving Credit Facility Seventh Amendment Effective Date"), the Company further amended its Revolving Credit Facility to increase the existing revolving commitments by an additional \$45 million (together with the Initial Incremental Commitment, the "Incremental Commitment").

After giving effect to the Incremental Commitment, the Company had a total of \$4.305 billion of revolving commitments available under the Revolving Credit Facility. The full amount of the Initial Incremental Commitment was made available from and after the Revolving Credit Facility Sixth Amendment Effective Date and the full amount of the Incremental Commitment was made available from and after the Revolving Credit Facility Seventh Amendment Effective Date. A portion of the non-extended revolving commitments terminated on July 5, 2023, with the remaining portion thereof terminating on May 28, 2024, unless otherwise extended.

The Revolving Credit Facility is guaranteed by NRG's existing and future direct and indirect subsidiaries, with customary and agreed-upon exceptions for, among other exceptions, unrestricted subsidiaries, foreign subsidiaries, project subsidiaries, immaterial subsidiaries, captive insurance subsidiaries and securitization vehicles. The Revolving Credit Facility is also secured by a first priority (subject to certain customary permitted liens) perfected security interest in a substantial portion of the property and assets owned by NRG and its subsidiaries that are guarantors under the Revolving Credit Facility, subject to certain exceptions that include, among other things, the capital stock of certain specified subsidiaries, including unrestricted subsidiaries and certain excluded subsidiaries, equity interests in excess of 66% of the total outstanding voting equity interests of certain foreign subsidiaries, equity interests the pledge of which is prohibited by applicable agreements binding on such subsidiaries and other assets that may be designated by NRG as excluded from the collateral that, when taken together with all other assets so designated since the Revolving Credit Facility Sixth Amendment Effective Date, have an aggregate fair market value not exceeding \$750 million. The Revolving Credit Facility is secured on a pari passu basis with certain interest rate, foreign currency and commodity hedging obligations of NRG, the Senior Secured First Lien Notes and certain other indebtedness. The collateral securing the Revolving Credit Facility will be released at the Company's request if both the senior unsecured long-term debt securities of the Company and the revolving loans under the Revolving Credit Facility are rated investment grade by any two of the three rating agencies and the satisfaction of certain other conditions, subject to reversion if such rating agencies withdraw such investment grade rating or downgrade such rating below investment grade (or, with respect to the revolving loans, cease to publish a rating).

The Revolving Credit Facility contains customary covenants, which, among other things, require NRG to maintain a maximum first lien leverage ratio on a consolidated basis when amounts outstanding under the Revolving Credit Facility (subject to certain exceptions) exceed a certain threshold and limit, subject to certain exceptions, NRG's ability to:

- incur indebtedness and liens and enter into sale and lease-back transactions;
- make investments, loans and advances;
- return capital to shareholders;
- repay material subordinated indebtedness;
- consummate mergers, consolidations and asset sales;

- enter into affiliate transactions; and
- change its fiscal year-end.

As of December 31, 2023, there were no outstanding borrowings and there were \$883 million in letters of credit issued under the Revolving Credit Facility.

Senior Notes

Issuance of 2033 Senior Secured First Lien Notes

On March 9, 2023, the Company issued \$740 million of aggregate principal amount of 7.000% senior secured first lien notes due 2033 (the "2033 Senior Secured First Lien Notes"). The 2033 Senior Secured First Lien Notes are senior secured obligations of NRG and are guaranteed by certain of its subsidiaries that guarantee indebtedness under the Revolving Credit Facility. The 2033 Senior Secured First Lien Notes are secured by a first priority security interest in the same collateral that is pledged for the benefit of the lenders under the Revolving Credit Facility, which collateral consists of a substantial portion of the property and assets owned by the Company and the guarantors. The collateral securing the 2033 Senior Secured First Lien Notes will be released at the Company's request if the senior unsecured long-term debt securities of the Company are rated investment grade by any two of the three rating agencies and the satisfaction of certain other conditions, subject to reversion if such rating agencies withdraw such investment grade rating or downgrade such rating below investment grade. Interest is paid semi-annually beginning on September 15, 2023 until the maturity date of March 15, 2033. The proceeds of the 2033 Senior Secured First Lien Notes, along with cash on hand and proceeds from certain other financings, were used to fund the acquisition of Vivint Smart Home.

Senior Note Redemptions

During the year ended December 31, 2023, the Company redeemed \$620 million in aggregate principal amount of its 3.875% Senior Notes, due 2032, for \$509 million, which included the payment of \$7 million of accrued interest, using cash on hand at an average early redemption percentage of 81%. In connection with the redemption, a \$109 million gain on debt extinguishment was recorded, which included the write-off of previously deferred financing costs and other fees of \$9 million.

During the year ended December 31, 2021, the Company redeemed approximately \$1.9 billion in aggregate principal amount of its Senior Notes for \$1.9 billion using the proceeds of the 2032 Senior Notes and cash on hand, as detailed in the table below. In connection with the redemptions, a \$77 million loss on debt extinguishment was recorded, which included the write-off of previously deferred financing costs of \$12 million.

(In millions, except percentages)	Principal Repurchased	Cash Paid ^(a)	Average Early Redemption Percentage
7.250% Senior Notes, due 2026	\$ 1,000	\$ 1,056	103.625 %
6.625% Senior Notes, due 2027	855	893	103.313 %
Total	\$ 1,855	\$ 1,949	

(a) Includes accrued interest of \$29 million for redemptions for the year ended December 31, 2021

2048 Convertible Senior Notes

Accounting for Convertible Senior Notes — Upon issuance in 2018, the Convertible Senior Notes were separated into liability and equity components for accounting purposes. The carrying amount of the liability component was initially calculated by measuring the fair value of similar liabilities that do not have an associated convertible feature. The carrying amount of the equity component representing the conversion option was determined by deducting the fair value of the liability component from the par value of the Convertible Senior Notes. This difference represented the debt discount that was amortized to interest expense over seven years, which was determined to be the expected life of the Convertible Senior Notes, using the effective interest rate method. The equity component was recorded in additional paid-in capital and was not remeasured as it continued to meet the conditions for equity classification.

Following the adoption of ASU 2020-06 as of January 1, 2022, the Company no longer records the conversion feature of its convertible senior notes in equity. Instead, the Company combined the previously separated equity component with the liability component, which together is now classified as debt, thereby eliminating the subsequent amortization of the debt discount as interest expense. As a result of the provisions of the amended guidance, the Company recorded a \$100 million decrease to additional paid-in capital, a \$57 million decrease to debt discount, a \$57 million increase to retained earnings, and a \$14 million decrease to long-term deferred tax liabilities.

Modification to Convertible Senior Notes — On February 22, 2022, the Company irrevocably elected to eliminate the right to settle conversions only in shares of the Company's common stock, such that any conversion after such date, the Company will pay cash per \$1,000 principal amount and will settle in cash or a combination of cash and the Company's common stock for the remainder, if any, of the Company's conversion obligation in excess of the aggregate principal amount.

Convertible Senior Notes Features — As of December 31, 2023, the Convertible Senior Notes were convertible, under certain circumstances, into cash or a combination of cash and the Company's common stock at a price of \$41.83 per common share, which is equivalent to a conversion rate of approximately 23.9079 shares of common stock per \$1,000 principal amount of Convertible Senior Notes. As of December 31, 2022, the Convertible Senior Notes were convertible at a price of \$43.46 per common share, which is equivalent to a conversion rate of approximately 23.0116 shares of common stock per \$1,000 principal amount of Convertible Senior Notes. The net carrying amounts of the Convertible Senior Notes as of December 31, 2023 and December 31, 2022 were \$572 million and \$570 million, respectively. The Convertible Senior Notes mature on June 1, 2048, unless earlier repurchased, redeemed or converted in accordance with their terms. The Convertible Senior Notes are convertible at the option of the holders under certain circumstances. Prior to the close of business on the business day immediately preceding December 1, 2024, the Convertible Senior Notes will be convertible only upon the occurrence of certain events and during certain periods, including, among others, during any calendar quarter (and only during such calendar quarter) if the last reported sales price per share of the Company's common stock exceeds 130% of the conversion price for each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter. Thereafter during specified periods as follows:

- from December 1, 2024 until the close of business on the second scheduled trading day immediately before June 1, 2025; and
- from December 1, 2027 until the close of business on the second scheduled trading day immediately before the maturity date

All conversions with a conversion date that occurs within the specific periods above will be settled after such period pursuant to the terms of the indenture. The following table details the interest expense recorded in connection with the Convertible Senior Notes, due 2048:

(\$ In millions)	For the years ended December 31,		
	2023	2022	2021
Contractual interest expense	\$ 16	\$ 16	\$ 16
Amortization of discount and deferred finance costs ^(a)	2	1	15
Total	<u>\$ 18</u>	<u>\$ 17</u>	<u>\$ 31</u>
Effective Interest Rate	3.18 %	3.01 %	5.34 %

(a) Upon adoption of ASU 2020-06 on January 1, 2022, which resulted in the removal of the debt discount, no further debt discount amortization is being recorded

Senior Notes Early Redemption

As of December 31, 2023, NRG had the following outstanding issuances of senior notes with an early redemption feature, or Senior Notes:

- 6.625% senior notes, issued August 2, 2016 and due January 15, 2027, or the 2027 Senior Notes;
- 5.750% senior notes, issued December 7, 2017 and due January 15, 2028, or the 2028 Senior Notes;
- 5.250% senior notes, issued May 24, 2019 and due June 15, 2029, or the 2029 Senior Notes;
- 3.375% senior notes, issued December 2, 2020 and due February 15, 2029, or the 3.375% 2029 Senior Notes;
- 3.625% senior notes, issued December 2, 2020 and due February 15, 2031, or the 2031 Senior Notes; and
- 3.875% senior notes, issued August 23, 2021 and due February 15, 2032, or the 2032 Senior Notes.

The indentures and the forms of notes provide, among other things, that the Senior Notes will be senior unsecured obligations of the Company. The indentures also provide for customary events of default, which include, among others: nonpayment of principal or interest; breach of other agreements in the indentures; defaults in failure to pay certain other indebtedness; the rendering of judgments to pay certain amounts of money against the Company and its subsidiaries; the failure of certain guarantees to be enforceable; and certain events of bankruptcy or insolvency. Generally, if an event of default occurs, the trustee or the holders of at least 25% or 30% (depending on the series of Senior Notes) in principal amount of the then outstanding series of Senior Notes may declare all of the Senior Notes of such series to be due and payable immediately. The terms of the indentures, among other things, limit the Company's ability and certain of its subsidiaries' ability to return capital to stockholders, grant liens on assets to lenders and incur additional debt. Interest is payable semi-annually on the Senior Notes until their maturity dates.

2027 Senior Notes

The Company may redeem some or all of the 2027 Senior Notes at redemption prices expressed as percentages of principal amount as set forth in the following table, plus accrued and unpaid interest on the notes redeemed to the first applicable redemption date:

Redemption Period	Redemption Percentage
July 15, 2023 to July 14, 2024	101.104 %
July 15, 2024 and thereafter	100.000 %

2028 Senior Notes

The Company may redeem some or all of the 2028 Senior Notes at redemption prices expressed as percentages of principal amount as set forth in the following table, plus accrued and unpaid interest on the notes redeemed to the first applicable redemption date:

Redemption Period	Redemption Percentage
January 15, 2024 to January 14, 2025	101.917 %
January 15, 2025 to January 14, 2026	100.958 %
January 15, 2026 and thereafter	100.000 %

5.250% 2029 Senior Notes

At any time prior to June 15, 2024, the Company may redeem all or a part of the 5.250% 2029 Senior Notes, at a redemption price equal to 100% of the principal amount of the notes redeemed, plus accrued and unpaid interest to the redemption date, plus a premium. The premium is the greater of: (i) 1% of the principal amount of the notes; or (ii) the excess of the principal amount of the note over the following: the present value of 102.625% of the note, plus interest payments due on the note through June 15, 2024 (excluding accrued but unpaid interest to the redemption date), computed using a discount rate equal to the Treasury Rate as of such redemption date plus 0.50% over the principal amount of the note. In addition, on or after June 15, 2024, the Company may redeem some or all of the notes at redemption prices expressed as percentages of principal amount as set forth in the following table, plus accrued and unpaid interest on the notes redeemed to the first applicable redemption date:

Redemption Period	Redemption Percentage
June 15, 2024 to June 14, 2025	102.625 %
June 15, 2025 to June 14, 2026	101.750 %
June 15, 2026 to June 14, 2027	100.875 %
June 15, 2027 and thereafter	100.000 %

3.375% 2029 Senior Notes

On or after February 15, 2024, the Company may redeem some or all of the notes at redemption prices expressed as percentages of principal amount as set forth in the following table, plus accrued and unpaid interest on the notes redeemed to the first applicable redemption date:

Redemption Period	Redemption Percentage
February 15, 2024 to February 14, 2025	101.688 %
February 15, 2025 to February 14, 2026	100.844 %
February 15, 2026 and thereafter	100.000 %

2031 Senior Notes

At any time prior to February 15, 2026, the Company may redeem all or a part of the 2031 Senior Notes, at a redemption price equal to 100% of the principal amount of the notes redeemed, plus accrued and unpaid interest to the redemption date, plus a premium. The premium is the greater of: (i) 1% of the principal amount of the note; or (ii) the excess of the present value of 101.813% of the note, plus interest payments due on the note through February 15, 2026 (excluding accrued but unpaid interest to the redemption date), computed using a discount rate equal to the Treasury Rate as of such redemption date plus 0.50% over the principal amount of the note. In addition, on or after February 15, 2026, the Company may redeem some or all of the notes at redemption prices expressed as percentages of principal amount as set forth in the following table, plus accrued and unpaid interest on the notes redeemed to the first applicable redemption date:

Redemption Period	Redemption Percentage
February 15, 2026 to February 14, 2027	101.813 %
February 15, 2027 to February 14, 2028	101.208 %
February 15, 2028 to February 14, 2029	100.604 %
February 15, 2029 and thereafter	100.000 %

2032 Senior Notes

At any time prior to August 15, 2024, the Company may redeem up to 40% of the aggregate principal amount of the 2032 Senior Notes, at a redemption price equal to 103.875% of the principal amount of the notes redeemed, plus accrued and unpaid interest, with an amount equal to the net cash proceeds of certain equity offerings, provided that at least 50% of the aggregate principal amount remains outstanding immediately after the occurrence of such redemption. At any time prior to February 15, 2027, the Company may redeem all or a part of the 2032 Senior Notes, at a redemption price equal to 100% of the principal amount of the notes redeemed, plus accrued and unpaid interest to the redemption date, plus a premium. The premium is the greater of: (i) 1% of the principal amount of the notes; or (ii) the excess of (A) the present value of (1) the redemption price of the note at February 15, 2027 (such redemption price being set forth in the table appearing below in the column "Redemption Percentage (If Sustainability Performance Target has not been satisfied and/or confirmed by External Verifier)" unless the Sustainability Performance Target has been satisfied in respect of the year ended December 31, 2025 and the Company has provided confirmation thereof to the trustee together with a related confirmation by the External Verifier by the date that is at least 15 days prior to August 15, 2026 in which case the redemption price shall be as set forth in the column "Redemption Percentage (If Sustainability Performance Target has been satisfied and confirmed by External Verifier)") plus (2) interest payments due on the note through February 15, 2027 (excluding accrued but unpaid interest to the redemption date) computed using a discount rate equal to the Treasury Rate as of such redemption date plus 0.50%, over (B) the principal amount of the note. In addition, on or after February 15, 2027, the Company may redeem some or all of the notes at redemption prices expressed as percentages of principal amount as set forth in the following table during the twelve-month period beginning on February 15 of the years indicated below, plus accrued and unpaid interest on the notes redeemed to the first applicable redemption date:

Year	Redemption Percentage (If Sustainability Performance Target has been satisfied and confirmed by External Verifier)	Redemption Percentage (If Sustainability Performance Target has not been satisfied and/or confirmed by External Verifier)
2027	101.938 %	102.188 %
2028	101.292 %	101.458 %
2029	100.646 %	100.729 %
2030 and thereafter	100.000 %	100.000 %

Receivables Facility

In 2020, NRG Receivables LLC, a bankruptcy remote, special purpose, indirect wholly owned subsidiary, ("NRG Receivables") entered into the Receivables Facility, subject to adjustments on a seasonal basis, with issuers of asset-backed commercial paper and commercial banks (the "Lenders"). The assets of NRG Receivables are first available to satisfy the claims of the Lenders before making payments on the subordinated note and equity issued by NRG Receivables. The assets of NRG Receivables are not available to the Company and its subsidiaries or creditors unless and until distributed by NRG Receivables. Under the Receivables Facility, certain indirect subsidiaries of the Company sell their accounts receivables to NRG Receivables, subject to certain terms and conditions. In turn, NRG Receivables grants a security interest in the purchased receivables to the Lenders as collateral for cash borrowings and issuances of letters of credit. Pursuant to the Performance Guaranty, the Company has guaranteed, for the benefit of NRG Receivables and the Lenders, the payment and performance by each indirect subsidiary of its respective obligations under the Receivables Facility. The accounts receivables remain on the

Company's consolidated balance sheet and any amounts funded by the Lenders to NRG Receivables will be reflected as short-term borrowings. Cash flows from the Receivables Facility are reflected as financing activities in the Company's consolidated statements of cash flows. The Company continues to service the accounts receivables sold in exchange for a servicing fee.

On June 22, 2023, NRG Receivables amended its existing Receivables Facility to, among other things, (i) extend the scheduled termination date to June 21, 2024, (ii) increase the aggregate commitments from \$1.0 billion to \$1.4 billion (adjusted seasonally) and (iii) add a new originator. On October 6, 2023, the Receivables Facility was further amended to replace the benchmark interest rate of the Receivable Facility's subordinated note from LIBOR to SOFR. The weighted average interest rate related to usage under the Receivables Facility as of December 31, 2023 was 0.841%. As of December 31, 2023, there were no outstanding borrowings and there were \$1.0 billion in letters of credit issued under the Receivables Facility.

Repurchase Facility

In 2020, the Company entered into the Repurchase Facility related to the Receivables Facility. Under the Repurchase Facility, the Company can currently borrow up to \$150 million, collateralized by a subordinated note issued by NRG Receivables to NRG Retail LLC in favor of the originating entities representing a portion of the balance of receivables sold to NRG Receivables under the Receivables Facility.

In addition, in connection with the amendments to the Receivables Facility, on June 22, 2023, the Company and the originators thereunder renewed the existing uncommitted Repurchase Facility. Such renewal, among other things, extended the maturity date to June 21, 2024 and joined an additional originator to the Repurchase Facility. On October 6, 2023, the Repurchase Facility was further amended to reflect the concurrent amendment to the Receivables Facility's subordinated note. The Repurchase Facility has no commitment fee and borrowings will be drawn at SOFR + 1.55%. As of December 31, 2023, there were no outstanding borrowings under the Repurchase Facility.

Bilateral Letter of Credit Facilities

On May 19, 2023, May 30, 2023 and October 17, 2023 the Company increased the size of its bilateral letter of credit facilities by \$25 million, \$100 million and \$50 million, respectively, to provide additional liquidity and to allow for the issuance of up to \$850 million of letters of credit. These facilities are uncommitted. As of December 31, 2023, \$671 million was issued under these facilities.

Tax Exempt Bonds

(In millions, except rates)	As of December 31,		Interest Rate %
	2023	2022	
NRG Indian River Power 2020, tax exempt bonds, due 2040 . . .	\$ 57	\$ 57	1.250
NRG Indian River Power 2020, tax exempt bonds, due 2045 . . .	190	190	1.250
NRG Dunkirk 2020, tax exempt bonds, due 2042	59	59	4.250
City of Texas City, tax exempt bonds, due 2045	33	33	4.125
Fort Bend County, tax exempt bonds, due 2038	54	54	4.750
Fort Bend County, tax exempt bonds, due 2042	73	73	4.750
Total	<u>\$ 466</u>	<u>\$ 466</u>	

Dunkirk Bonds

On April 3, 2023, NRG remarketed \$59 million in aggregate principal amount of 4.25% tax-exempt refinancing bonds of the Chautauqua County Capital Resource Corporation (the "Dunkirk Bonds"). The Dunkirk Bonds are guaranteed on a first-priority basis by each of NRG's current and future subsidiaries that guarantee indebtedness under the Revolving Credit Facility. The Dunkirk Bonds are secured by a first priority security interest in the same collateral that is pledged for the benefit of the lenders under the Revolving Credit Facility, which consists of a substantial portion of the property and assets owned by NRG and the guarantors. The collateral securing the Dunkirk Bonds will, at the request of NRG, be released if NRG satisfies certain conditions, including receipt of an investment grade rating on its senior, unsecured debt securities from two out of the three rating agencies, subject to reversion if those rating agencies withdraw their investment grade rating of the Dunkirk Bonds or any of NRG's senior, unsecured debt securities or downgrade such ratings below investment grade. The Dunkirk Bonds are subject to mandatory tender and purchase on April 3, 2028 and have a final maturity date of April 1, 2042.

Pre-Capitalized Trust Securities Facility

On August 29, 2023, the Company entered into a Facility Agreement (as defined below) with Alexander Funding Trust II, a newly-formed Delaware statutory trust (the “Trust”), in connection with the sale by the Trust of \$500 million pre-capitalized trust securities redeemable July 31, 2028 (the “P-Caps”). The Trust invested the proceeds from the sale of the P-Caps in a portfolio of principal and interest strips of U.S. Treasury securities (the “Eligible Treasury Assets”). The P-Caps replaced the Company’s existing pre-capitalized trust securities redeemable 2023 issued by Alexander Funding Trust, which matured on November 15, 2023.

In connection with the sale of the P-Caps, the Company and the guarantors named therein entered into a facility agreement, dated August 29, 2023 (the “Facility Agreement”), with the Trust and Deutsche Bank Trust Company Americas, as notes trustee (the “Notes Trustee”). Under the Facility Agreement, the Company has the right, from time to time, to issue to the Trust, and to require the Trust to purchase from the Company, on one or more occasions (the “Issuance Right”), up to \$500 million aggregate principal amount of the Company’s 7.467% Senior Secured First Lien Notes due 2028 (the “P-Caps Secured Notes”) in exchange for all or a portion of the Eligible Treasury Assets corresponding to the portion of the Issuance Right under the Facility Agreement being exercised at such time. The Company pays to the Trust a facility fee equal to 3.13427% applied to the unexercised portion of the Issuance Right on a semi-annual basis.

The P-Caps are to be redeemed by the Trust on July 31, 2028 or earlier upon an early redemption of the P-Caps Secured Notes. Following any distribution of P-Caps Secured Notes to the holders of the P-Caps, the Company may similarly redeem such P-Caps Secured Notes, in whole or in part, at the redemption price described in the P-Caps Indenture (as defined below), plus accrued but unpaid interest to, but excluding, the date of redemption. Any P-Caps Secured Notes outstanding and held by the Trust as a result of the exercise of the Issuance Right that remain outstanding will also mature on July 31, 2028.

The Issuance Right will be exercised automatically in full if (i) the Company fails to pay the facility fee when due or any amount due and owing under the trust expense reimbursement agreement or fails to purchase and pay for any Eligible Treasury Assets that are due and not paid on their payment date and such failure is not cured within 30 days or (ii) upon certain bankruptcy events of the Company. The Company will be required to mandatorily exercise the Issuance Right if certain mandatory exercise events occur upon the terms and conditions set forth in the Facility Agreement.

The P-Caps Secured Notes that may be sold to the Trust from time to time will be governed by the base indenture, dated August 29, 2023 (the “Base Indenture”), between the Company and the Notes Trustee, as supplemented by the supplemental indenture, dated August 29, 2023 (the “Supplemental Indenture” and, together with the Base Indenture, the “P-Caps Indenture”), among the Company, the guarantors named therein and the Notes Trustee.

The P-Caps Secured Notes will, if sold to the Trust, be guaranteed on a first-priority basis by each of the Company’s subsidiaries that guarantee indebtedness under the Revolving Credit Facility. The P-Caps Secured Notes will, if sold to the Trust, be secured by a first priority security interest in the same collateral that is pledged for the benefit of the lenders under the Revolving Credit Facility, which consists of a substantial portion of the property and assets owned by the Company and the guarantors. The collateral securing the P-Caps Secured Notes will be released at the Company’s request if the senior unsecured long-term debt securities of the Company are rated investment grade by any two of the three rating agencies, subject to reversion if such rating agencies downgrade such rating below investment grade or withdraw such investment grade rating.

In connection with the issuance of the P-Caps, on August 29, 2023, the Company entered into a letter of credit facility agreement (the “LC Agreement”) with Deutsche Bank Trust Company Americas, as collateral agent (the “Collateral Agent”) and administrative agent, and certain financial institutions (the “LC Issuers”) for the issuance of letters of credit in an aggregate amount not to exceed \$485 million. The LC Agreement replaced the Company’s existing letter of credit facility agreement, effective August 29, 2023. In addition, on August 29, 2023, the Trust entered into a pledge and control agreement (the “Pledge Agreement”), among the Company, the Trust and the Collateral Agent, under which the Company and the Trust agreed to grant a security interest over the Eligible Treasury Assets in favor of the Collateral Agent for the benefit of the LC Issuers. Pursuant to the LC Agreement and the Pledge Agreement, the Collateral Agent is entitled to withdraw Eligible Treasury Assets in the amount of any drawn letters of credit issued pursuant to the LC Agreement from the Company’s and the Trust’s pledged accounts, following notice to the Company, in the event the Company has failed to reimburse such drawn amounts and the LC Issuers have the right to instruct the Collateral Agent to enforce the pledge over the Eligible Treasury Assets upon the occurrence of any event of default under the LC Agreement.

Non-recourse Debt

The following are descriptions of certain indebtedness of NRG’s subsidiaries. All of NRG’s non-recourse debt is secured by the assets in the subsidiaries as further described below.

Acquired Vivint Smart Home Debt

On March 10, 2023, in connection with the Vivint Smart Home acquisition, Vivint Smart Home's indirect wholly owned subsidiary, APX Group, Inc. ("APX"), retained its 6.750% senior secured notes due 2027, 5.750% senior notes due 2029, senior secured term loan credit agreement and senior secured revolving credit facility.

Vivint Smart Home 2027 Senior Secured Notes

Vivint Smart Home has outstanding \$600 million aggregate principal amount of 6.750% senior secured notes due 2027 (the "Vivint Smart Home 2027 Senior Secured Notes"). The Vivint Smart Home 2027 Senior Secured Notes are senior secured obligations of APX and are guaranteed by APX Group Holdings, Inc., each of APX's existing and future wholly owned U.S. restricted subsidiaries (subject to customary exclusions and qualifications) and Vivint Smart Home. Interest on the Vivint Smart Home 2027 Senior Secured Notes is paid semi-annually in arrears on February 15 and August 15 until the maturity date of February 15, 2027.

Vivint Smart Home 2029 Senior Notes

Vivint Smart Home has outstanding \$800 million aggregate principal amount of 5.750% senior notes due 2029 (the "Vivint Smart Home 2029 Senior Notes"). The Vivint Smart Home 2029 Senior Notes are senior unsecured obligations of APX and are guaranteed by APX Group Holdings, Inc., each of APX's existing and future wholly owned U.S. restricted subsidiaries (subject to customary exclusions and qualifications) and Vivint Smart Home. Interest on the Vivint Smart Home 2029 Senior Notes is paid semi-annually in arrears on January 15 and July 15 until the maturity date of July 15, 2029.

Vivint Smart Home Senior Secured Credit Facilities

The Vivint Smart Home senior secured credit agreement (the "Vivint Smart Home Credit Agreement") provides for (i) a term loan facility in an initial aggregate principal amount of \$1.4 billion (the "Vivint Smart Home Term Loan Facility", and the loans thereunder, the "Vivint Smart Home Term Loans") and (ii) a revolving credit facility in an initial aggregate principal amount of \$370 million (the "Vivint Smart Home Revolving Credit Facility," and the loans thereunder, the "Vivint Smart Home Revolving Loans").

All of APX's obligations under the Vivint Smart Home Credit Agreement are guaranteed by APX Group Holdings, Inc. and each of APX's existing and future wholly-owned U.S. restricted subsidiaries (subject to customary exclusions and qualifications). The obligations under the Vivint Smart Home Credit Agreement are secured by a first priority (subject to certain customary permitted liens) perfected security interest in (i) substantially all of the present and future tangible and intangible assets of APX, and the guarantors, including without limitation equipment, subscriber contracts and communication paths, intellectual property, general intangibles, investment property, material intercompany notes and proceeds of the foregoing, subject to permitted liens and other customary exceptions, (ii) substantially all personal property of APX and the guarantors consisting of accounts receivable arising from the sale of inventory and other goods and services (including related contracts and contract rights, inventory, cash, deposit accounts, other bank accounts and securities accounts), inventory and intangible assets to the extent attached to the foregoing books and records of APX and the guarantors, and the proceeds thereof, subject to permitted liens and other customary exceptions, in each case held by APX and the guarantors and (iii) a pledge of all of the capital stock of APX, each of its subsidiary guarantors and each restricted subsidiary of APX and its subsidiary guarantors (subject to customary exclusions and qualifications), in each case other than certain excluded assets and subject to the limitations and exclusions provided in the applicable collateral documents.

The Vivint Smart Home Credit Agreement contains customary covenants, which, among other things, require APX to maintain a maximum first lien net leverage ratio when amounts outstanding under the Vivint Smart Home Revolving Facility exceed a certain threshold and restrict, subject to certain exceptions, APX and its restricted subsidiaries' ability to:

- incur or guarantee additional debt or issue disqualified stock or preferred stock;
- pay dividends and make other distributions on, or redeem or repurchase, capital stock;
- make certain investments;
- incur certain liens;
- enter into transactions with affiliates;
- merge or consolidate;
- materially change the nature of their business;
- enter into agreements that restrict the ability of restricted subsidiaries to make dividends or other payments to APX or grant liens on their assets;
- designate restricted subsidiaries as unrestricted subsidiaries;

- amend, prepay, redeem or purchase certain material contractually subordinated debt; and
- transfer or sell certain assets.

On June 9, 2023, Vivint Smart Home entered into an amendment to the Vivint Smart Home Credit Agreement which transitioned the benchmark rate applicable to the Vivint Smart Home Term Loans and the Vivint Smart Home Revolving Loans from LIBOR to SOFR. As of December 31, 2023, the aggregate outstanding principal amount of the Vivint Term Loans was \$1.3 billion. As of December 31, 2023, Vivint Smart Home had no outstanding borrowings under the Vivint Smart Home Revolving Credit Facility.

Vivint Smart Home Notes Early Redemption

2027 Senior Secured Notes

APX may redeem some or all of the 2027 Senior Secured Notes at redemption prices expressed as percentages of principal amount as set forth in the following table, plus accrued and unpaid interest on the notes redeemed to the first applicable redemption date:

<u>Redemption Period</u>	<u>Redemption Percentage</u>
February 15, 2024 to February 14, 2025	101.688 %
February 15, 2025 and thereafter	100.000 %

2029 Senior Notes

At any time prior to July 15, 2024 and from time to time, APX may redeem the notes in whole or in part, at a redemption price equal to 100% of the principal amount of the notes redeemed, plus accrued and unpaid interest to the redemption date, plus a premium. The premium is the greater of: (i) 1% of the principal amount of the note; and (ii) the excess, if any, of (a) the present value at such redemption date of (i) the redemption price of such note at July 15, 2024, plus (ii) interest payments due on the note through July 15, 2024 (excluding accrued but unpaid interest to the redemption date), computed using a discount rate equal to the Treasury Rate as of such redemption date plus 0.50% over the then outstanding principal amount of such note. In addition, on or after July 15, 2024, APX may redeem some or all of the notes at redemption prices expressed as percentages of principal amount as set forth in the following table, plus accrued and unpaid interest on the notes redeemed to the first applicable redemption date:

<u>Redemption Period</u>	<u>Redemption Percentage</u>
July 15, 2024 to July 14, 2025	102.875 %
July 15, 2025 to July 14, 2026	101.438 %
July 15, 2026 and thereafter	100.100 %

Note 14 — *Asset Retirement Obligations*

The Company's AROs are primarily related to the environmental obligations for mine reclamation, ash disposal, site closures, fuel storage facilities and future dismantlement of equipment on leased property. In addition, the Company has also identified conditional AROs for asbestos removal and disposal, which are specific to certain power generation operations.

Following the sale of the Company's 44% equity interest in STP on November 1, 2023, the Company no longer has asset retirement obligations related to nuclear decommissioning. Prior to the sale, accretion for the nuclear decommissioning ARO and amortization of the related ARO asset were recorded to the Nuclear Decommissioning Trust Liability and were not included in net income, consistent with regulatory treatment per ASC 980, *Regulated Operations*.

The following table represents the balance of ARO obligations as of December 31, 2023 and 2022, along with the activity related to the Company's ARO obligations for the year ended December 31, 2023:

(In millions)	Nuclear Decommission	Other ^(a)	Total
Balance as of December 31, 2022	\$ 340	\$ 418	\$ 758
Revisions in estimates for current obligations	(13)	3	(10)
Additions	—	13	13
Spending for current obligations	—	(42)	(42)
Accretion	16	23	39
Dispositions	(343)	(8)	(351)
Balance as of December 31, 2023	<u>\$ —</u>	<u>\$ 407</u>	<u>\$ 407</u>

(a) Total accretion expense related to asset retirement obligations included in the consolidated statement of cash flows includes accretion and revisions in estimates for asset retirement liabilities on non-operating plants

Note 15 — Benefit Plans and Other Postretirement Benefits

NRG sponsors and operates defined benefit pension and other postretirement plans. NRG pension benefits are available to eligible non-union and union employees through various defined benefit pension plans. These benefits are based on pay, service history and age at retirement. Most pension benefits are provided through tax-qualified plans. NRG also provides postretirement health and welfare benefits for certain groups of employees. Cost sharing provisions vary by the terms of any applicable collective bargaining agreements.

NRG maintains three separate qualified pension plans, the NRG Pension Plan for Bargained Employees, the NRG Pension Plan and the Pension Plan for Employees of Direct Energy Marketing Limited ("DEML"). Participation in the NRG Pension Plan for Bargained Employees depends upon whether an employee is covered by a bargaining agreement. The NRG Pension plan was frozen for non-union employees on December 31, 2018. The Pension Plan for Employees of DEML is closed to new participants.

NRG expects to contribute \$43 million to the Company's pension plans in 2024, of which \$23 million relates to the GenOn plan.

NRG Defined Benefit Plans

The annual net periodic benefit cost/(credit) related to NRG's pension and other postretirement benefit plans include the following components:

(In millions)	Year Ended December 31,		
	Pension Benefits		
	2023	2022	2021
Service cost benefits earned	\$ 5	\$ 7	\$ 9
Interest cost on benefit obligation	50	41	27
Expected return on plan assets	(39)	(47)	(66)
Amortization of unrecognized net loss	6	3	1
Curtailment and special termination benefits (income)/expense	(1)	14	2
Net periodic benefit cost/(credit)	<u>\$ 21</u>	<u>\$ 18</u>	<u>\$ (27)</u>

(In millions)	Year Ended December 31,		
	Other Postretirement Benefits		
	2023	2022	2021
Interest cost on benefit obligation	\$ 4	\$ 2	\$ 2
Amortization of unrecognized prior service cost	(8)	(8)	(10)
Amortization of unrecognized net loss	1	2	1
Curtailment expense	—	—	1
Net periodic benefit credit	<u>\$ (3)</u>	<u>\$ (4)</u>	<u>\$ (6)</u>

A comparison of the pension benefit obligation, other postretirement benefit obligations and related plan assets for NRG's plans on a combined basis is as follows:

(In millions)	As of December 31,			
	Pension Benefits		Other Postretirement Benefits	
	2023	2022	2023	2022
Benefit obligation at January 1	\$ 1,036	\$ 1,452	\$ 84	\$ 105
Service cost	5	7	—	—
Interest cost	50	41	4	2
Actuarial loss/(gain)	22	(289)	(5)	(11)
Employee and retiree contributions	—	—	4	3
Curtailment and special termination benefit loss	(2)	—	(1)	—
Benefit payments	(89)	(171)	(11)	(15)
Foreign exchange translation	1	(4)	—	—
Benefit obligation at December 31	1,023	1,036	75	84
Fair value of plan assets at January 1	844	1,336	—	—
Actual return on plan assets	93	(317)	—	—
Employee and retiree contributions	—	—	4	3
Employer contributions	2	—	7	12
Benefit payments	(89)	(171)	(11)	(15)
Foreign exchange translation	1	(4)	—	—
Fair value of plan assets at December 31	851	844	—	—
Funded status at December 31 — excess of obligation over assets	\$ (172)	\$ (192)	\$ (75)	\$ (84)

During the year ended December 31, 2023, the actuarial loss of \$22 million on pension benefits was primarily driven by decreasing discount rates.

During the year ended December 31, 2022, the actuarial gain of \$289 million on pension benefits was primarily driven by increasing discount rates.

Amounts recognized in NRG's balance sheets were as follows:

(In millions)	As of December 31,			
	Pension Benefits		Other Postretirement Benefits	
	2023	2022	2023	2022
Other current liabilities	\$ —	\$ —	\$ 5	\$ 7
Other non-current liabilities	172	192	70	77

Amounts recognized in NRG's accumulated OCI that have not yet been recognized as components of net periodic benefit cost were as follows:

(In millions)	As of December 31,			
	Pension Benefits		Other Postretirement Benefits	
	2023	2022	2023	2022
Net loss/(gain)	\$ 73	\$ 110	\$ (14)	\$ (7)
Prior service cost/(credit)	—	1	(4)	(12)
Total accumulated OCI	\$ 73	\$ 111	\$ (18)	\$ (19)

Other changes in plan assets and benefit obligations recognized in OCI were as follows:

(In millions)	Year Ended December 31,			
	Pension Benefits		Other Postretirement Benefits	
	2023	2022	2023	2022
Net actuarial (gain)/loss	\$ (31)	\$ 74	\$ (5)	\$ (11)
Amortization of net actuarial loss	(6)	(3)	(1)	(2)
Amortization of prior service cost	—	—	8	8
Effect of settlement/curtailment	(1)	(14)	(1)	—
Total recognized in OCI	\$ (38)	\$ 57	\$ 1	\$ (5)
Net periodic benefit cost/(credit)	21	18	(3)	(4)
Net recognized in net periodic pension (credit)/cost and OCI	\$ (17)	\$ 75	\$ (2)	\$ (9)

The following table presents the balances of significant components of NRG's pension plan:

(In millions)	As of December 31,	
	Pension Benefits	
	2023	2022
Projected benefit obligation	\$ 1,023	\$ 1,036
Accumulated benefit obligation	1,015	1,022
Fair value of plan assets	851	844

NRG's market-related value of its plan assets is the fair value of the assets. The fair values of the Company's pension plan assets by asset category and their level within the fair value hierarchy are as follows:

(In millions)	Fair Value Measurements as of December 31, 2023		
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Total
Common/collective trust investment — U.S. equity	\$ —	\$ 156	\$ 156
Common/collective trust investment — non-U.S. equity	—	58	58
Common/collective trust investment — non-core assets	—	81	81
Common/collective trust investment — fixed income	—	188	188
Short-term investment fund	19	—	19
Subtotal fair value	\$ 19	\$ 483	\$ 502
Measured at net asset value practical expedient:			
Common/collective trust investment — non-U.S. equity			32
Common/collective trust investment — fixed income			243
Common/collective trust investment — non-core assets			47
Partnerships/joint ventures			27
Total fair value			\$ 851

(In millions)	Fair Value Measurements as of December 31, 2022		
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Total
Common/collective trust investment — U.S. equity	\$ —	\$ 155	\$ 155
Common/collective trust investment — non-U.S. equity	—	65	65
Common/collective trust investment — non-core assets	—	90	90
Common/collective trust investment — fixed income	—	181	181
Short-term investment fund	22	—	22
Subtotal fair value	\$ 22	\$ 491	\$ 513
Measured at net asset value practical expedient:			
Common/collective trust investment — non-U.S. equity			33
Common/collective trust investment — fixed income			220
Common/collective trust investment — non-core assets			55
Partnerships/joint ventures			23
Total fair value			\$ 844

In accordance with ASC 820, the Company determines the level in the fair value hierarchy within which each fair value measurement in its entirety falls, based on the lowest level input that is significant to the fair value measurement in its entirety. The fair value of the common/collective trust investments is valued at fair value which is equal to the sum of the market value of all of the fund's underlying investments. Certain common/collective trust investments have readily determinable fair value as they publish daily net asset value, or NAV, per share and are categorized as Level 2. Certain other common/collective trust investments and partnerships/joint ventures use NAV per share, or its equivalent, as a practical expedient for valuation, and thus have been removed from the fair value hierarchy table.

The following table presents the significant assumptions used to calculate NRG's benefit obligations:

Weighted-Average Assumptions	As of December 31,			
	Pension Benefits		Other Postretirement Benefits	
	2023	2022	2023	2022
Discount rate	4.97 %	5.18 %	4.96 %	5.19 %
Interest crediting rate	5.67 %	5.21 %	4.66 %	4.00 %
Rate of compensation increase	3.06 %	3.06 %	—	—
Health care trend rate	—	—	7.7% grading to 4.5% in 2033	7% grading to 4.4% in 2031

The following table presents the significant assumptions used to calculate NRG's benefit expense:

Weighted-Average Assumptions	As of December 31,					
	Pension Benefits			Other Postretirement Benefits		
	2023	2022	2021	2023	2022	2021
Discount rate	5.18 %	2.89%/4.71%/5.41%	2.55 %	5.19 %	2.82 %	2.81 %
Interest crediting rate	5.21 %	3.07 %	3.13 %	4.00 %	1.94 %	1.62 %
Expected return on plan assets	5.55 %	4.99 %	5.62 %	—	—	—
Rate of compensation increase	3.06 %	3.06 %	3.06 %	—	—	—
Health care trend rate	—	—	—	7.2% grading to 4.5% in 2028	6.9% grading to 4.4% in 2028	7.0% grading to 4.4% in 2028

NRG uses December 31 of each respective year as the measurement date for the Company's pension and other postretirement benefit plans. The Company sets the discount rate assumptions on an annual basis for each of NRG's defined benefit retirement plans as of December 31. The discount rate assumptions represent the current rate at which the associated liabilities could be effectively settled at December 31. The Company utilizes the Aon AA Above Median, or AA-AM, yield curve and the AON Canada yield curve to select the appropriate discount rate assumption for its retirement plans. The AA-AM yield curve is a hypothetical AA yield curve represented by a series of annualized individual spot discount rates from 6 months to 99 years. Under the AA-AM yield curve, each bond issue used to build this yield curve must be non-callable, and have an average rating of AA when averaging available Moody's Investor Services, Standard & Poor's and Fitch ratings. The AON Canada yield curve is based on high quality corporate bonds. Under the AON Canada yield curve, expected plan cash flows were discounted using the yield curve, and then a single rate is determined which produces an equivalent present value.

NRG employs a total return investment approach, whereby a mix of equities and fixed income investments are used to maximize the long-term return of plan assets for a prudent level of risk. Risk tolerance is established through careful consideration of plan liabilities, plan funded status, and corporate financial condition. The Investment Committee reviews the asset mix periodically and as the plan assets increase in future years, the Investment Committee may examine other asset classes such as real estate or private equity. NRG employs a building block approach to determining the long-term rate of return assumption for plan assets, with proper consideration given to diversification and rebalancing. Historical markets are studied and long-term historical relationships between equities and fixed income are preserved, consistent with the widely accepted capital market principle that assets with higher volatility generate a greater return over the long run. Current factors such as inflation and interest rates are evaluated before long-term capital market assumptions are determined. Peer data and historical returns are reviewed to check for reasonableness and appropriateness.

The target allocations of NRG's pension plan assets were as follows for the year ended December 31, 2023:

U.S. equity	19 %
Non-U.S. equity	12 %
Non-core assets	17 %
Fixed Income	52 %

Plan assets are currently invested in a diversified blend of equity and fixed-income investments. Furthermore, equity investments are diversified across U.S., non-U.S., global, and emerging market equities, as well as among growth, value, small and large capitalization stocks.

Investment risk and performance are monitored on an ongoing basis through quarterly portfolio reviews of each asset fund class to a related performance benchmark, if applicable, and annual pension liability measurements. Performance benchmarks are composed of the following indices:

Asset Class	Index
U.S. equities	Dow Jones U.S. Total Stock Market Index
Non-U.S. equities	MSCI All Country World Index
Non-core assets ^(a)	Various (per underlying asset class)
Fixed income securities	Barclays Short, Intermediate and Long Credits/Barclays Strips 20+ Index and FTSE Canada Universe Bond Index

- (a) Non-Core Assets are defined as diversifying asset classes approved by the Investment Committee that are intended to enhance returns and/or reduce volatility of the U.S. and non-U.S. equities. Asset classes considered Non-Core include, but may not be limited to: Emerging Market Equity, Emerging Market Debt, Non-US Developed Market Small Cap, High Yield Fixed Income, Real Estate, Bank Loans, Global Infrastructure and other Alternatives

NRG's expected future benefit payments for each of the next five years, and in the aggregate for the five years thereafter, are as follows:

(In millions)	Pension	Other Postretirement Benefit	
	Benefit Payments	Benefit Payments	Medicare Prescription Drug Reimbursements
2024	\$ 82	\$ 5	\$ —
2025	81	5	—
2026	79	5	—
2027	78	5	—
2028	76	5	—
2029-2033	360	27	2

STP Defined Benefit Plans

STPNOC, which operates and maintains STP, provides its employees a defined benefit pension plan, as well as postretirement health and welfare benefits. Although NRG did not sponsor the STP plan, it reimbursed STPNOC for 44% of the contributions made towards its retirement plan obligations. For the years ended December 31, 2023 and December 31, 2022, NRG reimbursed STPNOC \$3 million and \$18 million, respectively, for its contribution to the plans. On November 1, 2023, the Company closed on the sale of its 44% equity interest in STP. Following the sale, the Company is no longer responsible for further reimbursements to the STP pension plan.

The Company recognized the following in its statement of financial position, statement of operations and accumulated OCI related to its former 44% interest in STP:

(In millions)	As of December 31,	
	Pension Benefits	Other Postretirement Benefits
	2022	2022
Funded status — STPNOC benefit plans	\$ (7)	\$ (13)
Net periodic benefit cost/(credit)	2	(4)
Other changes in plan assets and benefit obligations recognized in other comprehensive income	(27)	1

Defined Contribution Plans

NRG's employees are also eligible to participate in defined contribution 401(k) plans.

The Company's costs related to these plans were as follows:

(In millions)	Year Ended December 31,		
	2023	2022	2021
Cost recognized for defined contribution plans	\$ 61	\$ 37	\$ 35

The Company's costs, which are primarily related to employer matching of a portion of employee contributions to defined contribution plans, increased during 2023 primarily due to an increase in retirement saving plan match and the Vivint acquisition.

Note 16 — Capital Structure

For the period from December 31, 2020 to December 31, 2023, the Company had 10,000,000 shares of preferred stock authorized and 500,000,000 shares of common stock authorized. The following table reflects the changes in NRG's preferred and common shares issued and outstanding for each period presented:

	Preferred Shares	Common Shares		
	Issued and Outstanding	Issued	Treasury	Outstanding
Balance as of December 31, 2020	—	423,057,848	(178,825,915)	244,231,933
Shares issued under ESPP	—	—	117,392	117,392
Shares issued under LTIPs	—	489,326	—	489,326
Share repurchases	—	—	(1,084,752)	(1,084,752)
Balance as of December 31, 2021	—	423,547,174	(179,793,275)	243,753,899
Shares issued under ESPP	—	—	142,825	142,825
Shares issued under LTIPs	—	349,827	—	349,827
Share repurchases	—	—	(14,685,521)	(14,685,521)
Balance as of December 31, 2022	—	423,897,001	(194,335,971)	229,561,030
Issuance of Series A Preferred Stock .	650,000	—	—	—
Shares issued under ESPP	—	—	191,249	191,249
Shares issued under LTIPs	—	1,109,611	—	1,109,611
Share repurchases	—	—	(22,730,940)	(22,730,940)
Retirement of treasury stock	—	(157,676,142)	157,676,142	—
Balance as of December 31, 2023	650,000	267,330,470	(59,199,520)	208,130,950
Shares issued under LTIPs	—	660,267	—	660,267
Share repurchases	—	—	(770,205)	(770,205)
Retirement of treasury stock	—	(770,205)	770,205	—
Balance as of February 1, 2024	650,000	267,220,532	(59,199,520)	208,021,012

Common Stock

As of December 31, 2023, NRG had 27,362,083 shares of common stock reserved for the maximum number of shares potentially issuable based on the conversion and redemption features of the long-term incentive plans.

Common Stock Dividends

The Company declared and paid \$0.3775, \$0.350 and \$0.325 quarterly dividend per common share, or \$1.51, \$1.40 and \$1.30 per share on an annualized basis for 2023, 2022 and 2021 respectively.

In 2021, 2022 and 2023, NRG increased the annual dividend on its common stock to \$1.30, \$1.40 and \$1.51 per share, respectively, representing an 8% increase each year. The long-term capital allocation policy targets an annual dividend growth rate of 7%-9% per share in subsequent years. Beginning in the first quarter of 2024, NRG will increase the annual dividend by 8% to \$1.63 per share.

The Company's common stock dividends are subject to available capital, market conditions, and compliance with associated laws, regulations and other contractual obligations.

On January 19, 2024, NRG declared a quarterly dividend on the Company's common stock of \$0.4075 per share, or \$1.63 per share on an annualized basis, payable on February 15, 2024, to stockholders of record as of February 1, 2024.

Employee Stock Purchase Plan

The Company offers participation in the ESPP which allows eligible employees to elect to withhold between 1% and 10% of their eligible compensation to purchase shares of NRG common stock at the lesser of 90% of its market value on the offering date or 90% of the fair market value on the exercise date. An offering date occurs each April 1 and October 1. An exercise date occurs each September 30 and March 31. On April 27, 2023, NRG stockholders approved the adoption of the Amended and Restated Employee Stock Purchase Plan, effective April 1, 2023, which included a reduction in the price at which eligible employees may purchase shares of NRG common stock from 95% to 90% of the fair market value of the shares on the applicable date. NRG stockholders also approved an increase of 4,400,000 shares available for the issuance under the ESPP. As of December 31, 2023, there remained 6,702,125 shares of treasury stock reserved for issuance under the ESPP.

Share Repurchases

Share repurchases in 2021 and 2022 were made under the December 6, 2021 \$1 billion authorization, as part of NRG's capital allocation policy. On June 22, 2023, following the acquisition of Vivint Smart Home, NRG revised its long-term capital allocation policy to target allocating approximately 80% of cash available for allocation, after debt reduction, to be returned to shareholders. As part of the revised capital allocation framework, the Company announced an increase to its share repurchase authorization to \$2.7 billion, to be executed through 2025.

On November 6, 2023, the Company executed Accelerated Share Repurchase agreements to repurchase a total of \$950 million of NRG's outstanding common stock. Under the ASR agreements, the Company paid a total of \$950 million and will receive shares of NRG's common stock on specified settlement dates. The total number of shares purchased pursuant to the ASR agreements will generally be based on the volume-weighted average prices of NRG's common stock during the term of each ASR agreement, less a discount. The Company received initial shares of 4,494,224 on November 8, 2023 and an additional 13,181,918 shares on December 27, 2023, which were recorded in treasury stock at fair value based on the volume-weighted average closing prices of \$833 million, with the remaining \$117 million recorded in additional paid in capital, representing the value of the forward contracts to purchase additional shares. On January 30, 2024, an additional 770,205 shares were delivered. The ASR period will end in March of 2024 and additional shares may be delivered upon final settlement of the remaining agreements. The total number of shares delivered and the average price paid for all of the shares delivered under the ASR agreements will be determined at the end of the ASR period.

During the year ended December 31, 2023, the Company completed \$1.2 billion of share repurchases under the \$2.7 billion authorization, including \$950 million through the ASR and \$200 million through open market repurchases at an average price of \$39.56. As of February 1, 2024, \$1.5 billion is remaining under the \$2.7 billion authorization.

The following table summarizes the share repurchases made from 2021 through February 1, 2024:

	Total number of shares purchased	Average price paid per share	Amounts paid for shares purchased (in millions)
2021 Repurchases:			
Open market repurchases ^(a)	1,084,752	\$ 40.85	\$ 44
2022 Repurchases:			
Open market repurchases	14,685,521	40.48	595
2023 Repurchases:			
Open market repurchases	5,054,798		200
Repurchases made under the accelerated share repurchase agreements ^(b)	17,676,142		950
Total Share Repurchases during 2023	22,730,940	(e)	\$ 1,150 (c)
Repurchases made subsequent to December 31, 2023 under the accelerated share repurchase agreements ^(d)	770,205		—
Total Share Repurchases January 1, 2023 through February 1, 2024	23,501,145	(e)	\$ 1,150

(a) Includes \$5 million accrued as of December 31, 2021

(b) Initial and interim shares delivered under the November 6, 2023 accelerated share repurchase agreements

(c) Excludes \$10 million accrued for excise tax owed as of December 31, 2023

(d) Additional shares delivered under the November 6, 2023 accelerated share repurchase agreements

(e) The total number of shares delivered and the average price per share under the ASR agreements will be determined at the end of the ASR period

Retirement of Treasury Stock

In the fourth quarter of 2023, the Company retired 157,676,142 shares of treasury stock. These retired shares are now included in NRG's pool of authorized but unissued shares. The retired stock had a carrying value of approximately \$5.0 billion. The Company's accounting policy upon the formal retirement of treasury stock is to deduct its par value from common stock and to reflect any excess of cost over par value as a deduction from additional paid-in capital.

Preferred Stock

Series A Preferred Stock

On March 9, 2023 ("Series A Issuance Date"), the Company issued 650,000 shares of 10.25% Series A Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock. The net proceeds of \$635 million, net of issuance costs, were used to partially fund the Vivint Smart Home acquisition.

The Series A Preferred Stock is not convertible into or exchangeable for any other securities or property and has limited voting rights. The Series A Preferred Stock may be redeemed, in whole or in part, on one or more occasions, at the option of the

Company at any time after March 15, 2028 ("Series A First Reset Date") and in certain other circumstances prior to the Series A First Reset Date. The Series A Preferred Stock has a liquidation preference of \$1,000 per share, plus accumulated but unpaid dividends.

Series A Preferred Stock Dividends

The annual dividend rate on each share of Series A Preferred Stock is 10.25% from the Series A Issuance Date to, but excluding the Series A First Reset Date. On and after the Series A First Reset Date, the dividend rate on each share of Series A Preferred Stock shall equal the five-year U.S. Treasury rate as of the most recent reset dividend determination date (subject to a floor of 1.00%), plus a spread of 5.92% per annum. Cumulative cash dividends on the Series A Preferred Stock are payable semiannually, in arrears, on each March 15 and September 15, when, as and if declared by the Board of Directors. In September 2023, the Company declared and paid a semi-annual dividend of \$52.96 per share on its outstanding Series A Preferred Stock, totaling \$34 million.

Note 17 — Investments Accounted for by the Equity Method and Variable Interest Entities

Entities that are not Consolidated

NRG accounts for the Company's significant investments using the equity method of accounting. NRG's carrying value of equity investments can be impacted by a number of elements including impairments and movements in foreign currency exchange rates.

The following table summarizes NRG's equity method investments as of December 31, 2023:

(In millions, except percentages)

Name:	Economic Interest	Investment Balance
Gladstone	37.5 %	\$ 34
Midway-Sunset Cogeneration Company	50.0 %	8
Total equity investments in affiliates		\$ 42

The following table summarizes the undistributed earnings from NRG's equity method investments as of December 31, 2023:

(In millions)	As of December 31,	
	2023	2022
Undistributed earnings	\$ —	\$ 42

Other Equity Investments

Gladstone — Through a joint venture, NRG owns a 37.5% interest in Gladstone, a 1,613 MW coal-fueled power generation facility in Queensland, Australia. The power generation facility is managed by the joint venture participants and the facility is operated by NRG. Operating expenses incurred in connection with the operation of the facility are funded by each of the participants in proportion to their ownership interests. Coal is sourced from local mines in Queensland. NRG and the joint venture participants receive their respective share of revenues directly from the off takers in proportion to the ownership interests in the joint venture. Power generated by the facility is primarily sold to an adjacent aluminum smelter, with excess power sold to the Queensland Government-owned utility under long-term supply contracts. NRG's investment in Gladstone was \$34 million as of December 31, 2023.

Entities that are Consolidated

The Company has a controlling financial interest that has been identified as a VIE under ASC 810 in NRG Receivables LLC, which has entered into financing transactions related to the Receivables Facility as further described in Note 13, *Long-term Debt and Finance Leases*.

The summarized financial information for the Company's consolidated VIEs consisted of the following:

(In millions)	December 31, 2023	December 31, 2022
Accounts receivable and Other current assets	\$ 1,541	\$ 2,108
Current liabilities	153	152
Net assets	\$ 1,388	\$ 1,956

Note 18 — (Loss)/Income Per Share

Basic (loss)/income per common share is computed by dividing net (loss)/income less cumulative dividends attributable to preferred stock by the weighted average number of common shares outstanding. Shares issued and treasury shares repurchased during the year are weighted for the portion of the year that they were outstanding. Diluted (loss)/income per share is computed in a manner consistent with that of basic (loss)/income per share, while giving effect to all potentially dilutive common shares that were outstanding during the period.

Dilutive effect for equity compensation and other equity instruments — The relative performance stock units, non-vested restricted stock units, market stock units and non-qualified stock options are not considered outstanding for purposes of computing basic (loss)/income per share. However, these instruments are included in the denominator for purposes of computing diluted (loss)/income per share under the treasury stock method for periods when there is net income. The Convertible Senior Notes are convertible, under certain circumstances, into cash or combination of cash and Company's common stock. Prior to adoption of ASU 2020-06, there was no dilutive effect for the Convertible Senior Notes due to the Company's expectation to settle the liability in cash. Upon adoption of ASU 2020-06, on January 1, 2022, the Company is including the potential share settlements, if any, in the denominator for purposes of computing diluted (loss)/income per share under the if converted method for periods when there is net income. The potential shares settlements are calculated as the excess of the Company's conversion obligation over the aggregate principal amount (which will be settled in cash), divided by the average share price for the period. For the year ended December 31, 2023, there was no dilutive effect for the Convertible Senior Note since there was a net loss. For the year ended December 31, 2022, there was no dilutive effect for the Convertible Senior Notes since there were no potential share settlements for the period.

The reconciliation of NRG's basic and diluted (loss)/income per share is shown in the following table:

(In millions, except per share amounts)	Year Ended December 31,		
	2023	2022	2021
Basic and diluted (loss)/income per share:			
Net (loss)/income	\$ (202)	\$ 1,221	\$ 2,187
Less: Cumulative dividends attributable to Series A Preferred Stock	54	—	—
(Loss)/Income Available to Common Stockholders	\$ (256)	\$ 1,221	\$ 2,187
Weighted average number of common shares outstanding - basic and diluted	228	236	245
(Loss)/Income per weighted average common share — basic and diluted	\$ (1.12)	\$ 5.17	\$ 8.93

As of December 31, 2023, the Company had 6 million of outstanding equity instruments that are anti-dilutive and were not included in the computation of the Company's diluted loss per share. As of December 31, 2022 and 2021, the Company had an insignificant number of outstanding equity instruments that are anti-dilutive and were not included in the computation of the Company's diluted income per share.

Note 19 — Segment Reporting

The Company's segment structure reflects how management makes financial decisions and allocates resources. The Company manages its operations based on the combined results of the retail and wholesale generation businesses with a geographical focus. Vivint Smart Home operations are reported within the Vivint Smart Home segment.

NRG's chief operating decision maker, its interim chief executive officer, evaluates the performance of its segments based on operational measures including adjusted earnings before interest, taxes, depreciation and amortization, or Adjusted EBITDA, free cash flow and allocation of capital, as well as net income/(loss). The accounting policies of the segments are the same as those applied in the consolidated financial statements as disclosed in Note 2, *Summary of Significant Accounting Policies*.

The Company had no customer that comprised more than 10% of the Company's consolidated revenues during the years ended December 31, 2023, 2022 and 2021.

Intersegment sales are accounted for at market.

For the Year Ended December 31, 2023

(In millions)	Texas	East	West/ Services/ Other	Vivint Smart Home ^(a)	Corporate ^(b)	Eliminations	Total
Revenue^(b)	\$10,476	\$12,547	\$ 4,281	\$ 1,549	\$ —	\$ (30)	\$ 28,823
Operating expenses	8,407	14,412	5,025	917	133	(30)	28,864
Depreciation and amortization	294	116	95	586	36	—	1,127
Impairment losses	2	4	20	—	—	—	26
Total operating cost and expenses	8,703	14,532	5,140	1,503	169	(30)	30,017
Gain on sale of assets	1,319	259	—	—	—	—	1,578
Operating income/(loss)	3,092	(1,726)	(859)	46	(169)	—	384
Equity in earnings of unconsolidated affiliates	—	—	16	—	—	—	16
Impairment losses on investments	—	—	(102)	—	—	—	(102)
Other income, net	2	11	6	(12)	56	(16)	47
Gain on debt extinguishment	—	—	—	—	109	—	109
Interest expense	(3)	(3)	(31)	(177)	(469)	16	(667)
Income/(loss) before income taxes	3,091	(1,718)	(970)	(143)	(473)	—	(213)
Income tax (benefit)/expense ^(c)	—	—	(111)	(32)	132	—	(11)
Net income/(loss)	<u>\$ 3,091</u>	<u>\$ (1,718)</u>	<u>\$ (859)</u>	<u>\$ (111)</u>	<u>\$ (605)</u>	<u>\$ —</u>	<u>\$ (202)</u>

Balance sheet

Equity investments in affiliates	\$ —	\$ —	\$ 42	\$ —	\$ —	\$ —	\$ 42
Capital expenditures	495	5	27	18	53	—	598
Goodwill	643	721	221	3,494	—	—	5,079
Total assets	<u>\$ 8,236</u>	<u>\$13,712</u>	<u>\$ 3,626</u>	<u>\$ 7,043</u>	<u>\$ 19,919</u>	<u>\$ (26,498)</u>	<u>\$ 26,038</u>

(a) Includes results of operations following the acquisition date of March 10, 2023

(b) Inter-segment sales and inter-segment net derivative gains and losses included in revenues

\$ 5	\$ 9	\$ 16	\$ —	\$ —	\$ —	\$ 30
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(c) Consolidated domestic federal and state income taxes are recorded to the Corporate segment, except for Vivint Smart Home which is recorded directly to the Vivint Smart Home segment. West/Services/Other amounts represent foreign income taxes

For the Year Ended December 31, 2022

(In millions)	Texas	East	West/ Services/ Other	Corporate ^(a)	Eliminations	Total
Revenue^(a)	\$ 10,057	\$ 16,763	\$ 4,706	\$ —	\$ 17	\$ 31,543
Operating expenses	8,495	16,031	4,108	86	17	28,737
Depreciation and amortization	310	208	85	31	—	634
Impairment losses	—	206	—	—	—	206
Total operating cost and expenses	8,805	16,445	4,193	117	17	29,577
Gain/(loss) on sale of assets	10	—	45	(3)	—	52
Operating income/(loss)	1,262	318	558	(120)	—	2,018
Equity in (losses)/earnings of unconsolidated affiliates	(2)	—	8	—	—	6
Other income, net	5	10	3	54	(16)	56
Interest expense	—	(1)	(32)	(400)	16	(417)
Income/(loss) before income taxes	1,265	327	537	(466)	—	1,663
Income tax expense ^(b)	—	1	57	384	—	442
Net income/(loss)	\$ 1,265	\$ 326	\$ 480	\$ (850)	\$ —	\$ 1,221

Balance sheet

Equity investments in affiliates	\$ —	\$ —	\$ 133	\$ —	\$ —	\$ 133
Capital expenditures	273	7	37	50	—	367
Goodwill	710	723	217	—	—	1,650
Total assets	\$ 11,475	\$ 19,526	\$ 8,139	\$ 35,780	\$ (45,774)	\$ 29,146

(a) Inter-segment sales and inter-segment net derivative gains and losses included in revenues \$ 4 \$ (26) \$ 5 \$ — \$ — \$ (17)

(b) Consolidated domestic federal and state income taxes are recorded to the Corporate segment. West/Services/Other amounts represent foreign income taxes

For the Year Ended December 31, 2021

(In millions)	Texas	East	West/ Services/ Other	Corporate ^(a)	Eliminations	Total
Revenue^(a)	\$ 10,295	\$ 13,025	\$ 3,659	\$ —	\$ 10	\$ 26,989
Operating expenses	8,692	10,256	3,467	141	10	22,566
Depreciation and amortization	336	333	88	28	—	785
Impairment losses	—	535	9	—	—	544
Total operating cost and expenses	9,028	11,124	3,564	169	10	23,895
Gain on sale of assets	19	—	17	211	—	247
Operating income	1,286	1,901	112	42	—	3,341
Equity in (losses)/earnings of unconsolidated affiliates	(3)	—	20	—	—	17
Other income, net	8	7	3	59	(14)	63
Loss on debt extinguishment	—	—	—	(77)	—	(77)
Interest expense	(1)	(1)	(28)	(469)	14	(485)
Income/(loss) before income taxes	1,290	1,907	107	(445)	—	2,859
Income tax expense ^(b)	—	—	19	653	—	672
Net income/(loss)	\$ 1,290	\$ 1,907	\$ 88	\$ (1,098)	\$ —	\$ 2,187

(a) Inter-segment sales and inter-segment net derivative gains and losses included in revenues \$ 5 \$ (18) \$ 3 \$ — \$ — \$ (10)

(b) Consolidated domestic federal and state income taxes are recorded to the Corporate segment. West/Services/Other amounts represent foreign income taxes

Note 20 — Income Taxes

The income tax provision consisted of the following amounts:

(In millions, except effective income tax rate)	Year Ended December 31,		
	2023	2022	2021
Current			
U.S. Federal	\$ 26	\$ 3	\$ —
State	84	65	48
Foreign	(12)	3	3
Total — current	98	71	51
Deferred			
U.S. Federal	50	258	569
State	(61)	59	36
Foreign	(98)	54	16
Total — deferred	(109)	371	621
Total income tax (benefit)/expense	\$ (11)	\$ 442	\$ 672
Effective income tax rate	5.2 %	26.6 %	23.5 %

The IRA enacted on August 16, 2022, introduced new provisions including a 15% corporate alternative minimum tax and a 1% excise tax on net share repurchases with both taxes effective beginning in fiscal year 2023 for NRG. There is no impact on the Company's provision for income taxes from the CAMT for the year ended December 31, 2023. The Company will reevaluate the impact of the corporate alternative minimum tax upon the potential release of guidance by the U.S. Treasury and the IRS regarding the treatment of unrealized gains and losses on derivative instruments.

The following represented the domestic and foreign components of income before income taxes:

(In millions)	Year Ended December 31,		
	2023	2022	2021
U.S.	\$ 261	\$ 1,436	\$ 2,759
Foreign	(474)	227	100
Total	\$ (213)	\$ 1,663	\$ 2,859

Reconciliations of the U.S. federal statutory tax rate to NRG's effective tax rate were as follows:

(In millions, except effective income tax rate)	Year Ended December 31,		
	2023	2022	2021
(Loss)/Income before income taxes	\$ (213)	\$ 1,663	\$ 2,859
Tax at federal statutory tax rate	(45)	349	600
State taxes	(22)	69	111
Foreign rate differential	(10)	7	(3)
Changes in state valuation allowances	42	(3)	(29)
Permanent differences	31	17	8
Recognition of uncertain tax benefits	12	8	(10)
Deferred impact of state tax rate changes	3	14	(10)
Foreign tax refunds	(17)	—	—
Return to provision adjustments	(5)	—	5
Carbon capture tax credits	—	(19)	—
Income tax (benefit)/expense	\$ (11)	\$ 442	\$ 672
Effective income tax rate	5.2 %	26.6 %	23.5 %

For the year ended December 31, 2023, NRG's effective income tax rate was lower than the federal statutory tax rate of 21%, primarily due to permanent differences and changes in state valuation allowances.

For the year ended December 31, 2022, NRG's effective income tax rate was higher than the federal statutory tax rate of 21% primarily due to state tax expense partially offset by the recognition of carbon capture tax credits.

For the year ended December 31, 2021, NRG's effective income tax rate was higher than the federal statutory tax rate of 21% primarily due to state tax expense partially offset by tax benefits from the revaluation of state deferred tax assets, valuation allowance, and settlements of uncertain tax positions.

The temporary differences, which gave rise to the Company's deferred tax assets and liabilities consisted of the following:

(In millions)	As of December 31,	
	2023	2022
Deferred tax assets:		
U.S. Federal net operating loss carryforwards	\$ 1,762	\$ 1,717
State net operating loss carryforwards	367	315
Foreign net operating loss carryforwards	110	104
Deferred revenues	347	—
Difference between book and tax basis of property	353	399
Federal and state tax credit carryforwards	317	393
Deferred compensation, accrued vacation and other reserves	141	93
Interest disallowance carryforward per § 163(j) of the Tax Act	132	65
Pension and other postretirement benefits	48	62
Allowance for credit losses	35	33
Equity compensation	24	8
Federal benefit on state uncertain tax positions	13	5
Inventory obsolescence	11	10
U.S. capital loss	1	15
Other	33	22
Total deferred tax assets	3,694	3,241
Deferred tax liabilities:		
Intangibles amortization (excluding goodwill)	726	269
Derivatives	156	874
Capitalized contract costs	131	—
Equity method investments	93	82
Goodwill	40	26
Debt discount amortization	26	—
Emissions allowances	18	19
Total deferred tax liabilities	1,190	1,270
Total deferred tax assets less deferred tax liabilities	2,504	1,971
Valuation allowance	(275)	(224)
Total net deferred tax assets, net of valuation allowance	\$ 2,229	\$ 1,747

The following table summarizes NRG's net deferred tax position as presented in the consolidated balance sheets:

(In millions)	As of December 31,	
	2023	2022
Deferred tax asset	\$ 2,251	\$ 1,881
Deferred tax liability	(22)	(134)
Net deferred tax asset	\$ 2,229	\$ 1,747

The primary drivers for the increase in the net deferred tax asset from \$1.7 billion as of December 31, 2022 to \$2.2 billion as of December 31, 2023 is due to unrealized mark-to-market book losses and deferred revenues, partially offset by capitalized contract costs and a step-up in basis of book intangibles associated with the acquisition of Vivint Smart Home.

Deferred tax assets and valuation allowance

Net deferred tax balance — As of December 31, 2023 and 2022, NRG recorded a net deferred tax asset, excluding valuation allowance, of \$2.5 billion and \$2.0 billion, respectively. The Company believes certain state net operating losses may not be realizable under the more-likely-than-not measurement and as such, a valuation allowance was recorded as of December 31, 2023 as discussed below.

NOL carryforwards — As of December 31, 2023, the Company had tax-effected cumulative U.S. NOLs consisting of carryforwards for federal and state income tax purposes of \$1.8 billion and \$367 million, respectively. In addition, NRG has tax-effected cumulative foreign NOL carryforwards of \$110 million. The majority of NRG's NOL carryforwards have no expiration date.

Valuation allowance — As of December 31, 2023, the Company's tax-effected valuation allowance was \$275 million, consisting of state NOL carryforwards and foreign NOL carryforwards. The valuation allowance was recorded based on the assessment of cumulative and forecasted pre-tax book earnings and the future reversal of existing taxable temporary differences.

Taxes Receivable and Payable

As of December 31, 2023, NRG recorded a current federal payable of \$20 million, a current net state payable of \$3 million and a current net foreign receivable of \$7 million.

Uncertain tax benefits

NRG has identified uncertain tax benefits with after-tax value of \$73 million and \$22 million as of December 31, 2023 and 2022, for which NRG has recorded a non-current tax liability of \$76 million and \$24 million, respectively. The Company recognizes interest and penalties related to uncertain tax benefits in income tax expense. The Company recognized \$1 million of interest expense for the year ended December 31, 2023, \$1 million for the year ended 2022 and an immaterial amount for the year ended 2021. As of December 31, 2023 and 2022, NRG had cumulative interest and penalties related to these uncertain tax benefits of \$3 million and \$2 million, respectively.

Tax jurisdictions — NRG is subject to examination by taxing authorities for income tax returns filed in the U.S. federal jurisdiction and various state and foreign jurisdictions including operations located in Australia and Canada.

The Company is no longer subject to U.S. federal income tax examinations for years prior to 2020. With few exceptions, state and Canadian income tax examinations are no longer open for years before 2015.

The following table summarizes uncertain tax benefits activity:

(In millions)	As of December 31,	
	2023	2022
Balance as of January 1	\$ 22	\$ 13
Increase due to current year positions	28	9
Increase due to acquired balance from Vivint Smart Home	23	—
Uncertain tax benefits as of December 31	<u>\$ 73</u>	<u>\$ 22</u>

Note 21 — Stock-Based Compensation

The Company's stock-based compensation consists of awards granted under the NRG LTIP and following the Acquisition in March 2023, the Vivint LTIP.

NRG Energy, Inc. Long-Term Incentive Plan

As of December 31, 2023 and 2022, a total of 25,000,000 shares of NRG common stock were authorized for issuance under the NRG LTIP. There were 7,717,139 and 8,179,771 shares of common stock remaining available for grants under the NRG LTIP as of December 31, 2023 and 2022, respectively. The NRG LTIP is subject to adjustments in the event of reorganization, recapitalization, stock split, reverse stock split, stock dividend, and a combination of shares, merger or similar change in NRG's structure or outstanding shares of common stock. As of December 31, 2023, the outstanding awards under the NRG LTIP include restricted stock units, deferred stock units and relative performance stock units.

Restricted Stock Units

As of December 31, 2023, RSUs granted under the NRG LTIP typically have three-year graded vesting schedules beginning on the grant date. Fair value of the RSUs granted during 2023 and 2022 is derived from the closing price of NRG common stock on the grant date. The following table summarizes the Company's non-vested RSU awards and changes during the year:

	Units	Weighted Average Grant Date Fair Value per Unit
Non-vested at December 31, 2022	856,917	\$ 40.25
Granted	1,031,469	35.71
Forfeited	(284,076)	34.70
Vested	(393,470)	39.67
Non-vested at December 31, 2023	1,210,840	37.88

The total fair value of RSUs vested during the years ended December 31, 2023, 2022 and 2021 was \$20 million, \$10 million and \$12 million, respectively. The weighted average grant date fair value of RSUs granted during the years ended December 31, 2023, 2022 and 2021 was \$35.71, \$41.26 and \$39.00, respectively.

Deferred Stock Units

DSUs represent the right of a participant to be paid one share of NRG common stock at the end of a deferral period established under the terms of the award. DSUs granted under the NRG LTIP are fully vested at the date of issuance. Fair value of the DSUs, which is based on the closing price of NRG common stock on the date of grant, is recorded as compensation expense in the period of grant.

The following table summarizes the Company's outstanding DSU awards and changes during the year:

	Units	Weighted Average Grant Date Fair Value per Unit
Outstanding at December 31, 2022	418,014	\$ 27.63
Granted	79,072	34.40
Converted to Common Stock	(53,799)	25.11
Outstanding at December 31, 2023	443,287	29.07

The aggregate intrinsic values for DSUs outstanding as of December 31, 2023, 2022 and 2021 were approximately \$23 million, \$13 million and \$17 million, respectively. The aggregate intrinsic values for DSUs converted to common stock for the years ended December 31, 2023, 2022 and 2021 were \$3 million, \$1 million and \$1 million, respectively. The weighted average grant date fair value of DSUs granted during the years ended December 31, 2023, 2022 and 2021 was \$34.40, \$45.49 and \$32.27, respectively.

Relative Performance Stock Units

RPSUs entitle the recipient to stock upon vesting. The amount of the award is subject to the Company's achievement of certain performance measures over the vesting period. RPSUs are restricted grants where the quantity of shares increases and decreases alongside the Company's Total Shareholder Return ("TSR"), relative to the TSR of the Company's current proxy peer group and the total returns of select indexes, or Peer Group. For RPSU's granted in 2022 and forward, the peer group consists of the companies that comprise the Standard & Poor's 500 Index on the first day of the performance period. Each RPSU represents the potential to receive NRG common stock after the completion of the performance period, typically three years of service from the date of grant. The number of shares of NRG common stock to be paid (if any) as of the vesting date for each RPSU will depend on the Company's percentile rank within the Peer Group. The number of shares of common stock to be paid as of the vesting date for each RPSU is linearly interpolated for TSR performance between the following points: (i) 0% if ranked below the 25th percentile; (ii) 25% if ranked at the 25th percentile; (iii) 100% if ranked at the 55th percentile (or the 65th percentile if the Company's absolute TSR is less than negative 15%); and (iv) 200% if ranked at the 75th percentile or above.

The following table summarizes the Company's non-vested RPSU awards and changes during the year:

	Units	Weighted Average Grant-Date Fair Value per Unit
Non-vested at December 31, 2022	795,335	\$ 50.23
Granted	617,510	39.46
Forfeited ^(a)	(737,227)	45.61
Vested	(3,729)	50.28
Non-vested at December 31, 2023	671,889	46.27

(a) Includes January 2023 vestings that occurred at a 0% payout as well as forfeitures due to the departure of certain officers

The weighted average grant date fair value of RPSUs granted during the years ended December 31, 2023, 2022 and 2021, was \$39.46, \$57.41 and \$46.78, respectively.

The fair value of RPSUs is estimated on the date of grant using a Monte Carlo simulation model and expensed over the service period, which equals the vesting period. Significant assumptions used in the fair value model with respect to the Company's RPSUs are summarized below:

	2023	2022	2021 ^(a)
Expected volatility	41.35 %	37.54 %	34.05 %
Expected term (in years)	3	3	3
Risk free rate	4.18 %	0.97 %	0.17 %

(a) Assumptions pertain to the main award granted in January 2021. Additional 60,815 RPSUs were granted in September 2021 with a risk free rate of 0.42% and expected volatility of 37.38%

The expected volatility is calculated based on NRG's historical stock price volatility data over the period commensurate with the expected term of the RPSU, which equals the vesting period.

Vivint Smart Home Long-Term Incentive Plan

Effective March 10, 2023, in connection with the Vivint Smart Home Acquisition, as discussed in Note 4, *Acquisitions and Dispositions*, NRG assumed the Vivint Smart Home, Inc. Long-Term Incentive Plan, or Vivint LTIP. In addition to the rollover awards converted as part of the Acquisition, the Vivint LTIP provides for issuances of time-based restricted stock units and performance-based restricted stock units. As of December 31, 2023, 17,500,000 shares of NRG common stock were authorized for issuance under the Vivint LTIP, and there were 12,749,736 shares of common stock remaining available for grants.

Restricted Stock Units

As of December 31, 2023, RSUs under the Vivint LTIP include RSUs which were granted prior to the Acquisition and were converted into awards that will vest as NRG common stock ("Rollover RSUs"). These awards typically had four-year graded vesting schedules beginning on the grant date. The fair value of the Rollover RSUs is based on the fair value of NRG common stock on the Acquisition date after applying the conversion ratio as per the Merger Agreement. The RSUs that were granted following the Acquisition date are typically subject to the same terms as the RSUs under the NRG LTIP.

The following table summarizes the non-vested RSUs under the Vivint LTIP and changes during the year:

	Rollover RSUs		RSUs granted following the Acquisition	
	Units	Weighted Average Grant Date Fair Value per Unit	Units	Weighted Average Grant Date Fair Value per Unit
Non-vested at December 31, 2022	—	\$ —	—	\$ —
Rollover RSUs at the Acquisition date	4,553,998	31.63	—	—
Granted following the Acquisition date	—	—	895,827	35.24
Forfeited	(288,776)	31.63	(110,531)	35.21
Vested	(1,280,321)	31.63	(4,998)	35.21
Non-vested at December 31, 2023	2,984,901	31.63	780,298	35.24

The total fair value of RSUs vested during the year ended December 31, 2023 was \$66 million.

Performance Stock Units

As of December 31, 2023, PSUs granted under the Vivint LTIP are generally granted under the same terms as the PSUs granted under the NRG LTIP, and are valued using the same methods and assumptions. During the year ended December 31, 2023, 102,837 PSUs were granted at a weighted average grant date fair value per unit of \$44.96 and remain outstanding as of year end.

Supplemental Information

The following table summarizes NRG's total compensation expense recognized for the years presented, as well as total non-vested compensation costs not yet recognized and the period over which this expense is expected to be recognized as of December 31, 2023, for each of the types of awards issued under the LTIPs. Minimum tax withholdings of \$22 million, \$6 million, and \$9 million for the years ended December 31, 2023, 2022, and 2021, respectively, are reflected as a reduction to additional paid-in capital on the Company's consolidated balance sheets.

(In millions, except weighted average data)	Compensation Expense			Non-vested Compensation Cost	
				Unrecognized Total Cost	Weighted Average Recognition Period Remaining (In years)
	Year Ended December 31,			As of December 31,	
	2023	2022	2021	2023	2023
Award					
RSUs under NRG LTIP	\$ 20	\$ 15	\$ 9	\$ 29	1.61
RSUs under Vivint LTIP	76	—	—	69	1.82
PSUs under Vivint LTIP	2	—	—	3	2.25
DSUs	2	2	2	—	0.00
RPSUs	3	11	9	17	1.69
PRSUs under NRG LTIP ^(a)	12	6	7	15	1.74
PRSUs under Vivint LTIP ^(a)	8	—	—	14	2.29
Total	\$ 123	\$ 34	\$ 27	\$ 147	
Tax detriment recognized	\$ 2	\$ 3	\$ 2		

(a) Phantom Restricted Stock Units, PRSUs, are liability-classified time-based awards that typically vest ratably over a three-year period. The amount to be paid upon vesting is based on NRG's closing stock price for the period

Note 22 — Related Party Transactions

NRG provides services to some of its related parties, who are accounted for as equity method investments, under operations and maintenance agreements. Fees for the services under these agreements include recovery of NRG's costs of operating the plants. Certain agreements also include fees for administrative service, a base monthly fee, profit margin and/or annual incentive bonus.

The following table summarizes NRG's material related party transactions with third-party affiliates:

(In millions)	Year Ended December 31,		
	2023	2022	2021
<i>Revenues from Related Parties Included in Revenues</i>			
Gladstone	\$ 4	\$ 4	\$ 4
Ivanpah ^(a)	78	42	39
Midway-Sunset	2	6	6
Total	\$ 84	\$ 52	\$ 49

(a) Includes fees under project management agreements with each project company

Note 23 — Commitments and Contingencies

Commitments

NRG has entered into long-term contractual arrangements related to energy products, including power purchases, gas transportation and storage, and fuel and transportation services. These contracts are not included in the consolidated balance sheet as of December 31, 2023.

As of December 31, 2023, the Company's minimum commitments under such outstanding agreements are estimated as follows:

Period	(In millions)
2024	\$ 573
2025	836
2026	540
2027	364
2028	292
Thereafter	823
Total ^(a)	\$ 3,428

(a) The year 2024 does not include an additional \$978 million of short-term commitments

The Company's actual costs may be significantly higher than these estimated minimum unconditional long-term firm commitments with remaining term in excess of one year. For the years ended December 31, 2023, 2022 and 2021, the costs of fuel and purchased energy were \$13.4 billion, \$19.6 billion and \$13.4 billion, respectively.

First Lien Structure

NRG has granted first liens to certain counterparties on a substantial portion of property and assets owned by NRG and the guarantors of its senior debt. NRG uses the first lien structure to reduce the amount of cash collateral and letters of credit that it would otherwise be required to post from time to time to support its obligations under out-of-the-money hedges. To the extent that the underlying hedge positions for a counterparty are out-of-the-money to NRG, the counterparty would have a claim under the first lien program. As of December 31, 2023, all hedges under the first liens were in-the-money on a counterparty aggregate basis.

Contingencies

The Company's material legal proceedings are described below. The Company believes that it has valid defenses to these legal proceedings and intends to defend them vigorously. NRG records accruals for estimated losses from contingencies when information available indicates that a loss is probable and the amount of the loss, or range of loss, can be reasonably estimated. As applicable, the Company has established an adequate accrual for the applicable legal matters, including regulatory and environmental matters as further discussed in Note 24, *Regulatory Matters*, and Note 25, *Environmental Matters*. In addition, legal costs are expensed as incurred. Management has assessed each of the following matters based on current information and made a judgment concerning its potential outcome, considering the nature of the claim, the amount and nature of damages sought, and the probability of success. Unless specified below, the Company is unable to predict the outcome of these legal proceedings or reasonably estimate the scope or amount of any associated costs and potential liabilities. As additional information becomes available, management adjusts its assessment and estimates of such contingencies accordingly. Because litigation is subject to inherent uncertainties and unfavorable rulings or developments, it is possible that the ultimate resolution of the Company's liabilities and contingencies could be at amounts that are different from its currently recorded accruals and that such difference could be material.

In addition to the legal proceedings noted below, NRG and its subsidiaries are party to other litigation or legal proceedings arising in the ordinary course of business. In management's opinion, the disposition of these ordinary course matters will not materially adversely affect NRG's consolidated financial position, results of operations, or cash flows.

Environmental Lawsuits

Sierra club et al. v. Midwest Generation LLC — In 2012, several environmental groups filed a complaint against Midwest Generation with the Illinois Pollution Control Board ("IPCB") alleging violations of environmental law resulting in groundwater contamination. In June 2019, the IPCB found in an interim order that Midwest Generation violated the law because it had improperly handled coal ash at four facilities in Illinois and caused or allowed coal ash constituents to impact groundwater. On September 9, 2019, Midwest Generation filed a Motion to Reconsider numerous issues, which the court granted in part and denied in part on February 6, 2020. In 2023, the IPCB held hearings to determine the appropriate relief. Midwest Generation has been working with the Illinois EPA to address the groundwater issues since 2010.

Consumer Lawsuits

Similar to other energy service companies operating in the industry, from time-to-time, the Company and/or its subsidiaries may be subject to consumer lawsuits in various jurisdictions where they sell natural gas and electricity.

Variable Price Cases — In the cases set forth below, referred to as the Variable Price Cases, such actions involve consumers alleging that one of the Company's ESCOs promised that consumers would pay the same or less than they would have paid if they stayed with their default utility or previous energy supplier. The underlying claims of each case are similar and the Company continues to deny the allegations and is vigorously defending these matters. These matters were known and accrued for at the time of each acquisition.

XOOM Energy

Mirkin v. XOOM Energy (E.D.N.Y. Aug. 2019) is a defendant in a putative class action lawsuit pending in New York. The Court denied XOOM's motion for summary judgment and granted class certification. The Second Circuit denied XOOM's request to appeal the class certification grants. XOOM plans to challenge Mirkin's expert testimony to further hamper Mirkin's ability to support its case.

Direct Energy

There was one putative class action pending against Direct Energy: Richard Schafer v. Direct Energy (W.D.N.Y. Dec. 2019; on appeal 2nd Cir. N.Y.) - The Second Circuit sent the matter back to the trial court in December 2021. After discovery, Direct Energy filed summary judgment. Direct Energy won summary judgment and Schafer appealed. The appeal is fully briefed. Oral argument occurred on October 25, 2023. The Second Circuit upheld the trial court's grant of summary judgment in favor of Direct Energy.

Telephone Consumer Protection Act ("TCPA") Cases — In the cases set forth below, referred to as the TCPA Cases, such actions involve consumers alleging violations of the Telephone Consumer Protection Act of 1991, as amended, by receiving calls, texts or voicemails without consent in violation of the federal Telemarketing Sales Rule, and/or state counterpart legislation. The underlying claims of each case are similar. The Company denies the allegations asserted by plaintiffs and intends to vigorously defend these matters. These matters were known and accrued for at the time of the acquisition.

There are two putative class actions pending against Direct Energy: (1) Holly Newman v. Direct Energy, LP (D. Md Sept 2021) - Direct Energy filed its Motion to Dismiss asserting the ruling in the Brittany Burk v. Direct Energy (S.D. Tex. Feb 2019) preempts the Plaintiff's ability to file suit based on the same facts. The Court denied Direct Energy's motion stating the Court does not have the benefit of all of the facts that were in front of the Burk court to issue a similar ruling. On October 19, 2022, Direct Energy filed a Motion to Transfer Venue asking the Court to transfer the case to the Southern District where the Burk case was filed. On April 12, 2023, the Court granted Direct Energy's Motion to Transfer Venue, moving to the case to the Southern District of Texas; and (2) Matthew Dickson v. Direct Energy (N.D. Ohio Jan. 2018) - The case was stayed pending the outcome of an appeal to the Sixth Circuit based on the unconstitutionality of the TCPA during the period from 2015-2020. The Sixth Circuit found the TCPA was in effect during that period and remanded the case back to the trial court. Direct Energy refiled its motions along with supplements. On March 25, 2022, the Court granted summary judgment in favor of Direct Energy and dismissed the case. Dickson appealed. The Sixth Circuit found that Dickson has standing and reversed the trial court's dismissal of the case. The matter is back at the trial court. The parties will conduct further fact discovery and expert discovery and are likely to resubmit motions for further review by the Court.

Sales Practice Lawsuits

There are three litigation matters relating to claims made by Vivint Smart Home competitors against Vivint Smart Home alleging, among other things, that Vivint Smart Home's sales representatives used deceptive sales practices. These matters were known and accrued for at the time of the acquisition. The three matters are: (1) CPI Security Systems, Inc. ("CPI") v. Vivint Smart Home, Inc. (W.D.N.C. Sept. 2020). The CPI matter that was filed in 2020 went to trial, and in February 2023, the jury issued a verdict against Vivint Smart Home, in favor of CPI for \$50 million of compensatory damages and an additional \$140 million of punitive damages. Vivint Smart Home has filed its notice of appeal and is awaiting a briefing schedule. While Vivint Smart Home believes the CPI jury verdict is not legally or factually supported and intends to pursue post judgment remedies and file an appeal, there can be no assurance that such defense efforts will be successful; (2) ADT LLC, et al. ("ADT") v. Vivint Smart Home, Inc. f/k/a Mosaic Acquisition Corporation, et al. (S.D.Fl. Aug. 2020). The parties mediated in May 2023 and agreed on a settlement. In June 2023, the Court granted final approval of the settlement, which was paid in June 2023; and (3) Alert 360 Opco, Inc, et al. ("Alert 360") v. Vivint Smart Home, Inc., et al (N.D.Ok. March 2023). On March 1, 2023, Alert 360 filed a complaint against Vivint Smart Home alleging, among other things, deceptive sales practices. The parties settled the dispute in October 2023 and the case was dismissed.

Patent Infringement Lawsuits

SB IP Holdings LLC (“Skybell”) v. Vivint Smart Home, Inc. — On October 23, 2023, a jury in the U.S. District Court, Eastern District of Texas, Sherman Division, issued a verdict against the Company in favor of Skybell for \$45 million in damages for patent infringement. The patents that were the basis for the claims made by Skybell were ruled invalid by the U.S. International Trade Commission in November 2021. In accordance with advice by legal counsel, the Company does not believe the verdict is legally supported and will pursue post-judgment and appellate remedies along with any other legal options available.

Contract Disputes

Alarm.com — In September 2022, Vivint Smart Home sent Alarm.com a notice asserting that it was no longer obligated to pay certain license fees under the Patent Cross License Agreement between the parties on the basis that Vivint Smart Home no longer practices any claim under any valid Alarm.com patent and, therefore, no license fees are due. Alarm.com filed an arbitration demand against Vivint Smart Home alleging, among other things, breach of the agreement due to continued use of the patents in question. The parties have resolved all outstanding litigation and entered into a long-term intellectual property licensing agreement.

STP — In July 2023, the partners in STP, CPS and Austin Energy, initiated a lawsuit and filed to intervene in the license transfer application with the NRC, claiming a right of first refusal exists in relation to the proposed sale of NRG South Texas' 44% interest in STP to Constellation. NRG believes the claims set forth by CPS and Austin Energy in the lawsuit and the NRC proceedings are without merit and intends to vigorously defend against them. For further discussion of the transaction, see Note 4, *Acquisitions and Dispositions*.

Winter Storm Uri Lawsuits

The Company has been named in certain property damage and wrongful death claims that have been filed in connection with Winter Storm Uri in its capacity as a generator and a REP. Most of the lawsuits related to Winter Storm Uri are consolidated into a single multi-district litigation matter in Harris County District Court. NRG's REPs have since been severed from the multi-district litigation and will be seeking dismissal in any remaining cases. As a power generator, the Company is named in various cases with claims ranging from: wrongful death; personal injury only; property damage and personal injury; property damage only; and subrogation. The First Court of Appeals conditionally granted the generators' mundamus relief, ordering the trial court to grant the generator defendants' Motions to Dismiss. The Company expected the Plaintiffs to challenge this ruling. The Company intends to vigorously defend these matters.

Indemnifications and Other Contractual Arrangements

Washington-St. Tammany and Claiborne Electric Cooperative v. LaGen — On June 28, 2017, plaintiffs Washington-St. Tammany Electric Cooperative, Inc. and Claiborne Electric Cooperative, Inc. filed a lawsuit against LaGen in the United States District Court for the Middle District of Louisiana. The plaintiffs claimed breach of contract against LaGen for allegedly improperly charging the plaintiffs for costs related to the installation and maintenance of certain pollution control technology. Plaintiffs sought damages for the alleged improper charges and a declaration as to which charges were proper under the contract. On February 4, 2019, NRG sold the South Central Portfolio, including the entities subject to this litigation. However, NRG has agreed to indemnify the purchaser for certain losses suffered in connection with this litigation. In February 2020, the federal court dismissed this lawsuit without prejudice for lack of subject matter jurisdiction. On March 17, 2020, plaintiffs filed a lawsuit in the Nineteenth Judicial District Court for the Parish of East Baton Rouge in Louisiana alleging substantially the same matters, which was dismissed on October 2, 2023 pursuant to a settlement agreement.

Note 24 — Regulatory Matters

NRG operates in a highly regulated industry and is subject to regulation by various federal, state and provincial agencies. As such, NRG is affected by regulatory developments at the federal, state and provincial levels and in the regions in which NRG operates.

In addition to the regulatory proceedings noted below, NRG and its subsidiaries are parties to other regulatory proceedings arising in the ordinary course of business or have other regulatory exposure. In management's opinion, the disposition of these ordinary course matters will not materially adversely affect NRG's consolidated financial position, results of operations, or cash flows.

California Station Power — As the result of unfavorable final and non-appealable litigation, the Company accrued a liability associated with consumption of station power at the Company's Encina power plant facility in California after August 30, 2010. The Company has established an appropriate accrual pending potential regulatory action by San Diego Gas & Electric regarding the Company's Encina facility.

Federal Trade Commission Investigation — In 2019, Vivint Smart Home received a civil investigative demand from the staff of the Federal Trade Commission (“FTC”) concerning potential violations of the Fair Credit Reporting Act and the “Red Flags Rule” thereunder, and the FTC Act. In April 2021, Vivint Smart Home entered into a settlement with the FTC that resolved this investigation. As part of this settlement, which was approved by a federal court on May 3, 2021, Vivint Smart Home paid \$20 million and agreed to implement various additional compliance related measures (“Stipulated Order”). The Company is currently in the process of administering the terms of the Stipulated Order, which includes multiple undertakings by the Company. The Company is engaged in ongoing discussions with the staff of the FTC regarding the Company’s compliance with the terms of the Stipulated Order. Under the terms of the Stipulated Order, Vivint Smart Home is required to undertake biennial assessments by an independent third-party assessor (the “Assessor”), which reviews Vivint Smart Home’s compliance program and provides a report on Vivint Smart Home’s ongoing compliance with the Stipulated Order. Since its inception until December 31, 2023, Vivint Smart Home has completed its initial assessment and its first biennial assessment as required by the Stipulated Order. In addition, Vivint Smart Home has voluntarily undertaken six quarterly audits by the appointed Assessor. In all the assessments, Vivint Smart Home received a report from the Assessor with no findings of non-compliance of any kind.

New York State Public Service Commission (“NYSPSC”) - Notice of Apparent Violation — The NYSPSC issued an order referred to as the Retail Reset Order in December 2019 that limited ESCO’s offers for electric and natural gas to three compliant products: guaranteed savings from the utility default rate, a fixed term capped at 5% of the rolling 12-month average utility default rate, or NY-sourced renewable energy that is at least 50% greater than the prevailing NY Renewable Energy Standard for load serving entities. The order effectively limited ESCO offers to natural gas customers to only the guaranteed savings and capped fixed term compliant products because no equivalent renewable energy product exists for natural gas. NRG took action to comply with the order when it became effective April 16, 2021. On January 8, 2024, the NYSPSC notified eight of NRG’s retail energy suppliers (serving both electricity and natural gas) of alleged non-compliance with New York regulatory requirements. Among other items, the notices allege that the NRG suppliers did not transition existing residential customers to one of the three compliant products authorized by the NYSPSC following the effective date of the order. NRG responded to the notices in February 2024. The outcome of this process has the potential to negatively impact the retail business in New York.

Note 25 — Environmental Matters

NRG is subject to a wide range of environmental laws in the development, construction, ownership and operation of power plants. These laws generally require that governmental permits and approvals be obtained before construction and maintained during operation of power plants. The electric generation industry has been facing increasingly stringent requirements regarding air quality, GHG emissions, combustion byproducts, water discharge and use, and threatened and endangered species. In general, future laws are expected to require the addition of emissions controls or other environmental controls or to impose additional restrictions on the operations of the Company’s facilities, which could have a material effect on the Company’s consolidated financial position, results of operations, or cash flows. The Company has elected to use a \$1 million disclosure threshold, as permitted, for environmental proceedings to which the government is a party.

Air

CPP/ACE Rules — In 2019, the EPA promulgated the ACE rule, which rescinded the CPP, which had sought to broadly regulate CO₂ emissions from the power sector. The ACE rule required states that have coal-fired EGUs to develop plans to seek heat rate improvements from coal-fired EGUs. On January 19, 2021, the D.C. Circuit vacated the ACE rule (but on February 22, 2021, at the EPA’s request, stayed the issuance of the portion of the mandate that would vacate the repeal of the CPP). On June 30, 2022, the U.S. Supreme Court held that the “generation shifting” approach in the CPP exceeded the powers granted to the EPA by Congress. The Court did not address the related issues of whether the EPA may adopt only measures applied at each source. On May 23, 2023, the EPA proposed significantly revising the manner in which new and existing EGU’s GHG emissions should be regulated including using hydrogen as a fuel, capturing and storing/sequestering CO₂ and requiring new units to be more efficient. The EPA has stated that it intends to finalize these revisions in 2024. The Company expects that the final rule will be challenged in the courts and accordingly uncertain over the next several years.

Cross-State Air Pollution Rule (“CSAPR”) — On March 15, 2023, the EPA signed and released a prepublication of a final rule that sought to significantly revise the CSAPR to address the good-neighbor obligations of the 2015 ozone NAAQS for 23 states after earlier having disapproved numerous state plans to address the issue. Several states, including Texas, challenged the EPA’s disapproval of their state plans. On May 1, 2023, the United States Court of Appeals for the Fifth Circuit stayed the EPA’s disapproval of Texas’ and Louisiana’s state plans, which disapprovals are a condition precedent to the EPA imposing its plan on Texas and Louisiana. Several other states are also similarly situated because of similar stays. Nonetheless, on June 5, 2023, the EPA published this rule in the Federal Register. On July 31, 2023, the EPA promulgated an interim final rule that addresses the various judicial orders that have stayed several State-Implementation-Plan disapprovals by limiting the effectiveness of certain requirements of the final rule promulgated on June 5, 2023 in Texas and five other states. The final rule decreases, over time, the ozone-season NO_x allowances allocated to generators in the states not affected by the judicial stays

beginning in 2023 by assuming that participants in this cap-and-trade program had or would optimize existing NOx controls and later install additional NOx controls. The Company cannot predict the outcome of the legal challenges to the: (i) various state disapprovals; (ii) the final rule promulgated on June 5, 2023; and (iii) the interim final rule promulgated on July 31, 2023 that seeks to address the judicial orders.

Regional Haze Proposal — On May 2023, the EPA proposed to withdraw the existing Texas Sulfur Dioxide Trading Program and replace it with unit-specific SO₂ limits for 12 units in Texas to address requirements to improve visibility at National Parks and Wilderness areas. If finalized as proposed, the rule would result in more stringent SO₂ limits for two of the Company's coal-fired units in Texas. The Company cannot predict the outcome of this proposal.

Water

Effluent Limitations Guidelines — In 2015, the EPA revised the ELG for Steam Electric Generating Facilities, which imposed more stringent requirements (as individual permits were renewed) for wastewater streams from FGD, fly ash, bottom ash, and flue gas mercury control. On September 18, 2017, the EPA promulgated a final rule that, among other things, postponed the compliance dates to preserve the status quo for FGD wastewater and bottom ash transport water by two years to November 2020 until the EPA amended the rule. On October 13, 2020, the EPA amended the 2015 ELG rule by: (i) altering the stringency of certain limits for FGD wastewater; (ii) relaxing the zero-discharge requirement for bottom ash transport water; and (iii) changing several deadlines. In October 2021, NRG informed its regulators that the Company intends to comply with the ELG by ceasing combustion of coal by the end of 2028 at its domestic coal units outside of Texas, and installing appropriate controls by the end of 2025 at its two plants that have coal-fired units in Texas. On March 29, 2023, the EPA proposed revisions to the ELG and sought comments, which the EPA is analyzing.

Byproducts

In 2015, the EPA finalized a rule regulating byproducts of coal combustion (e.g., ash and gypsum) as solid wastes under the RCRA. On August 21, 2018, the D.C. Circuit found, among other things, that the EPA had not adequately regulated unlined ponds and legacy surface impoundments. On August 28, 2020, the EPA finalized "A Holistic Approach to Close Part A: Deadline to Initiate Closure," which amended the April 2015 Rule to address the August 2018 D.C. Circuit decision and extend some of the deadlines. On November 12, 2020, the EPA finalized "A Holistic Approach to Closure Part B: Alternative Demonstration for Unlined Surface Impoundments," which further amended the April 2015 Rule to, among other things, provide procedures for requesting approval to operate existing ash impoundments with an alternative liner. On May 23, 2023, the EPA proposed establishing requirements for: (i) inactive (or legacy) surface impoundments at inactive facilities and (ii) all CCR management units (regardless of how or when the CCR was placed) at regulated facilities. NRG anticipates further rulemaking related to legacy surface impoundments and the Federal Permit Program.

Note 26 — Cash Flow Information

Detail of supplemental disclosures of cash flow and non-cash investing and financing information was:

(In millions)	Year Ended December 31,		
	2023	2022	2021
Interest paid, net of amount capitalized	\$ 548	\$ 383	\$ 433
Income taxes paid, net of refunds	48	66	32
Non-cash investing activities:			
Decreases to fixed assets for accrued capital expenditures	—	(68)	(16)

Note 27 — Guarantees

NRG and its subsidiaries enter into various contracts that include indemnification and guarantee provisions as a routine part of the Company's business activities. Examples of these contracts include asset purchases and sale agreements, commodity sale and purchase agreements, retail contracts, joint venture agreements, EPC agreements, operation and maintenance agreements, service agreements, settlement agreements, and other types of contractual agreements with vendors and other third parties, as well as affiliates. These contracts generally indemnify the counterparty for tax, environmental liability, litigation and other matters, as well as breaches of representations, warranties and covenants set forth in these agreements. The Company is obligated with respect to customer deposits associated with the Company's retail operations. In some cases, NRG's maximum potential liability cannot be estimated, since the underlying agreements contain no limits on potential liability.

The following table summarizes the maximum potential exposures that can be estimated for NRG's guarantees, indemnities, and other contingent liabilities by maturity:

(In millions)	By Remaining Maturity at December 31,					
	2023					2022 Total
	Under 1 Year	1-3 Years	3-5 Years	Over 5 Years	Total	
Guarantees						
Letters of credit and surety bonds	\$ 4,555	\$ 37	\$ —	\$ —	\$ 4,592	\$ 5,211
Asset sales guarantee obligations	13	24	22	67	126	409
Other guarantees	—	—	—	27	27	15
Total guarantees	\$ 4,568	\$ 61	\$ 22	\$ 94	\$ 4,745	\$ 5,635

Letters of credit and surety bonds — As of December 31, 2023, NRG and its consolidated subsidiaries were contingently obligated for a total of \$4.6 billion under letters of credit and surety bonds. Most of these letters of credit and surety bonds are issued in support of the Company's obligations to perform under commodity agreements and obligations associated with future closure and maintenance of ash sites, as well as for financing or other arrangements. A majority of these letters of credit and surety bonds expire within one year of issuance, and it is typical for the Company to renew them on similar terms.

The material indemnities, within the scope of ASC 460, are as follows:

Asset sales — The purchase and sale agreements which govern NRG's asset or share investments and divestitures customarily contain guarantees and indemnifications of the transaction to third parties. The contracts indemnify the parties for liabilities incurred as a result of a breach of a representation or warranty by the indemnifying party, changes in tax laws or for pre-existing environmental matters. These obligations generally have a discrete term and are intended to protect the parties against risks that are difficult to predict or estimate at the time of the transaction. In several cases, the contract limits the liability of the indemnifier. NRG has no reason to believe that the Company currently has any material liability relating to such routine indemnification obligations included in the table above, except for the California property tax indemnity for estimated increases in California property taxes of certain solar properties that the Company agreed to indemnify, as part of the agreement to sell NRG Yield and the Renewables Platform. The California property tax indemnity is estimated to be \$126 million as of December 31, 2023 and is included in the above table under asset sales guarantee obligations.

Other guarantees — NRG has issued other guarantees of obligations including payments under certain agreements with respect to certain of its unconsolidated subsidiaries, payment or performance by fuel providers and payment or reimbursement of credit support and deposits. The Company does not believe that it will be required to perform under these guarantees.

Other indemnities — Other indemnifications NRG has provided cover operational, tax, litigation and breaches of representations, warranties and covenants. NRG has also indemnified, on a routine basis in the ordinary course of business, consultants or other vendors who have provided services to the Company. NRG's maximum potential exposure under these indemnifications can range from a specified dollar amount to an indeterminate amount, depending on the nature of the transaction. Total maximum potential exposure under these indemnifications is not estimable due to uncertainty as to whether claims will be made or how they will be resolved. NRG does not have any reason to believe that the Company will be required to make any material payments under these indemnity provisions.

Because many of the guarantees and indemnities NRG issues to third parties and affiliates do not limit the amount or duration of its obligations to perform under them, there exists a risk that the Company may have obligations in excess of the amounts described above. For those guarantees and indemnities that do not limit the Company's liability exposure, it may not be able to estimate what the Company's liability would be, until a claim is made for payment or performance, due to the contingent nature of these contracts.

Note 28 — Jointly Owned Plant

NRG owns an undivided interest in Cedar Bayou. Cedar Bayou is maintained and operated pursuant to its joint ownership participation and operating agreement. NRG is responsible for its subsidiaries' share of operating costs and direct expenses and includes its proportionate share of the facility and related revenues and direct expenses in the jointly-owned plant in the corresponding balance sheet and income statement captions of the Company's consolidated financial statements.

The following table summarizes NRG's proportionate ownership interest in the Company's jointly-owned facility:

(In millions unless otherwise stated)	Ownership Interest	Property, Plant & Equipment	Accumulated Depreciation	Construction in Progress
As of December 31, 2023				
Cedar Bayou Unit 4, Baytown, TX	50.00 %	\$ 222	\$ (115)	\$ 2

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS

For the Years Ended December 31, 2023, 2022 and 2021

(In millions)	Balance at Beginning of Period	Charged to Costs and Expenses	Charged to Other Accounts	Deductions	Balance at End of Period
Allowance for credit losses, deducted from accounts receivable and other non-current assets					
Year Ended December 31, 2023	\$ 133	\$ 251	\$ 35	\$ (274) ^(a)	\$ 145
Year Ended December 31, 2022	683	11	—	(561) ^(a)	133
Year Ended December 31, 2021	67	698	112	(194) ^(a)	683
Income tax valuation allowance, deducted from deferred tax assets					
Year Ended December 31, 2023	\$ 224	\$ 42	\$ 9	\$ —	\$ 275
Year Ended December 31, 2022	248	(20)	(4)	—	224
Year Ended December 31, 2021	266	(29)	11	—	248

(a) Represents principally net amounts charged as uncollectible

EXHIBIT INDEX

Number	Description	Method of Filing
2.1	Third Amended Joint Plan of Reorganization of GenOn Energy, Inc. and its Debtor Affiliates.	Incorporated herein by reference to Exhibit 2.1 to the Registrant's current report on Form 8-K filed on December 18, 2017.
2.2 ^{†^}	Purchase and Sale Agreement, dated as of February 6, 2018, by and among NRG Energy, Inc. and NRG Repowering Holdings LLC, and GIP III Zephyr Acquisition Partners, L.P.	Incorporated herein by reference to Exhibit 2.9 to the Registrant's annual report on Form 10-K filed on March 1, 2018.
2.3 [^]	Purchase and Sale Agreement, dated as of February 6, 2018, by and between NRG Energy, Inc., NRG South Central Generating LLC, and Cleco Energy LLC.	Incorporated herein by reference to Exhibit 2.10 to the Registrant's annual report on Form 10-K filed on March 1, 2018.
2.4 [‡]	Purchase and Sale Agreement dated as of February 28, 2021 by and between NRG Energy, Inc., and Generation Bridge Acquisition, LLC, as a Purchaser	Incorporated herein by reference to Exhibit 2.1 to the Registrant's quarterly report on Form 10-Q filed on May 6, 2021.
2.5 [^]	Agreement and Plan of Merger dated as of December 6, 2022, by and among the Company, Merger Sub and Vivint.	Incorporated herein by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K, filed on December 6, 2022.
2.6	Equity Purchase Agreement, dated May 31, 2023 by and among Constellation Energy Generation, LLC, as Buyer and Texas Genco GP, LLC, Texas Genco LP, LLC, together, Seller.	Incorporated herein by reference to Exhibit 2.1 to the Registrant's current report on Form 8-K filed on June 1, 2023.
2.7	Amendment No.1 to Equity Purchase Agreement dated September 29, 2023 by and among Constellation Energy Generation, LLC. as Buyer and Texas Genco GP, LLC, together, Seller	Filed herewith.
2.8	Amendment No. 2 to Equity Purchase Agreement dated November 1, 2023 by and among Constellation Energy Generation, LLC. as Buyer and Texas Genco GP, LLC, together, Seller	Filed herewith.
2.9	Amendment No. 3 to Equity Purchase Agreement dated November 1, 2023 by and among Constellation Energy Generation, LLC. as Buyer and Texas Genco GP, LLC, together, Seller	Filed herewith.
3.1	Amended and Restated Certificate of Incorporation.	Incorporated herein by reference to Exhibit 3.1 to the Registrant's quarterly report on Form 10-Q filed on May 3, 2012.
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation.	Incorporated herein by reference to Exhibit 3.1 to the Registrant's current report on Form 8-K filed on December 14, 2012.
3.3	Sixth Amended and Restated By-Laws.	Incorporated herein by reference to Exhibit 3.2 to the Registrant's current report on Form 8-K filed on December 2, 2022.
3.4	Series A Preferred Stock Certificate of Designation filed with the Secretary of the State of Delaware on March 9, 2023.	Incorporated herein by reference to Exhibit 3.1 to the Registrant's current report on Form 8-K filed on March 10, 2023.
4.1	Specimen of Certificate representing common stock of NRG Energy, Inc.	Incorporated herein by reference to Exhibit 4.3 to the Registrant's quarterly report on Form 10-Q filed on August 4, 2006.
4.2	Base Indenture, dated May 28, 2019, between NRG Energy, Inc. and Delaware Trust Company, as trustee	Incorporated herein by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on May 30, 2019.
4.3	Supplemental Indenture, dated May 28, 2019, among NRG Energy, Inc., the guarantors named therein and Delaware Trust Company, as trustee, containing Form 3.750% Senior Secured First Lien Notes due 2024 and Form of 4.440% Senior Secured First Lien Notes due 2029	Incorporated herein by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on May 30, 2019.
4.4	Base Indenture, dated December 2, 2020, between NRG Energy, Inc. and Deutsche Bank Trust Company Americas, as trustee, pertaining to the Secured Notes.	Incorporated herein by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed on December 4, 2020.
4.5	Supplemental Indenture, dated December 2, 2020, among NRG Energy, Inc., the guarantors named therein and Deutsche Bank Trust Company Americas, as trustee, containing Form of 2.000% Senior Secured First Lien Notes due 2025 and Form of 2.450% Senior Secured First Lien Notes due 2027	Incorporated herein by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K, filed on December 4, 2020.

4.6	Supplemental Indenture, dated March 9, 2023, among NRG Energy, Inc., the guarantors named therein and Deutsche Bank Trust Company Americas, as trustee, containing Form of 7.000% Senior Secured First Lien Notes Due 2033	Incorporated herein by reference to Exhibit 4.2 to the Registrant's current report on Form 8-K filed on March 10, 2023.
4.7	Base Indenture, dated May 23, 2016, between NRG Energy, Inc. and Delaware Trust Company (as successor in interest to Law Debenture Trust Company of New York), as trustee.	Incorporated herein by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on May 23, 2016.
4.8	Third Supplemental Indenture, dated August 2, 2016, among NRG Energy, Inc., the guarantors named therein and Law Debenture Trust Company of New York containing Form of 6.625% Senior Notes due 2027.	Incorporated herein by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K, filed on August 3, 2016.
4.9	Fourth Supplemental Indenture, dated December 7, 2017, among NRG Energy, Inc., the guarantors named therein and Delaware Trust Company, as trustee, containing Form of 5.750% Senior Notes due 2028.	Incorporated herein by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K, filed on December 8, 2017.
4.10	Fifth Supplemental Indenture, dated May 14, 2019, among NRG Energy, Inc., the guarantors named therein and Delaware Trust Company, as trustee, containing Form of 5.250% Senior Notes due 2029.	Incorporated herein by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on May 16, 2019.
4.11	Base Indenture, dated December 2, 2020, between NRG Energy, Inc. and Deutsche Bank Trust Company Americas, as trustee, pertaining to the Unsecured notes.	Incorporated herein by reference to Exhibit 4.5 to the Registrant's Current Report on Form 8-K, filed on December 4, 2020.
4.12	Supplemental Indenture, dated December 2, 2020, among NRG Energy, Inc., the guarantors named therein and Deutsche Bank Trust Company Americas, as trustee, containing Form of 3.375% Senior Notes due 2029 and Form of 3.625% Senior Notes due 2031.	Incorporated herein by reference to Exhibit 4.6 to the Registrant's Current Report on Form 8-K, filed on December 4, 2020.
4.13	Second Supplemental Indenture, dated August 23, 2021, among NRG Energy, Inc., the guarantors named therein and Deutsche Bank Trust Company Americas, as trustee, containing Form of 3.875% Senior Notes due 2032.	Incorporated herein by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K, filed on August 23, 2021.
4.14	Indenture, dated May 24, 2018, among NRG Energy, Inc., the guarantors named therein and Delaware Trust Company, as trustee, containing Form of 2.750% Convertible Senior Notes due 2048.	Incorporated herein by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed on May 25, 2018.
4.15	Supplemental Indenture (Additional Subsidiary Guarantees-2.750% Convertible Senior Notes due 2048) dated January 5, 2021, among NRG Energy, Inc., each of its guarantor subsidiaries, and Delaware Trust Company as trustee.	Incorporated herein by reference to Exhibit 4.1 to the Registrant's quarterly report on Form 10-Q filed on May 6, 2021.
4.16	Supplemental Indenture (Additional Subsidiary Guarantees-2.750% Convertible Senior Notes due 2048) dated February 17, 2022, among NRG Energy, Inc., each of its guarantor subsidiaries, and Delaware Trust Company as trustee.	Incorporated herein by reference to Exhibit 4.53 to the Registrant's annual report on Form 10-K filed on February 24, 2022.
4.17	Supplemental Indenture (Settlement Elections - 2.750% Convertible Senior Notes due 2048) dated February 22, 2022, among NRG Energy, Inc., each of its guarantor subsidiaries, and Delaware Trust Company as trustee.	Incorporated herein by reference to Exhibit 4.52 to the Registrant's annual report on Form 10-K filed on February 24, 2022.
4.18	Base Indenture, dated August 29, 2023, between NRG Energy, Inc. and Deutsche Bank Trust Company Americas, as trustee, pertaining to the Alexander Funding Trust II Pre-Capitalized Trust Securities.	Incorporated herein by reference to Exhibit 4.4 to the Registrant's current report on Form 8-K filed on August 29, 2023.
4.19	Supplemental Indenture, dated August 29, 2023, among NRG Energy, Inc., the guarantors named therein and Deutsche Bank Trust Company Americas, as trustee, containing Form 7.467% Senior Secured First Lien Notes due 2028.	Incorporated herein by reference to Exhibit 4.5 to the Registrant's current report on Form 8-K filed on August 29, 2023.
4.20	Indenture, dated as of February 14, 2020, among APX Group, Inc., the guarantors party thereto and Wilmington Trust, National Association as trustee and collateral agent relating to APX Group, Inc.'s 6.75% Senior Secured Notes due 2027.	Incorporated herein by reference to Exhibit 10.1 to Vivint Smart Home, Inc.'s Current Report on Form 8-K filed on February 19, 2020).
4.21	Indenture, dated as of July 9, 2021, between APX Group, Inc., as the Issuer, the guarantors party hereto, and Wilmington Trust, National Association, as trustee, payment agent and registrar, relating to the Company's 5.75% Senior Notes due 2029.	Incorporated herein by reference to Exhibit 10.1 to Vivint Smart Home, Inc.'s Current Report on Form 8-K filed on July 12, 2021.

4.22	Description of NRG Energy, Inc. securities registered pursuant to section 12 of the Securities Exchange Act of 1934	Incorporated herein by reference to Exhibit 4.15 to the Registrant's Annual Report on Form 10-K, filed on February 27, 2020.
10.1*	Form of NRG Energy, Inc. Long-Term Incentive Plan Deferred Stock Unit Agreement for Directors.	Incorporated herein by reference to Exhibit 10.15 to the Registrant's annual report on Form 10-K filed on March 30, 2005.
10.2*	Form of NRG Energy, Inc. Long-Term Incentive Plan Restricted Stock Unit Agreement for Officers.	Incorporated herein by reference to Exhibit 10.6 to the Registrant's annual report on Form 10-K filed on March 1, 2018.
10.3*	Form of NRG Energy, Inc. Long-Term Incentive Plan Restricted Stock Unit Agreement for Non-Officers.	Incorporated herein by reference to Exhibit 10.7 to the Registrant's annual report on Form 10-K filed on March 1, 2018.
10.4*	Second Amended and Restated Annual Incentive Plan for Designated Corporate Officers.	Incorporated herein by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed on May 7, 2015.
10.5*	The NRG Energy, Inc. Amended and Restated Long-Term Incentive Plan.	Incorporated herein by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed on April 28, 2017.
10.6*	NRG 2010 Stock Plan for GenOn Employees.	Incorporated herein by reference to Exhibit 10.49 to the Registrant's annual report on Form 10-K filed on February 27, 2013.
10.7*	Form of NRG Energy, Inc. Long-Term Incentive Plan Relative Performance Stock Unit Agreement for Officers.	Incorporated herein by reference to Exhibit 10.73 to the Registrant's annual report on Form 10-K filed on March 1, 2018.
10.8*	Form of NRG Energy, Inc. Long-Term Incentive Plan Relative Performance Stock Unit Agreement for Senior Vice Presidents.	Incorporated herein by reference to Exhibit 10.74 to the Registrant's annual report on Form 10-K filed on March 1, 2018.
10.9†	Consent and Indemnity Agreement, dated as of February 6, 2018, by and among NRG Energy, Inc., NRG Repowering Holdings LLC, NRG Yield, Inc., and GIP III Zephyr Acquisition Partners, L.P., and NRG Yield Operating LLC (solely with respect to Sections E.5, E.6 and G.12).	Incorporated herein by reference to Exhibit 10.34 to NRG Yield, Inc.'s Annual Report on Form 10-K filed on March 1, 2018.
10.10*	NRG Energy, Inc. Amended and Restated Executive Change-in-Control and General Severance Plan for Tier IA and Tier IIA Executives (Amended and Restated Effective January 1, 2024).	Filed herewith
10.11	Sixth Amendment to Second Amended and Restated Credit Agreement, dated as of February 14, 2023, by and among NRG Energy, Inc., its subsidiaries party thereto, the lenders and issuing banks party thereto, Citicorp North America, Inc., as administrative agent and collateral agent, and Deutsche Bank Trust Company Americas, as collateral trustee, and included as Exhibit A-2 thereto a clean conformed copy of the Second Amended and Restated Credit Agreement	Incorporated herein by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed on February 15, 2023.
10.12	Seventh Amendment to Second Amended and Restated Credit Agreement, dated as of March 13, 2023, by and among NRG Energy, Inc., its subsidiaries party thereto, the lenders and issuing banks party thereto, Citicorp North America, Inc., as administrative agent and collateral agent, and Deutsche Bank Trust Company Americas, as collateral trustee.	Incorporated herein by reference to Exhibit 4.2 to the Registrant's quarterly report on Form 10-Q filed on May 4, 2023.
10.13	Second Amended and Restated Credit Agreement, dated as of July 9, 2021, among APX Group Holdings, Inc., as Holdings, APX Group, Inc., as the borrower, the guarantors party hereto from time to time, Bank of America, N.A., as administrative agent, swing line lender and an L/C issuer.	Incorporated herein by reference to Exhibit 10.2 to Vivint Smart Home, Inc.'s Current Report on Form 8-K filed on July 12, 2021.
10.14	Amendment No.1 to the Second Amended and Restated Credit Agreement, dated as of June 9, 2023, by and between AXP Group, Inc. as borrower and the Bank of America, N.A., as administrative agent.	Incorporated herein by reference to Exhibit 4.1 to the Registrant's quarterly report on Form 10-Q filed on August 8, 2023.

10.15	Facility Agreement, dated August 29, 2023, among NRG Energy, Inc., the guarantors party thereto, Alexander Funding Trust II and Deutsche Bank Trust Company Americas, as the notes trustee	Incorporated herein by reference to Exhibit 4.1 to the Registrant's current report on Form 8-K filed on August 29, 2023.
10.16	Letter of Credit Facility Agreement, dated August 29, 2023, among NRG Energy, Inc., the financial institutions from time to time party thereto as letter of credit issuers, and Deutsche Bank Trust Company Americas, as administrative agent and as collateral agent	Incorporated herein by reference to Exhibit 4.2 to the Registrant's current report on Form 8-K filed on August 29, 2023.
10.17	Amended and Restated Declaration of Trust of Alexander Funding Trust II, dated August 29, 2023, among NRG Energy, Inc. as depositor and in its own capacity, Deutsche Bank Trust Company Americas, as trustee, and Deutsche Bank Trust Company Delaware, as Delaware trustee	Incorporated herein by reference to Exhibit 4.3 to the Registrant's current report on Form 8-K filed on August 29, 2023.
10.18	Receivables Sale Agreement, dated as of September 22, 2020, among the Originators from time to time parties thereto, NRG Retail LLC, as Servicer, and NRG Receivables LLC.	Incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 22, 2020.
10.19	Amendment No. 3 to Receivables Loan and Servicing Agreement, dated as of June 22, 2023, among NRG Retail LLC, as Servicer, NRG Receivables LLC, as Borrower, NRG Energy, Inc., as Performance Guarantor, the Conduit Lenders, Committed Lenders, Facility Agents and LC Issuers party thereto, and Royal Bank of Canada, as administrative Agent, and included as Exhibit A-2 thereto a clean, conformed copy of the Receivables Loan and Servicing Agreement.	Incorporated herein by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed on June 27, 2023.
10.20*	Form of NRG Energy, Inc. Long-Term Incentive Plan Relative Performance Stock Unit Agreement for Chief Executive Officer	Incorporated herein by reference to Exhibit 10.21 to the Registrant's annual report on Form 10-K filed on February 24, 2022.
10.21*	Form of NRG Energy, Inc. Long-Term Incentive Plan Relative Performance Stock Unit Agreement for Executive Vice Presidents	Incorporated herein by reference to Exhibit 10.22 to the Registrant's annual report on Form 10-K filed on February 24, 2022.
10.22*	Form of NRG Energy, Inc. Long-Term Incentive Plan Relative Performance Stock Unit Agreement for Senior Vice Presidents.	Incorporated herein by reference to Exhibit 10.23 to the Registrant's annual report on Form 10-K filed on February 24, 2022.
10.23*	Form of NRG Energy, Inc. Long-Term Incentive Plan Relative Performance Stock Unit Agreement for Senior Vice Presidents.	Filed herewith
10.24*	Form of NRG Energy, Inc. Long-Term Incentive Plan Restricted Stock Unit Agreement.	Filed herewith
10.25*	Restricted Stock Unit Agreement, dated December 15, 2023, between NRG Energy, Inc. and Lawrence S. Coben	Filed herewith
10.26*	Vivint Smart Home, Inc. 2020 Omnibus Incentive Plan	Incorporated herein by reference to Exhibit 4.4 to Vivint Smart Home's Post-Effective Amendment on Form S-8 to Registration Statement on Form S-4 filed with the Securities and Exchange Commission on March 24, 2020
10.27*	Vivint Smart Home, Inc. Long-Term Incentive Plan Relative Performance Stock Unit Agreement and Notice of Grant under the Vivint Smart Home, Inc. Omnibus Incentive Plan.	Incorporated herein by reference to Exhibit 10.2 to the Registrant's quarterly report on Form 10-Q filed on May 4, 2023.
10.28*	Vivint Smart Home, Inc. Long-Term Incentive Plan Restricted Stock Unit Agreement and Notice of Grant under the Vivint Smart Home, Inc. Omnibus Incentive Plan.	Incorporated herein by reference to Exhibit 10.3 to the Registrant's quarterly report on Form 10-Q filed on May 4, 2023.
10.29*	Vivint Smart Home, Inc. Long-Term Incentive Plan Relative Performance Stock Unit Agreement and Notice of Grant under the Vivint Smart Home, Inc. Omnibus Incentive Plan for Executive Vice President	Filed herewith
10.30*	Vivint Smart Home, Inc. Long-Term Incentive Plan Restricted Stock Unit Agreement and Notice of Grant under the Vivint Smart Home, Inc. Omnibus Incentive Plan for Executive Vice Presidents.	Filed herewith

10.31*	Amended and Restated Employee Stock Purchase Plan	Incorporated herein by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed on May 2, 2023.
10.32*	Retention letter, dated December 6, 2022, between Vivint Smart Home, Inc. and Rasesh Patel.	Incorporated herein by reference to Exhibit 10.45 to Vivint Smart Home, Inc.'s Annual Report on Form 10-K for the annual period ended December 31, 2022.
10.33*	Amended and Restated Employment Agreement, dated June 20, 2022, between Vivint Smart Home, Inc. and Rasesh Patel	Incorporated by reference to Exhibit 10.5 to Vivint Smart Home, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2022
10.34*	Amendment to the Vivint Smart Home, Inc. 2020 Omnibus Incentive Plan	Incorporated herein by reference to Exhibit 10.1 to the Registrant's quarterly report on Form 10-Q filed on August 8, 2023.
10.35	Cooperation Agreement, dated as of November 20, 2023, by and among NRG Energy, Inc., Elliott Investment Management L.P., Elliott Associates, L.P., and Elliott International, L.P.	Incorporated herein by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed on November 20, 2023
21.1	Subsidiaries of NRG Energy, Inc.	Filed herewith.
22.1	List of Guarantor Subsidiaries	Filed herewith.
23.1	Consent of KPMG LLP.	Filed herewith.
24.1	Power of Attorney	Included on signature page
31.1	Rule 13a-14(a)/15d-14(a) certification of Lawrence Coben	Filed herewith.
31.2	Rule 13a-14(a)/15d-14(a) certification of Woo-Sung Chung	Filed herewith.
31.3	Rule 13a-14(a)/15d-14(a) certification of G. Alfred Spencer	Filed herewith.
32	Section 1350 Certification.	Furnished herewith.
97	NRG Energy, Inc. Clawback Policy	Filed herewith.
101 INS	Inline XBRL Instance Document.	The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.
101 SCH	Inline XBRL Taxonomy Extension Schema.	Filed herewith.
101 CAL	Inline XBRL Taxonomy Extension Calculation Linkbase.	Filed herewith.
101 DEF	Inline XBRL Taxonomy Extension Definition Linkbase.	Filed herewith.
101 LAB	Inline XBRL Taxonomy Extension Label Linkbase.	Filed herewith.
101 PRE	Inline XBRL Taxonomy Extension Presentation Linkbase.	Filed herewith.
104	Cover Page Interactive Data File (the cover page interactive data file does not appear in Exhibit 104 because it's Inline XBRL tags are embedded within the Inline XBRL document).	Filed herewith.
*	Exhibit relates to compensation arrangements.	
†	Portions of this exhibit have been redacted and are subject to a confidential treatment request filed with the Secretary of the Securities and Exchange Commission pursuant to Rule 24b-2 under the Securities Exchange Act of 1934, as amended.	
^	This filing excludes schedules pursuant to Item 601(b)(2) of Regulation S-K, which the registrant agrees to furnish supplementary to the Securities and Exchange Commission upon request by the Commission.	
‡	Portions of this exhibit have been excluded because they are both not material and would likely cause competitive harm to the registrant if publicly disclosed. Information that has been omitted has been noted in this document with a placeholder identified by the mark “[***]”.	

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

NRG ENERGY, INC.
(Registrant)

By: /s/ LAWRENCE S. COBEN

Lawrence S. Coben
*Interim President and Chief
Executive Officer*

Date: February 28, 2024

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Brian E. Curci and Christine A. Zoino, each or any of them, such person's true and lawful attorney-in-fact and agent with full power of substitution and resubstitution for such person and in such person's name, place and stead, in any and all capacities, to sign any and all amendments to this report on Form 10-K, and to file the same with all exhibits thereto, and other documents in connection therewith, 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 necessary or desirable to be done in and about the premises, as fully to all intents and purposes as such person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

In accordance with the Exchange Act, this report has been signed by the following persons on behalf of the registrant in the capacities indicated on February 28, 2024.

Signature	Title	Date
<u>/s/ LAWRENCE S. COBEN</u> Lawrence S. Coben	Interim President and Chief Executive Officer and Director (Principal Executive Officer, Chair of the Board)	February 28, 2024
<u>/s/ WOO-SUNG CHUNG</u> Woo-Sung Chung	Chief Financial Officer (Principal Financial Officer)	February 28, 2024
<u>/s/ G. ALFRED SPENCER</u> G. Alfred Spencer	Chief Accounting Officer (Principal Accounting Officer)	February 28, 2024
<u>/s/ E. SPENCER ABRAHAM</u> E. Spencer Abraham	Director	February 28, 2024
<u>/s/ ANTONIO CARRILLO</u> Antonio Carrillo	Director	February 28, 2024
<u>/s/ MATTHEW CARTER, JR.</u> Matthew Carter, Jr.	Director	February 28, 2024
<u>/s/ HEATHER COX</u> Heather Cox	Director	February 28, 2024
<u>/s/ ELISABETH B. DONOHUE</u> Elisabeth B. Donohue	Director	February 28, 2024
<u>/s/ MARWAN FAWAZ</u> Marwan Fawaz	Director	February 28, 2024
<u>/s/ PAUL W. HOBBY</u> Paul W. Hobby	Director	February 28, 2024
<u>/s/ ALEX POURBAIX</u> Alex Pourbaix	Director	February 28, 2024
<u>/s/ ALEXANDRA PRUNER</u> Alexandra Pruner	Director	February 28, 2024
<u>/s/ ANNE C. SCHAUMBURG</u> Anne C. Schaumburg	Director	February 28, 2024
<u>/s/ MARCIE C. ZLOTNIK</u> Marcie C. Zlotnik	Director	February 28, 2024



NRG Energy

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