Genie Energy Ltd.
Form 10-K
March 16, 2017

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, 2016,

or

Transition report pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934.

Commission File Number: 1-35327

Genie Energy Ltd.
(Exact name of registrant as specified in its charter)

Delaware	**45-2069276**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

520 Broad Street, Newark, New Jersey 07102
(Address of principal executive offices, zip code)

(973) 438-3500
(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
Class B common stock, par value $.01 per share	New York Stock Exchange
Series 2012-A Preferred stock, par value $.01 per share	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 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

Large accelerated filer	Accelerated filer
Non-accelerated filer	Smaller reporting company

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

The aggregate market value of the voting and non-voting stock held by non-affiliates of the registrant, based on the closing price on June 30, 2016 (the last business day of the registrant's most recently completed second fiscal quarter) of the Class B common stock of $6.77 per share, as reported on the New York Stock Exchange, was approximately $112 million.

As of March 10, 2017, the registrant had outstanding 23,085,826 shares of Class B common stock and 1,574,326 shares of Class A common stock. Excluded from these numbers are 204,920 shares of Class B common stock held in treasury by Genie Energy Ltd.

DOCUMENTS INCORPORATED BY REFERENCE

The definitive proxy statement relating to the registrant's Annual Meeting of Stockholders, to be held May 3, 2017, is incorporated by reference into Part III of this Form 10-K to the extent described therein.

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Genie Energy Ltd.

Annual Report on Form 10-K

Part I

As used in this Annual Report, unless the context otherwise requires, the terms “the Company,” “Genie,” “we,” “us,” and “our” refer to Genie Energy Ltd., a Delaware corporation, and its subsidiaries, collectively.

Item 1. Business.

BUSINESS OVERVIEW

Genie Energy Ltd. is comprised of the following two businesses:

Genie Retail Energy (GRE) owns retail energy providers (REPs), including IDT Energy, Inc. (IDT Energy), Residents Energy, Inc. (Residents Energy) and Retail Energy Holdings, LLC, and energy brokerage and marketing services. Its REP businesses resell electricity and natural gas to residential and small business customers primarily in the Eastern United States.

Genie Oil and Gas, Inc., (GOGAS), is an oil and gas exploration company. GOGAS projects include an oil and gas exploration project in Israel operated by its subsidiary, Afek Oil and Gas, Ltd., or Afek, where the company is in the process of operating on a petroleum exploration license covering 396.5 square kilometers in the southern portion of the Golan Heights.

CORPORATE STRUCTURE

Genie Energy Ltd., a Delaware corporation, owns 99.3% of its subsidiary, Genie Energy International Corporation, or GEIC, which owns 100% of GRE, and 92% of GOGAS. GOGAS holds an 85.1% interest in Afek. GOGAS also holds interests in three inactive oil and gas projects: an 86.1% interest in Israel Energy Initiatives, Ltd., or IEI, an oil shale development project in Israel, an 88.2% interest in Genie Mongolia, Inc., an oil shale exploration project in Central Mongolia, and a 98.3% interest in American Shale Oil Corporation, or AMSO, which operated an oil shale development project in Colorado that was decommissioned.

GRE has outstanding deferred stock units granted to officers and employees that represent an interest of 2.5 % of the equity of GRE.

REPORTABLE SEGMENTS

We have three reportable business segments: Genie Retail Energy, Afek Oil and Gas, Ltd., and Genie Oil and Gas. Our reportable segments are distinguished by types of service, customers and methods used to provide their services. Financial information by segment and geographic areas is presented in "Note 18—Business Segment Information" in the Notes to our Consolidated Financial Statements in this Annual Report.

GENERAL BUSINESS INFORMATION

Our main offices are located at 520 Broad Street, Newark, New Jersey 07102. Our telephone number is (973) 438-3500 and our web site is www.genie.com.

We make available free of charge through the investor relations page of our web site (http://genie.com/investors/sec-filings/) our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to these reports, and all beneficial ownership reports on Forms 3, 4 and 5 filed by directors, officers and beneficial owners of more than 10% of our equity as soon as reasonably practicable after such material is electronically filed with the Securities and Exchange Commission. We have adopted a Code of Business Conduct and Ethics for all of our employees, including our principal executive officer and principal financial officer. Copies of our Code of Business Conduct and Ethics are available on our web site.

Our web site (www.genie.com) and the information contained therein or incorporated therein are not incorporated into this Annual Report on Form 10-K or our other filings with the Securities and Exchange Commission.

KEY EVENTS IN OUR HISTORY

Genie was incorporated in January 2011. References to us in the following discussion are made on a consolidated basis as if we existed and owned Genie Retail Energy and Genie Oil and Gas in all periods discussed.

In November 2004, IDT Corporation, or IDT, our former corporate parent, launched a retail energy provider business in New York State under the brand name IDT Energy.

In April 2013, the Government of Israel finalized the award to our subsidiary, Afek, of an exclusive three-year petroleum exploration license covering 396.5 square kilometers in the southern portion of the Golan Heights in Northern Israel. The license has been extended to April 2018. Israel's Northern District Planning and Building Committee granted Afek a one-year permit that commenced in February 2015, which has been subsequently extended to April 18, 2018, to conduct an up to ten-well oil and gas exploration program. This permit as extended is expected to cover the remainder of Afek's ongoing exploration program in the area covered by its exploration license.

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In December 2013, GRE acquired Dallas-based Diversegy, LLC, a retail energy advisory and brokerage company that serves commercial and industrial customers throughout the United States.

In April 2014, Israel's Northern District Planning and Building Committee issued a one-year exploratory drilling permit to Afek. The permit, subsequently extended, authorizes the company to drill up to ten exploratory wells within its exploratory license area.

In February 2015, Afek began drilling its first exploratory well in Northern Israel's Golan Heights pursuant to its petroleum exploration license.

In October 2015, Afek confirmed the presence of hydrocarbons in its license area based on the data gathered from its exploratory drilling program.

In November 2016, Genie Retail Energy purchased Retail Energy Holdings, LLC, which operates REPs under the name Town Square Energy. The acquisition added 48,000 residential customer equivalents, or RCEs, and expanded GRE's serviceable markets into Connecticut, Massachusetts, New Hampshire, Rhode Island and new territories in Ohio.

Spin-Off from IDT Corporation

We were formerly a subsidiary of IDT. On October 28, 2011, we were spun-off by IDT and became an independent public company through a pro rata distribution of our common stock to IDT's stockholders, which we refer to as the Spin-Off. As a result of the Spin-Off, each of IDT's stockholders received: (i) one share of our Class A common stock for every share of IDT's Class A common stock held of record on October 21, 2011, or the Record Date, and (ii) one share of our Class B common stock for every share of IDT's Class B common stock held of record on the Record Date.

Exchange Offer and Issuance of Preferred Stock

On August 2, 2012, we initiated an offer to exchange up to 8.75 million outstanding shares of our Class B common stock for the same number of shares of a new series of preferred stock. On October 17, 2012, we issued 1,604,591 shares of our newly designated Series 2012-A Preferred Stock, par value $0.01 per share, in exchange for an equal number of shares of Class B common stock tendered in the exchange offer.

In subsequent exchange offers concluded in March 2013 and June 2014, we issued an aggregate of 718,108 shares of Series 2012-A Preferred Stock in exchange for an equal number of shares of Class B common stock tendered in the exchange offer.

RECENT DEVELOPMENTS

Afek

In February 2017, Afek began preparing the location for its sixth exploratory well in the Northern portion of its license area; the drilling is expected to begin in mid-March and is expected to be completed in the second quarter of 2017. Analysis of the results from previous wells, well flow tests and other tests is ongoing.

Dividends

We pay a quarterly dividend on both of our common and preferred stock. The aggregate dividends paid in the year ended December 31, 2016 on our Class A and Class B common stock (the "Common Stock") was $5.9 million, as follows:

On February 12, 2016, we paid a quarterly Base Dividend of $0.06 per share on our Common Stock for the fourth quarter of 2015 to stockholders of record at the close of business on February 5, 2016.

On May 20, 2016, we paid a quarterly Base Dividend of $0.06 per share on our Common Stock for the first quarter of 2016 to stockholders of record at the close of business on May 16, 2016.

On August 26, 2016, we paid a quarterly Base Dividend of $0.06 per share on our Common Stock for the second quarter of 2016 to stockholders of record at the close of business on August 17, 2016.

On December 2, 2016, we paid a quarterly Base Dividend of $0.06 per share on our Common Stock for the third quarter of 2016 to stockholders of record at the close of business on November 21, 2016.

On March 7, 2017, our Board of Directors declared a quarterly dividend of $0.075 per share on our Class A common stock and Class B common stock for the fourth quarter of 2016 to stockholders of record as of the close of business on March 20, 2017. The dividend will be paid on March 24, 2017.

The aggregate dividends paid in the year ended December 31, 2016 on our Preferred Stock was $1.5 million, as follows:

On February 16, 2016, we paid a quarterly Base Dividend of $0.1594 per share on our Preferred Stock for the fourth quarter of 2015 to stockholders of record at the close of business on February 5, 2016 of our Preferred Stock.

On May 16, 2016, we paid a quarterly Base Dividend of $0.1594 per share on the Preferred Stock for the first a quarter of 2016 to stockholders of record at the close of business on May 6, 2016 of our Preferred Stock.

On August 15, 2016, we paid a quarterly Base Dividend of $0.1594 per share on the Preferred Stock for the second quarter of 2016 to stockholders of record at the close of business on August 5, 2016 of our Preferred Stock.

On November 15, 2016, we paid a quarterly Base Dividend of $0.1594 per share on the Preferred Stock for the third quarter of 2016 to stockholders of record as of the close of business on October 28, 2016.

On February 15, 2017, we paid a quarterly Base Dividend of $0.1594 per share on the Preferred Stock for the fourth quarter of 2016 to stockholders of record at the close of business on February 6, 2017 in the aggregate amount of $0.4 million.

Genie Retail Energy

Genie Retail Energy is comprised of REPs and related businesses. GRE’s REP businesses purchase electricity and natural gas on the wholesale markets and resells these commodities to its residential and small business customers. The positive difference between the net sales price of electricity and natural gas sold to its customers and the cost of its electricity and natural gas supplies and related costs is the REP businesses’ gross profit.

GRE’s REP businesses operate in certain utility territories within the retail energy markets of ten states in the Eastern and Midwestern US: Connecticut, Illinois, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania and Rhode Island, as well as in Washington, D.C.

GRE’s REP businesses operate under several brand names including IDT Energy, Residents Energy, and Town Square Energy. Their diverse offerings include, in electricity markets, variable rate offerings, fixed rate offerings, and green renewable electricity offerings. Natural gas offerings include both variable and fixed rate offerings.

Historically, GRE's REP businesses have expanded organically – adding new customers through customer acquisition programs at a rate faster than customers lost through attrition or churn. New customers are generally acquired through a combination of marketing and sales channels including door-to-door solicitation, telemarketing, online and digital marketing, and direct mail, and by competitive bidding for exclusive contracts awarded by certain municipalities that, when authorized by state laws, award participating residents' electricity supply to a single supplier.

In November 2016, GRE closed on the acquisition of Retail Energy Holdings, LLC (REH), a privately held retail electricity provider operating under the Town Square Energy brand. The acquisition added approximately 48,000 RCEs to GRE's customer base. Town Square Energy, operates in eight Eastern states and its licenses and customer base expands GRE's geographic footprint to four new states – New Hampshire, Rhode Island, Massachusetts and Connecticut – and provides additional electricity customers in New Jersey, Maryland, Ohio and Pennsylvania.

Customer churn is a significant factor in the REP business, with monthly churn rates for GRE's REPs averaging between four and eight percent per month. Customer churn tends to decrease when commodity prices fall, when weather-driven consumption decreases, when the price to REP customers decreases relative to competitors including the incumbent utility provider, or when the REPs incentivize customer tenure. Customer churn tends to increase when commodity prices rise, when weather driven consumption increases or spikes, or when the price to REP customers increases relative to the prices charged by competitors including incumbent utility providers.

GRE also operates several smaller non-REP businesses including Diversegy. Diversegy, which GRE acquired in December 2013, operates as an energy broker and advisor to industrial, commercial and municipal customers across deregulated energy markets in the United States. Diversegy's customers are not served only by GRE REPs.

In 2016, GRE launched Genie Solar Energy, a provider of end-to-end solar solutions primarily for commercial customers. Genie Solar currently operates in five states – Massachusetts, New Hampshire, New Jersey, New York and Pennsylvania,

GRE's revenue represents 100% of our total consolidated revenue since our inception. In 2016, GRE generated revenue of $212 million comprised of $179 million from sales of electricity, $31 million from sales of natural gas, and other revenue of $2 million, as compared with revenue of $213 million in the year ended December 31, 2015 comprised of $170 million from the sales of electricity, $41 million from the sales of natural gas and other revenue of $2 million. Electricity sales have become a more significant portion of GRE's business in recent years.

GRE’s REP businesses are seasonal businesses, particularly sales of natural gas. Approximately 43% and 64% of our natural gas revenues in 2016 and 2015, respectively, were generated during the first quarter, when the demand for heating was highest. Although the demand for electricity is not as seasonal as natural gas, approximately 31% and 29% of total revenues from electricity sales were generated in the third quarter of 2016 and 2015, respectively.

The weather has a significant impact on GRE’s operations. For example, unusually sustained cold weather in the first quarter of 2014 drove increased demand. Coupled with short reserves of natural gas in the wholesale markets and delivery constrictions beyond our control, this caused a significant increase in revenues and cost of revenues in the first quarter of 2014. In addition, many electricity generation plants are natural gas fired. That winter’s “polar vortex” resulted in extraordinarily large spikes in the prices of wholesale electricity and natural gas in markets where GRE’s REPs and other retail providers purchase their supply.

Abrupt increases in supply commodity prices when coupled with higher than anticipated demand because of extreme weather, such as during the ‘polar vortex’, can significantly reduce or eliminate GRE’s gross profit margins as we seek to cushion the impact of the price spikes on our customers. They also can trigger enhanced regulatory scrutiny of REPs, restrictive regulation and litigation.

Industry Overview

GRE operates retail energy providers that operate in states with deregulated retail energy markets. Like other REPs, GRE’s REPs purchase electricity and natural gas on the wholesale markets and resell the commodities to its customers, primarily homeowners, renters and small businesses. The incumbent local utilities continue to handle electricity and natural gas distribution, billing, and collections. A portion of the proceeds billed to GRE’s REPs customers for the commodity supply is remitted to the REPs.

GRE has no significant fixed assets and low levels of capital expenditure. Its cost of revenues is incurred to purchase electricity and natural gas in their respective wholesale markets. Selling, general and administrative expenses are primarily related to customer acquisition, customer retention, billing and purchase of receivables, or POR, fees paid to the utilities, and program management.

Customers; Marketing

The services of GRE's REPs IDT Energy, Residents Energy and Town Square Energy are made available to customers under several categories of terms and conditions. The majority of our current customer base is enrolled in variable rate programs, the only programs GRE's REPs offered until 2014, via automatically renewing or month-to-month agreements, which enable us to recover our wholesale costs for electricity and natural gas through adjustments to the rates charged to our customers. The frequency and degree of these rate adjustments is determined by GRE, and is not restricted by regulation.

Variable rate energy supply programs are available to all customers in all states served by GRE's REPs. Likewise, Renewable (Green) energy supply options exist in all markets served by GRE's REPs. Renewable (Green) Electricity supply is 100% matched with renewable energy certificates that reflect the generation of electricity from sources like hydro-electric wind, solar and biomass.

For our variable rate product, the amount we charge to our customers reflects the underlying commodity cost plus a markup. During times of rising costs, we typically experience higher rates of churn than when costs are declining or stable.

The electricity and natural gas we sell are metered and delivered to customers by the local utilities. Consequently, we do not have a maintenance or service staff for customer locations. The utilities also provide billing and collection services for the majority of our customers. For a small number of direct bill customers, we perform our own billing and collection. Additionally, GRE's REPs' receivables are, in many states, purchased by the utilities in whose areas we operate for a percentage of their face value (over the course of 2016, the associated cost was approximately 1.6% of revenue) in exchange for the utility receiving a first priority lien in the customer receivable without recourse against the REP.

GRE's REP businesses market their energy services primarily through direct marketing methods, including door-to-door sales, outbound telemarketing direct mail and internet signup. As of December 31, 2016, GRE serviced 412,000 meters (296,000 electric and 116,000 natural gas), as compared to 392,000 meters (264,000 electric and 128,000 natural gas) as of December 31, 2015.

GRE's strategy is to acquire profitable customers in low-risk markets, specifically where the utilities have adopted a portfolio of REP-friendly, regulatory-driven programs. Among these programs is purchase of receivables programs, where utilities are contractually obligated to purchase customer receivables at a pre-determined fixed discount. Under POR programs, utilities offer consolidated billing, where the utilities have the responsibility for billing the individual customer and the subsequent collection of the remittances. There are markets in which we operate that the utilities engage in consolidated billing on behalf of REP's but are not obligated to guarantee the receivables. Additionally, we target markets in which we can procure energy in an efficient and transparent manner. We seek to purchase wholesale energy where there is a real time market that reflects a fair price for the commodity for all participants. This allows GRE to reflect a true market cost base and adjust its rates to its variable rate customers taking into account its competitors who change their commodity prices at longer intervals.

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Utilities in Connecticut, Ohio, New York, Pennsylvania, Illinois, Washington, D.C., Massachusetts and Maryland offer POR programs, without recourse, that permit customers with past-due balances to remain in the POR and consolidated bill programs. However, utilities in New Jersey generally do not permit customers with past-due balances beyond 120 days to enroll or remain in their POR programs, which means that after a certain amount of time (determined based on the specific commodity), the REP becomes responsible for the billing and collection of the commodity portion of the future invoices for its delinquent customers. Utilities in New Hampshire and Rhode Island do not offer POR but they do offer consolidated billing.

We also regularly monitor other deregulated or deregulating markets to determine if they are appropriate for entry, and may initiate the licensing process in a selected region to facilitate entry into the region contingent upon favorable deregulatory developments.

Acquisition and Management of Gas and Electric Supply

Since 2009, IDT Energy and Residents Energy have been party to a Preferred Supplier Agreement with BP Energy Company, or BP. The agreement allows for purchases of electricity and natural gas for customers focused in areas where the utilities have POR programs. Under the arrangement, IDT Energy and Residents Energy purchase electricity and natural gas at market rate plus a fee. IDT Energy’s obligations to BP are secured by a first security interest in deposits or receivables from utilities in connection with their purchase of IDT Energy’s customer’s receivables under the applicable POR program, and in any cash deposits or letters of credit posted in connection with any collateral accounts with BP. The agreement with BP has been amended to cover the territories in which we operate. The agreement was modified and extended on November 19, 2015, and is scheduled to terminate on November 30, 2019. IDT Energy and Residents Energy’s ability to purchase electricity and natural gas under this agreement is subject to satisfaction of certain conditions including the maintenance of certain covenants.

GRE is required to meet certain minimum green energy supply criteria in some of the markets in which it operates. We meet those thresholds by acquiring renewable energy certificates, or REC’s. In addition, GRE offers green or other renewable energy products to its customers in several territories. GRE acquires green renewable energy conversion rights or attributes and REC’s to satisfy the load requirements for these customers.

As an owner of REPs, GRE does not own electrical power generation, transmission, or distribution facilities, or natural gas production, pipeline or distribution facilities. GRE’s REPs currently contract with Dominion Transmission, Inc., National Fuel Supply, Williams Gas Pipeline and Texas Eastern Transmission and others for natural gas pipeline, storage and transportation services, and utilizes the New York Independent System Operator, Inc., or NYISO, and PJM Interconnection, LLC, or PJM, for electric transmission and distribution. NYISO operates the high-voltage electric transmission network in New York State, and administers and monitors New York’s wholesale electricity markets. PJM is a regional transmission organization that coordinates the movement of wholesale electricity in all or parts of thirteen states (including New Jersey, Pennsylvania, Maryland and Illinois) and the District of Columbia.

For risk management purposes, GRE REPs utilize forward physical delivery contracts for a portion of their purchases of electricity and natural gas, which are defined as commodity derivative contracts. In addition, GRE's REPs enter into put and call options as hedges against unfavorable fluctuations in market prices of electricity and natural gas.

The NYISO and PJM perform real-time load balancing for each of the electrical power grids in which GRE REPs operate. Similarly, load balancing is performed by the utilities or local distribution company, or LDC, for each of the natural gas markets in which GRE operates. Load balancing ensures that the amount of electricity and natural gas that GRE purchases is equal to the amount necessary to service its customers' demands at any specific point in time. GRE is charged or credited for balancing the electricity and natural gas purchased and sold for its account by its suppliers and the LDCs. GRE manages the differences between the actual electricity and natural gas demands of its customers and its bulk or block purchases by buying and selling in the spot market, and through monthly cash settlements and/or adjustments to future deliveries in accordance with the load balancing performed by utilities, LDCs, NYISO and PJM.

Diversegy

Diversegy, which we acquired in December 2013, operates as an energy broker and advisor to industrial, commercial and municipal customers across deregulated energy markets in the United States. Customers of all types and size have the ability to leverage Diversegy's expertise and purchasing power as they evaluate their electricity and natural gas procurement plans. Diversegy allows us to enter more markets around the country as we are not limited to only the markets we operate as a REP, and we are not responsible for assuming the risk associated with procuring and managing the commodity.

Competition

As an operator of REPs, GRE competes with the local utility companies in each of the markets where it provides services and with many other licensed REPs. In some markets, competitor REPs are affiliated with local utilities. GRE also competes with several large vertically integrated energy companies. Some of these competitors are larger and better capitalized than GRE. Competition with the utilities and REPs exposes GRE to customer churn, especially since GRE's residential customers generally do not sign long-term contracts.

REPs and utilities offering fixed rate products or guaranteed pricing often are unable to change their sell rates offered to customers in response to volatility in the prices of the underlying commodities. In a rising commodity cost environment, REPs like ours that offer variable rate products, and reflect real-time commodity costs, will typically become less competitive with fixed rate providers. Conversely, in a downward moving commodity cost environment, variable rate REPs typically become more competitive as they benefit from the lag that utilities experience in reducing their sell rate to reflect the lower commodity costs.

Increasing our market share depends in part on our ability to persuade more customers to switch from other providers to GRE than those that churn from us to other providers. Moreover, local utilities and some REPs may have certain advantages such as name recognition, financial strength and long-standing relationships with customers. Persuading potential customers to switch to GRE requires significant marketing and sales operations.

Regulation

While GRE's REPs variable rates are not regulated, they, like all GRE's REP programs, are governed by their terms and conditions, which are accepted by all customers. GRE's REPS are required to comply with various reporting requirements in order to maintain eligibility to operate as a REP. Certain jurisdictions require GRE's REPs to publish its customer offers with the applicable regulatory commission, or in the public domain, generally a website established for such purpose.

Because of the resulting dramatic increases in wholesale electricity costs during the winter's "polar vortex" in 2014, the retail electricity prices that GRE's REPs and many other variable rate electricity suppliers charged to their customers also increased sharply. These retail electricity price increases resulted in large numbers of complaints, regulatory actions, and calls for legislation, regulation and litigation. GRE's subsidiary, IDT Energy, also paid approximately $5 million in rebates to affected customers in the year ended December 31, 2014. These events adversely affected GRE's REPs customer churn, gross margins and results of operations.

As discussed more fully below in Item 3 “Legal Proceedings” in this Annual Report, IDT Energy reached a settlement with the Pennsylvania Attorney General’s Office and the Acting Consumer Advocate terminating litigation with no admission of liability or finding of wrongdoing by IDT Energy.

As discussed more fully below, on February 23, 2016, the New York Public Service Commission, or PSC, issued an order that sought to impose significant new restrictions on REPs operating in New York, including GRE. On December 2, 2016, the PSC noticed an evidentiary hearing scheduled to take place in 2017 to assess the retail energy market in New York. That process is underway and is expected to last several months. We are evaluating the potential impact of any new order from the PSC that would follow from the evidentiary process, while preparing to operate in compliance with any new requirements that may be imposed. Depending on the final language of any new order, as well as our ability to modify our relationships with our New York customers, an order could have a substantial impact upon the operations of GRE-owned REPs in New York. As of December 31, 2016, New York represented 44% of GRE’s total meters served and 33% of the total RCEs of GRE’s customer base.

REPs such as ours must be licensed in each state and utility service territory in which they operate. Each is subject to the rules and regulations governing the operations of REPs in each jurisdiction.

As of December 31, 2016, GRE’s REPs operate in eight utility territories in New York, six utility territories in New Jersey, nine utility territories in Pennsylvania, four utility territories in Maryland, six utility territories in Ohio, five utility territories in Massachusetts, two utility territories in New Hampshire, two in Connecticut, one in Rhode Island, one in Washington, D.C. and two in Illinois. The State of New York, the Commonwealth of Pennsylvania, the State of New Jersey, the State of Maryland, the State of Illinois, the District of Columbia, the State of Ohio, the State of New Hampshire, the State of Rhode Island, the State of Connecticut, the Commonwealth of Massachusetts, the federal government, and related public service/utility commissions, among others, establish the rules and regulations for our REP operations.

Like all operators of REPs, GRE is affected by the actions of governmental agencies, mostly on the state level, by the respective state Public Service/Utility Commissions, and other organizations (such as NYISO and PJM) and indirectly by the Federal Energy Regulatory Commission, or FERC. Regulations applicable to electricity and natural gas have undergone substantial change over the past several years as a result of restructuring initiatives at both the state and federal levels. We may be subject to new laws, orders or regulations or the revision or interpretation of existing laws, orders or regulations.

As of December 31, 2016, Diversegy was licensed to serve as a broker of electricity in New Jersey, Pennsylvania, Maryland, the District of Columbia, Illinois, Ohio, Rhode Island, New Hampshire, Massachusetts and Delaware, and as a gas broker in New Jersey, Maryland, Ohio, Rhode Island, New Hampshire, Virginia, Pennsylvania and the District of Columbia.

Employees

As of March 1, 2017, GRE employed 180 full time employees, 72 of whom are located in the Jamestown, New York office, of which approximately 85% are affiliated with our customer care center, 57 of whom are located in our New Jersey office, 13 of whom are located in our Arizona office and 38 of whom are located in the Florida and New York offices performing customer acquisition and support.

Genie Oil and Gas, Inc.

Genie Oil and Gas (GOGAS) is an oil and gas exploration company. GOGAS currently holds an 85.1% interest in Afek, our only active oil and gas exploration project, which operates in the southern portion of the Golan Heights in Northern Israel. In addition, GOGAS holds an interest in three inactive or disbanded projects including an 88.2% interest in Genie Mongolia, Inc., an oil shale exploration project in Central Mongolia, a 98.3% interest in AMSO, which operated American Shale Oil, LLC, or AMSO, LLC, an oil shale development project in Colorado that was substantially decommissioned, and an 86.1% interest in IEI, an oil shale development project in Israel's Shfela Basin.

Afek Oil and Gas Ltd.

In April 2013, the Government of Israel finalized the award to Afek of an exclusive three-year petroleum exploration license covering 396.5 square kilometers in the southern portion of the Golan Heights. The license has been extended to April 2018. Israel's Northern District Planning and Building Committee granted Afek a one-year permit that commenced in February 2015, which has been subsequently extended to April 18, 2018, to conduct an up to ten-well oil and gas exploration program. This permit as extended is expected to cover the remainder of Afek's ongoing exploration program in the area covered by its exploration license. Afek retained oil and gas exploration professionals and contracted with internationally recognized vendors to provide the services required for its exploration program. In 2013, Afek completed preliminary geophysical work including electromagnetic surveys and the reprocessing of the 2D seismic data to characterize the subsurface prior to drilling exploration wells. Afek subsequently conducted initial analysis of the acquired data internally and with outside experts.

In early 2014, Afek submitted a permit application to the Northern District Planning and Building Committee to conduct an exploration drilling program to further characterize the resource in its license area. In July of 2014, the Northern District Planning and Building Committee voted to approve an up to ten-well exploratory drilling program, and subsequently issued the requisite permits.

In October, 2014, the High Court of Justice in Israel issued an interim order to halt Afek's drilling program until it could rule on a petition filed by the Israel Union for Environmental Defense and some local residents challenging the issuance of the drilling permit. In December 2014, the Court ruled against the petitioners, and lifted its interim order.

In February 2015, Afek began drilling its first exploratory well in Northern Israel's Golan Heights. To date, Afek has completed drilling five wells. In addition, Afek has undertaken well flow tests in multiple target zones within two of the completed wells. The results of the exploration program to date confirmed the presence of significant hydrocarbons in the basin, but initial indications are that it is not commercially viable given current and forecasted market conditions and other constraints, and that the greatest potential for commercial development lies in an area further north within the license area than any of the five completed exploratory wells drilled to date.

Upon completion of drilling its fifth well, Afek turned its operational focus to the Northern region of its license area. Afek views the Northern and Southern regions separately when evaluating its unproved properties. The regions are demarcated as such due to the presence of the Sheik Ali Fault, which divides the Northwestern portion of Afek's license from the rest of its acreage. The data analyzed to date, including reprocessed existing seismic data, suggests that the source rock identified in the Southern block may extend northward at depths potentially sufficient to have induced a greater level of maturation of the resource. To validate this hypothesis, in February 2017, Afek began preparing the location for its sixth exploratory well in the Northern portion of its license area. Afek expects to spud this new well, Ness 10, during mid-March 2017 and complete the well during the second quarter of 2017. The volume of the resources and to what extent they may be extractable cannot yet be determined. The resources do not constitute proved, probable or possible reserves.

Afek incurred exploration expenses of \$6.1 million, \$6.6 million and \$7.0 million in the years ended December 31, 2016, 2015 and 2014, respectively.

In January 2017, we established Atid Drilling Ltd., (Atid), an on-shore drilling services venture based in Israel. Atid will serve as the primary drilling contractor for Afek and opportunistically pursue drilling opportunities for clients in a variety of fields including oil and gas exploration, water resource development and mineral exploration. Atid has executed a binding MOU to purchase a drilling rig and associated drilling equipment. The rig has successfully drilled five exploratory oil and gas wells in the Golan Heights over the past two years and recently completed a well in northern Israel.

Genie Mongolia

In April 2013, Genie Mongolia and the Petroleum Authority of Mongolia entered into an exclusive oil shale development agreement to explore and evaluate the commercial potential of oil shale resources in a 34,470 square kilometer area in Central Mongolia. Genie Mongolia maintains the rights to the acreage it has acquired, however, it has suspended its operations in Mongolia.

Genie Mongolia incurred research and development expenses of $0.1 million, $1.7 million and $2.7 million in the years ended December 31, 2016, 2015 and 2014, respectively.

AMSO, LLC

The U.S. Bureau of Land Management, or BLM, effective January 1, 2007, issued to EGL Resources a lease for research, development and demonstration, or RD&D Lease, in western Colorado, which it assigned to its affiliate, E.G.L. Oil Shale, L.L.C. (or EGL). In April 2008, EGL was acquired by AMSO and IDT (and subsequently renamed AMSO, LLC) in exchange for cash of $5.5 million, certain commitments for future funding of AMSO, LLC's operations and a 1% override on AMSO, LLC's future revenue. In March 2009, a subsidiary of TOTAL S.A., or Total, the world's fifth largest integrated oil and gas company, acquired a 50% interest in AMSO, LLC in exchange for cash paid to us of $3.2 million and Total's commitment to fund the majority of AMSO, LLC's research, development and demonstration expenditures as well as certain other funding commitments. On February 23, 2016, Total notified AMSO of its decision not to continue to fund AMSO, LLC. On March 23, 2016, Total gave AMSO its notice of withdrawal from AMSO, LLC. The withdrawal was effective on April 30, 2016. The project was substantially decommissioned by December 2016.

AMSO, LLC incurred $3.1 million, $4.8 million and $7.8 million for research and development in the years ended December 31, 2016, 2015 and 2014, respectively.

Israel Energy Initiatives, Ltd.

IEI had an exclusive Shale Oil Exploration and Production License awarded in July 2008 by the Government of Israel. The license covered approximately 238 square kilometers in the south of the Shfela region in central Israel. In June 2013, IEI submitted its application for the construction and operation of its oil shale pilot test facility to the Jerusalem District Building and Planning Committee. IEI was asked to provide supplements to the environmental impact assessment and a revised application was submitted in November, 2013. In September 2014, the Jerusalem District Building and Planning Committee voted against issuing the pilot plant building and construction permits. Operations at IEI are currently suspended.

IEI incurred nil, $0.2 million and $2.6 million for research and development in the years ended December 31, 2016, 2015 and 2014, respectively.

Competition

If Afek is successful in developing and producing commercial quantities of oil and gas in an environmentally acceptable manner and receives all the necessary regulatory approvals, then, in the commercial production phases of operations, it will likely face competition from conventional and unconventional oil producers, other fossil fuels and other alternative energy providers in marketing and selling refined products and natural gas. Many of the potential competitors, including national oil companies, are larger and have substantially greater resources to be able to withstand the volatility of the oil and gas market (including as to price, availability, refining capacity and other factors).

Regulation

Afek holds an exclusive exploration license in Northern Israel’s Golan Heights, granted by Israel’s National Infrastructure, Energy and Water Ministry. Although the original license term expired in April 2016, the license has been extended to April 2018. On February 1, 2016, Israel’s Northern District Planning and Building Committee approved a two-year permit extension for Afek to continue to conduct its up to ten-well oil and gas exploration program. The original permit was for a one-year period, which commenced in February 2015. On March 2, 2017, Afek received an additional extension until April 18, 2018. This extension is expected to cover the remainder of Afek’s ongoing exploratory program in the area covered by its exploratory license. Contingent upon the results of its exploration program, Afek may seek to declare a commercial discovery and apply for a commercial production lease pursuant to Israeli law. The international community considers the Golan Heights an internationally disputed territory, and therefore political risk may affect our ability to execute our plan of operations. This may influence local decision makers, as well as service providers necessary to our operations.

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Intellectual Property

We rely on a combination of patents, copyrights, trademarks, domain name registrations and trade secret laws in the United States and other jurisdictions and contractual restrictions to protect our intellectual property rights and our brand names. All of our employees sign confidentiality agreements. These agreements provide that the employee may not use or disclose our confidential information except as expressly permitted in connection with the performance of his or her duties for us, or in other limited circumstances. These agreements also state that, to the extent rights in any invention conceived of by the employee while employed by us do not vest in us automatically by operation of law, the employee is required to assign his or her rights to us.

In connection with its RD&D process and related technologies, some patents are registered in the name of AMSO, LLC and some patents are registered in the name of Genie IP BV., a Dutch subsidiary of ours. AMSO, LLC owns six patents issued in the United States, twenty-three patents issued abroad, four of which are jointly owned with Lawrence Livermore National Security, LLC ("LLNS"), as well as several pending applications, both in the United States and abroad. The issued or allowed patents include: patent No. 7,743,826 (US), which expires April 16, 2028; patent No. 7,921,907 (US), which expires January 19, 2027; patent No. 8,162,043 (US), which expires January 19, 2027; patent No. 8,464,792 (US), which expires July 27, 2031; patent No. 8,899,331 (US), granted jointly to AMSO, LLC and LLNS, which expires December 29, 2030; patent registration No. 3668 (Mongolia) which expires December 25, 2032; patent registration No. 32691 (Morocco), granted jointly to AMSO, LLC and LLNS on October 1, 2011, which expires September 30, 2029; patent registration No. 3565 (Mongolia), granted jointly to AMSO, LLC and LLNS on April 13, 2012, which expires March 29, 2031; patent No. 606 (Madagascar), granted on April 18, 2014, which expires April 27, 2031; patent registration No. 3590 (Mongolia), granted on April 13, 2012, which expires April 22, 2031; patent No. 32765 (Morocco), granted on November 1, 2011, which expires November 2, 2029; patent registration No. 2,741,861 (Canada), granted on August 27, 2013, which expires November 2, 2029; patent registration No. 2,738,920 (Canada), granted jointly to AMSO, LLC and LLNS, which expires September 30, 2029; and patent registration No. CN 102209835 (China), granted on April 16, 2014, which expires November 1, 2029; patent No. 3895 (Mongolia), granted January 28, 2015, which expires March 29, 2031; patent No. 222732 (Israel), granted December 25, 2015, which expires March 29, 2031; Patent No. ZL201180031952.4 (China), granted on January 6, 2016, which expires March 30, 2031; Patent No. 212486 (Israel), granted March 1, 2015, which expires Nov. 2, 2029; Patent No. 216332 (Israel), granted April 1, 2015, which expires May 13, 2030; Patent No. 34256 (Morocco), granted May 2, 2013, which expires March 30, 2031; Patent No. 34231 (Morocco), granted May 2, 2013, which expires April 27, 2031; and patent No. 9,127,541 (US), which expires November 2, 2029; ; patent No. 9,464,513 (US), granted October 11, 2016, which expires June 10, 2035; patent No. 2011245362 (Australia), granted June 9, 2016, which expires April 27, 2031; patent No. 2009311358 (Australia), granted June 16, 2016, which expires November 2, 2029; patent No. 2009298555 (Australia), granted January 5, 2017, which expires September 30, 2029; patent No. 211919 (Israel), granted November 30, 2014, which expires September 30, 2029; patent No. 102369339 (Chinese), granted November 30, 2016, which expires September 30, 2029; patent No. 10-0003894 (Mongolia), granted October 25, 2013, which expires April 27, 2031; patent No. 222641 (Israel), is allowed September 29, 2016, which expires April 27, 2031.

Genie IP B.V. owns Mongolian utility models 2050, 2052, 2053, 2054, 2055, and 2067, which all expire on January 23, 2019. The patents and utility models are directed to in-situ methods and systems for the extraction of oil from shale, integral to our technical and operational plans, as well as carbon sequestration in depleted oil shale deposits and down-hole heater technologies. AMSO has also been granted three trademarks in the United States in connection with its operations.

Genie IP B.V. has seven published international Patent Cooperation Treaty (PCT) applications, three published Israeli patent applications and additional unpublished patent applications. Some of these patent applications relate to methods and apparatus for oil extraction from shale, some of these patent applications relate to downstream processing of oil extracted from shale, and some of these patent applications relate to techniques for locating and extracting unconventional naturally-occurring oil from a tight formation.

Employees

GOGAS employs 33 employees. Afek also retains the services of a number of professional consultants, including geologists, hydrologists, drilling and completions engineers, process engineers, environmental experts, permitting consultants, energy experts, legal, and land designation and acquisition consultants.

Item 1A. Risk Factors.

RISK FACTORS

Our business, operating results or financial condition could be materially adversely affected by any of the following risks as well as the other risks highlighted elsewhere in this document, particularly the discussions about regulation, competition and intellectual property. The trading price of our Class B common stock and Series 2012-A Preferred Stock could decline due to any of these risks.

Risks Related to Genie Retail Energy

The REP business is highly competitive, and we may be forced to reduce prices or incur additional costs.

GRE's REP businesses face substantial competition both from the traditional incumbent utilities as well as from other REPs, including REP affiliates of the incumbent utilities in specific territories. As a result, we may be forced to reduce prices, incur increased costs or lose market share and cannot always pass along increases in commodity costs to customers. We compete on the basis of provision of services, customer service and price. Present or future competitors may have greater financial, technical or other resources which could put us at a disadvantage. Additionally, our experience has shown that utilities do not change their sell rates offered to customers immediately in response to increased prices for the underlying commodities.

Conversely, in a downward moving commodity cost environment, GRE's REPs variable rate plans may benefit from the lag that utilities experience in reducing their sell rate to reflect the lower cost base in the commodity markets, and may reflect commodity costs decreases in their offerings and rates.

Increasing our market share depends in part on our ability to persuade more customers to switch to GRE's services than those that churn from us to other providers or back to the local utility. Moreover, local utilities and some REPs may have certain advantages such as name recognition, financial strength and long-standing relationships with customers. Persuading potential customers to switch to GRE's REPs requires significant marketing and sales operations. If GRE is not successful in convincing customers to switch, our REP businesses, results of operations and financial condition will all be adversely affected.

Our current strategy is based on current regulatory conditions and assumptions, which could change or prove to be incorrect.

Regulation over the electricity and natural gas markets has been in flux at the state and federal levels. In particular, any changes adopted by the FERC, or changes in state or federal laws or regulations (including greenhouse gas laws) may affect the prices at which GRE purchases electricity or natural gas for its customers. While we endeavor to pass along increases in energy costs to our customers pursuant to our variable rate customer offerings, we may not always be able to do so due to competitive market forces and the risk of losing our customer base.

On February 23, 2016, the New York PSC issued an order that sought to impose significant new restrictions on REPs operating in New York, including those owned by GRE. The restrictions described in the PSC's order, which were to become effective March 4, 2016, would require that all REPs' electricity and natural gas offerings to residential and small business customers include an annual guarantee of savings compared to the price charged by the relevant incumbent utility or, for electricity offerings, provide at least 30% of the supply from renewable sources. Customers not enrolled in a compliant program would be relinquished back to the local utility at the end of their contract period or, for variable price customers operating on month to month agreements, at the end of the current monthly billing cycle.

On March 4, 2016, a group of parties from the REP industry sought and won a temporary restraining order to stay implementation of the most restrictive portions of the PSC's order pending a court hearing on those parties' motion for a preliminary injunction. On July 25, 2016, the New York State Supreme Court, County of Albany, entered a decision and order granting the Petitioners' petition, vacated provisions 1 through 3 of the Order, and remitted the matter to the PSC for further proceedings consistent with the Court's order.

On December 2, 2016, the PSC noticed an evidentiary hearing scheduled to take place in 2017 to assess the retail energy market in New York. That process is underway and is expected to last several months. We are evaluating the potential impact of any new order from the PSC that would follow from the evidentiary process, while preparing to operate in compliance with any new requirements that may be imposed. Depending on the final language of any new order, as well as our ability to modify our relationships with our New York customers, an order could have a substantial impact upon the operations of GRE-owned REPs in New York. As of December 31, 2016, New York represented 43% of GRE's total meters served and 33% of the total RCEs of GRE's customer base.

On July 14, 2016, and on September 19, 2016, the PSC issued Orders restricting REPs, including those owned by GRE, from serving customers enrolled in New York's utility low-income assistance programs. Representatives of the REP industry challenged the ruling in New York State Supreme Court, Albany County, and, on September 27, 2016, the court issued an order temporarily restraining the PSC from implementing the July and September Orders. On December 16, 2016, the PSC issued a prohibition on REP service to customers enrolled in New York's utility low-income assistance programs. As part of a stipulated schedule upon request of the REP industry, the PSC agreed to extend the deadlines for compliance with that order until May 2017. That order is under review in New York State Supreme Court, Albany County.

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In connection with the events described in the Risk Factor below entitled *"Unusual weather conditions may have significant direct and indirect impacts on GRE's business and results of operations"*, IDT Energy responded to formal and informal information requests from state utility commissions, state attorneys general, and state legislators related to the wholesale and retail electricity price increases in the winter of 2014. In addition, the Pennsylvania Attorney General's Office and the Acting Consumer Advocate filed a Joint Complaint against IDT Energy with the Pennsylvania Public Utility Commission in connection with such events. IDT Energy reached a settlement with the AG and the OCA to terminate the litigation with no admission of liability or finding of wrongdoing by IDT Energy. Under the settlement, IDT Energy issued additional refunds to its Pennsylvania customers who had variable rates for electricity supply in January, February and March of 2014. IDT Energy also is required to implement certain modifications to its sales, marketing and customer service processes, along with additional compliance and reporting requirements. The settlement was approved by the Pennsylvania PUC on July 8, 2016. In July 2016, IDT Energy paid the agreed-upon $2.4 million for additional customer refunds to a refund administrator, and that administrator is currently in the process of issuing the additional refunds to customers.

Legislators and regulators may enact or modify laws or regulation to prevent the repetition of the price spikes discussed below or address customer complaints that have come to light in connection with those events. Potential regulatory and/or legislative changes may impact our ability to use our established sales and marketing channels. Any changes in these factors, or any significant changes in industry development, could have an adverse effect on our revenues, profitability and growth or threaten the viability of our current business model.

Fixed Rate Products or Guaranteed Pricing Programs could result in losses or decreased profits if GRE fails to estimate commodity prices accurately.

REPs and utilities offering fixed rate products or guaranteed pricing often are unable to change their sell rates offered to customers in response to volatility in the prices of the underlying commodities or changes in the regulatory environment. In times of high commodity prices, these fixed rate programs expose us to the risk that we will incur significant unforeseen costs in performing the contracts. GRE's meters enrolled in offerings with fixed rate characteristics constituted approximately 32% of GRE's electric load during December 2016 compared to 15% of GRE's electric load during September 2016.

However, it is difficult to predict future commodity costs. Any shortfalls resulting from the risks associated with fixed-price programs will reduce our working capital and profitability. Our inability to accurately estimate the cost of providing services under these programs could have an adverse effect on our profitability and cash flows.

GRE's growth depends in part on its ability to enter new markets.

New markets for our business are determined based on many factors, which include the regulatory environment, as well as GRE's REP businesses ability to procure energy in an efficient and transparent manner. We seek to purchase wholesale energy where there is a real time market that reflects a fair price for the commodity for all participants.

Once new markets are determined to be suitable for GRE's REP businesses, we will expend substantial efforts to obtain necessary licenses and will incur significant customer acquisition costs and there can be no assurance that we will be successful in new markets. Furthermore, there are regulatory differences between the markets that we currently operate in and new markets, including, but not limited to, exposure to credit risk, additional churn caused by tariff requirements, rate-setting requirements and incremental billing costs. A failure to identify, become licensed in, and enter new territories may have a material negative impact on our growth, financial condition and results of operations.

Unfair business practices or other activities of REPs may adversely affect us.

Competitors in the highly competitive REP market have engaged in unfair business practices to sign up new customers. Competitors engaging in unfair business practices create an unfavorable impression about our industry on consumers, regulators or political bodies. Such unfair practices by other companies can adversely affect our ability to grow or maintain our customer base. The successes, failures or other activities of various REPs within the markets that we serve may impact how we are perceived in the market. Further, such practices can lead to regulatory action, such as the recent New York PSC Order, that can negatively impact us and the industry.

Demand for REP services and consumption by customers are significantly related to weather conditions.

Typically, colder winters and hotter summers create higher demand and consumption for natural gas and electricity, respectively. Milder than normal winters and/or summers may reduce the demand for our energy services, thus negatively impacting our financial results.

Unusual weather conditions may have significant direct and indirect impacts on GRE's business and results of operations.

A confluence of issues in January and February 2014 associated with the 2013-2014 winter season's polar vortex resulted in extraordinarily large spikes in the prices of wholesale electricity and natural gas in markets where GRE and other retail providers purchase their supply. In some regions, wholesale prices increased briefly by factors of more than eight times. Because of dramatic increases in wholesale electricity costs, the retail electricity prices that GRE's REPs and many other variable rate electricity suppliers charged to their customers increased sharply in January and February 2014. The unusually cold weather and resultant high energy costs also adversely affected GRE's customer churn and customer acquisition efforts. GRE responded by reducing its target margins in order to mitigate the severity of the commodity price increases on its customers and issued rebates to hard hit customers.

Repeats of the circumstances described above or similar circumstances could similarly harm margins and profitability in the future, and we could find it necessary to take similar or other actions that would have a negative impact on our financial condition and results of operations.

Because our variable pricing plan resulted in increased prices charged to customers, we experienced an increase in customer churn as utilities and fixed price REPs appeared to have more attractive pricing, although those increased churn levels have peaked. A failure to mitigate an increase in churn could result in decreases in meters served and revenues.

The retail electricity price increases discussed above resulted in large numbers of customers filing informal and formal complaints to state utility commissions, state attorneys general and state legislators. IDT Energy was served with several thousand formal and informal customer complaints to state utility commission and state attorneys general related to the winter retail price increases. IDT Energy has responded to each customer complaint it has received and attempted to resolve each complaining customer’s concerns. GRE’s REPs also paid approximately $5 million in rebates to affected customers in the year ended December 31, 2014. IDT Energy was not under any obligation to provide such rebates and did so in order to mitigate the impact of the price increases on its customers notwithstanding that the underlying cause of the price increase was beyond GRE’s control.

If certain REPs, however, are determined to have acted in a manner that was harmful to customers, the entire industry can suffer due to the reputational harm.

GRE is subject to litigation that may limit its operations.

In connection with the events described in the Risk Factor above entitled “*Unusual weather conditions may have significant direct and indirect impacts on GRE’s business and results of operations*”, IDT Energy has also been sued in separate putative class action suits in New York, New Jersey and Pennsylvania, partially related to the price increases during the winter of 2014. These matters are more fully discussed below in Item 3 “Legal Proceedings” in this Annual Report.

IDT Energy does not believe that it was at fault or acted in any way improperly with respect to the events of winter 2014. However, we cannot predict the outcome of putative class action litigation or the impact on us of these or other actions, or whether there will be other impacts from the conditions that existed in winter 2014. Further, although we have taken action to insulate us and our customers from future similar events, we cannot assure that those actions will be effective and we will not be subject to class actions in the future.

Such class action lawsuits or other claims against us could have a material adverse impact on our financial condition, competitive position or results of operations.

Regulatory conditions can affect the amount of taxes and fees we need to pay and our pricing advantages.

We are subject to audits in various jurisdictions for various taxes, including income tax, utility excise tax and sales and use tax. Aggressive stances taken recently by regulators increase the likelihood of our having to pay additional taxes and fees in connection with these audits. In the future, we may seek to pass such charges along to our customers, which could have an adverse impact on our pricing advantages.

Commodity price volatility could have an adverse effect on our cost of revenues and our results of operations.

Volatility in the markets for certain commodities can have an adverse impact on our costs for the purchase of the electricity and natural gas that GRE sells to its customers. In our fixed or guaranteed price products, we cannot, and in our variable price products, due to customer or competitive factors, we may not always be able or choose to, pass along increases in costs to our customers. This would have an adverse impact on our margins and results of operations. Alternatively, volatility in pricing for GRE’s electricity and natural gas related to the cost of the underlying commodities can lead to increased customer churn. In times of high commodity costs, our variable pricing model and commodity purchasing approach can lead to competitive disadvantages as we must pass along all or some portion of our increased costs to our customers.

We face risks that are beyond our control due to our reliance on third parties and our general reliance on the electrical power and transmission infrastructure within the United States.

Our ability to provide energy delivery and commodity services depends on the operations and facilities of third parties, including, among others, BP, NYISO and PJM. Our reliance on the electrical power generation and transmission infrastructure within the United States makes us vulnerable to large-scale power blackouts. The loss of use or destruction of third party facilities that are used to generate or transmit electricity due to extreme weather conditions, breakdowns, war, acts of terrorism or other occurrences could greatly reduce our potential earnings and cash flows.

The REP business, including our relationship with our suppliers, is dependent on access to capital and liquidity.

Our business involves entering into contracts to purchase large quantities of electricity and natural gas. Because of seasonal fluctuations, we are generally required to purchase electricity or natural gas in advance and finance that purchase until we can recover such amounts from revenues. GRE has a Preferred Supplier Agreement with BP pursuant to which we purchase electricity and natural gas at market rate plus a fee. The agreement was modified and extended on November 19, 2015, and is scheduled to terminate on November 30, 2019. In addition to other advantages of this agreement, we are only required to post security with BP. There can be no assurance that we will be able to maintain the required covenants, that BP will be able to maintain their required credit rating, or that the agreement will be renewed upon its expiration. In addition, the security requirements outside of the BP agreement may increase as we enter other markets. Difficulty in obtaining adequate credit and liquidity on commercially reasonable terms may adversely affect our business, prospects and financial conditions.

A revision to certain utility best practices and programs in which we participate and with which we comply could disrupt our operations and adversely affect our results and operations.

Certain retail access “best practices” and programs proposed and/or required by state regulators have been implemented by utilities in most of the service territories in which we operate. One such practice is participation in purchase of receivables programs under which certain utilities purchase customer receivables for approximately 98% of their face value in exchange for a first priority lien in the customer receivables without recourse against a REP. This program is a key to our control of bad debt risk in our REP business.

In New Jersey, customers who are delinquent in paying their invoices are no longer eligible to receive a consolidated utility invoice. A consolidated utility invoice is similar to a purchase of receivables program since the utility has the responsibility to bill the customer and collect the receivable. Instead, those customers are switched to a dual bill arrangement, whereby GRE’s REP businesses are responsible to bill and collect the commodity portion of the customers’ invoices. Once we invoice these customers under a dual bill arrangement, we have bad debt risk associated with that portion of our revenues. Economic conditions, the creditworthiness of our customers in New Jersey and our ability to collect from these customers, among other things, may impact our profitability.

The REP business depends on maintaining the licenses in the states we operate and any loss of those licenses would adversely affect our business, prospects and financial conditions.

GRE’s REP businesses require licenses from public utility commissions and other regulatory organizations to operate its business. Those agencies may impose various requirements to obtain or maintain licenses. Further, certain non-governmental organizations have been focusing on the REP industry and the treatment of customers by certain REPs. Any negative publicity regarding the REP industry in general and GRE in particular or any increase in customer complaints regarding GRE’s REP businesses could negatively affect our relationship with the various commissions and regulatory agencies and could negatively impact our ability to obtain new licenses to expand operations or maintain the licenses currently held. In the aftermath of the polar vortex, several regulatory bodies adopted more aggressive policies toward REPs, including the action against IDT Energy in Pennsylvania described elsewhere in this Annual Report. Any loss of our REP licenses would cause a negative impact on our results of operations, financial condition and cash flow.

The REP business depends on the continuing efforts of our management team and our personnel with strong industry or operational knowledge and our efforts may be severely disrupted if we lose their services.

Our success depends on key members of our management team, the loss of whom could disrupt our business operation. Our business also requires a capable, well-trained workforce to operate effectively. There can be no assurance that we will be able to retain our qualified personnel, the loss of whom may adversely affect our business, prospects and financial conditions.

We could be harmed by network disruptions, security breaches, or other significant disruptions or failures of our IT infrastructure and related systems.

To be successful, we need to continue to have available a high capacity, reliable and secure network. We face the risk, as does any company, of a security breach, whether through cyber-attack, malware, computer viruses, sabotage, or other significant disruption of our IT infrastructure and related systems. We face a risk of a security breach or disruption from unauthorized access to our proprietary or classified information on our systems. Certain of our personnel operate in jurisdictions that could be a target for cyber-attacks. The secure maintenance and transmission of our information is a critical element of our operations. Our information technology and other systems that maintain and transmit our information, or those of service providers or business partners, may be compromised by a malicious third party penetration of our network security, or that of a third party service provider or business partner, or impacted by advertent or inadvertent actions or inactions by our employees, or those of a third party service provider or business partner. As a result, our information may be lost, disclosed, accessed or taken without our consent.

Although we make significant efforts to maintain the security and integrity of these types of information and systems, there can be no assurance that our security efforts and measures will be effective or that attempted security breaches or disruptions would not be successful or damaging, especially in light of the growing sophistication of cyber-attacks and intrusions. We may be unable to anticipate all potential types of attacks or intrusions or to implement adequate security barriers or other preventative measures.

Network disruptions, security breaches and other significant failures of the above-described systems could (i) disrupt the proper functioning of these networks and systems, and therefore, our operations; (ii) result in the unauthorized access to, and destruction, loss, theft, misappropriation or release of our proprietary, confidential, sensitive or otherwise valuable information, including trade secrets, which others could use to compete against us or for disruptive, destructive or otherwise harmful purposes and outcomes; (iii) require significant management attention or financial resources to remedy the damages that result or to change our systems; or (iv) result in a loss of business, damage our reputation or expose us to litigation. Any or all of which could have a negative impact on our results of operations, financial condition and cash flows.

Our growth strategy depends, in part, on our acquiring complementary businesses and assets and expanding our existing operations, which we may be unable to do.

Our growth strategy is based, in part, on our ability to acquire businesses and assets that are complementary to our existing operations. We may also seek to acquire other businesses. The success of this acquisition strategy will depend, in part, on our ability to accomplish the following:

- identify suitable businesses or assets to buy;
- complete the purchase of those businesses on terms acceptable to us;
- complete the acquisition in the time frame we expect;
- improve the results of operations of the businesses that we buy and successfully integrate their operations into our own; and
- avoid or overcome any concerns expressed by regulators, including antitrust concerns.

There can be no assurance that we will be successful in pursuing any or all of these steps. Our failure to implement our acquisition strategy could have an adverse effect on other aspects of our business strategy and our business in general. We may not be able to find appropriate acquisition candidates, acquire those candidates that we find or integrate acquired businesses effectively or profitably.

Risks Related to Genie Oil and Gas

We have no current production of oil and gas and we may never have any.

We do not have any current production of oil and gas. We cannot assure you that we will produce or market oil or gas at all or in commercially profitable quantities. Our ability to produce and market oil and gas may depend upon our ability to develop and operate our planned projects and facilities, which may be affected by events or conditions that impact the advancement, operation, cost or results of such projects or facilities, including:

- Energy commodity prices relative to production costs;

The occurrence of unforeseen technical difficulties;

The outcome of negotiations with potential partners, governmental agencies, regulatory bodies, suppliers, customers or others;

Changes to existing legislation or regulation governing our current or planned operations;

Our ability to obtain all the necessary permits to operate our facilities;

Changes in operating conditions and costs, including costs of third-party equipment or services such as drilling and processing and access to power sources; and

Security concerns or acts of terrorism that threaten or disrupt the safe operation of our facilities.

Operating hazards and uninsured risks with respect to the oil and gas operations may have material adverse effects on our operations.

Our research, exploration and, if successful, development and production operations are subject to risks similar to those normally incident to the exploration for and the development and production of oil and gas, including blowouts, subsidence, uncontrollable flows of oil, gas or well fluids, fires, pollution and other environmental and operating risks. These hazards could result in substantial losses due to injury or loss of life, severe damage to or destruction of property and equipment, pollution and other environmental damage and suspension of operations. While as a matter of practice we have insurance against some or all of these risks, such insurance may not cover the particular hazard and may not be sufficient to cover all losses. The occurrence of a significant event adversely affecting any of our operations could have a material adverse effect on us, could materially affect our continued operations and could expose us to material liability.

Genie Oil and Gas' dependence on contractors, equipment and professional services that have limited availability could result in increased costs and possibly material delays in their respective work schedules.

The costs for our operations may be more expensive than planned or there could be delays in our operating plans. We may also incur delays in our drilling and operating schedule and we may not be able to meet our required work schedule. Similarly, some of the professional personnel we need for our planned operations are not available in the locations in which we operate or are not available on short notice for work in such location, and, therefore, we may need to use non-local contractors for various projects. Any or all of the factors specified above may result in increased costs and delays.

Genie Oil and Gas will require substantial funds and will need to raise additional capital in the future.

We will need substantial funds to fully execute our research and development activities in Northern Israel, and, if those activities are successful, we will need additional substantial funds to commence our anticipated commercial operations, if any. Failure to secure adequate funding could adversely affect our ability to advance our strategic plans as currently contemplated and require us to delay, scale back, or shut down our operations.

Genie Oil and Gas' success depends on the continuing efforts of key personnel and certain strategic partners, and our efforts may be severely disrupted if we lose their services.

Our future success depends, to a significant extent, on our ability to attract and retain qualified technical personnel, particularly those with expertise in the oil and gas industry. There is substantial competition for qualified technical personnel, and there can be no assurance that we will be able to attract or retain our qualified technical personnel. Specifically, we heavily rely on the services of Harold Vinegar, Ph.D. at GOGAS, for his technical expertise, assistance in the development of our intellectual property and guidance.

The unexpected loss of the services of one or more of these people, and the ability to find suitable replacements within a reasonable period of time thereafter, could have a material adverse effect on our operations.

Genie Oil and Gas is subject to regulatory, legal and political risks that may limit its operations.

Our operations and potential earnings may be affected from time to time in varying degree by regulatory, legal and political factors, including laws and regulations related to environmental or energy security matters, including those addressing alternative and renewable energy sources and the risks of global climate change and legal challenges. Such laws and regulations continue to increase in both number and complexity and affect our operations with respect to, among other things:

The discharge of pollutants into the environment;

The handling, use, storage, transportation, disposal and cleanup of hazardous materials and hazardous and nonhazardous wastes;

The dismantlement, abandonment and restoration of our properties and facilities at the end of their useful lives;

Restrictions on exploration and production;

Loss of petroleum rights, including key leases, licenses or permits;

Tax or royalty increases, including retroactive claims;

Political instability, war or other conflicts in areas where we operate.

For example, in March 2011, the Israeli Parliament passed a bill materially increasing the overall taxes, royalties and other fees due to the Israeli government from revenues derived by oil and natural gas producers. The Israeli Income Tax Ordinance was revised accordingly and the amount payable to the government from revenues derived by oil and natural gas producers increased from a maximum of 32% to 52%. This tax will only be imposed once a project has passed certain milestones set forth in the ordinance (when the profits derived from a certain field have reached 150% of the original investment in that field).

The oil and gas industry is subject to the general inherent industry and economic risks.

The oil and gas business is fundamentally a commodity business. This means that potential future commercial operations and earnings may be significantly affected by changes in oil and gas prices and by changes in margins on gasoline, natural gas and other refined products.

We may be exposed to infringement or misappropriation claims by third parties, which, if determined adversely to us, could cause us to lose significant rights and pay significant damage awards.

Our success depends, among other things, on our ability to use and develop our technology and know-how without infringing on the intellectual property rights of third parties. The validity and scope of claims relating to our technology involve complex scientific, legal and factual questions and analysis. It is therefore difficult to accurately predict whether or not a third party will assert that we are infringing on its intellectual property or whether it would prevail. Although we are not currently aware of any infringement or of any parties pursuing or intending to pursue infringement claims against us, we cannot assure you that we will not be subject to such claims in the future. Also, in many jurisdictions, patent applications remain confidential and are not published for some period after filing. Thus, we may be unaware of other parties' pending patent applications that relate to our processes. While at present we are unaware of competing patent applications, such applications could potentially surface.

The defense and prosecution of intellectual property suits, patent opposition proceedings and related legal and administrative proceedings can be both costly and time consuming and may significantly divert the efforts and resources of our technical and management personnel. An adverse determination in any such litigation or proceedings to which we may become a party could subject us to significant liability to third parties, require us to seek licenses from third parties, to pay ongoing royalties, to redesign our products, or subject us to injunctions prohibiting the manufacture and sale of our products or the use of our technologies.

Risk Related to Our Financial Condition and Reporting

We have identified a material weakness in our internal control over financial reporting and if we fail to remediate this material weakness and maintain proper and effective internal control over financial reporting, our ability to produce accurate and timely financial statements could be impaired and may lead investors and other users to lose confidence in our published financial data.

Maintaining effective internal control over financial reporting is necessary for us to produce reliable financial statements. In evaluating the effectiveness of our internal control over financial reporting as of December 31, 2013, management identified material weaknesses in our internal control over financial reporting and those material weaknesses were successfully remediated. In evaluating the effectiveness of our internal control over financial reporting as of September 30, 2016, management identified material weaknesses in our internal control over financial reporting and those material weaknesses were successfully remediated by December 31, 2016.

In evaluating the effectiveness of our internal control over financial reporting as of December 31, 2016, management identified a material weakness in our internal control over financial reporting as discussed below in Item 9A “Controls and Procedures” in this Annual Report. We are committed to taking steps to remediate the material weakness. We will work to continually improve our internal control process and will diligently review our financial reporting controls and procedures. However, if our remedial measures prove to be insufficient to address the material weakness, or if additional material weaknesses or significant deficiencies in our internal control over financial reporting are discovered or occur in the future, our consolidated financial statements may contain material misstatements and we could be required to restate our financial results.

Risks Related to Our Capital Structure

Holders of our Class B common stock and Series 2012-A Preferred Stock have significantly less voting power than holders of our Class A common stock.

Holders of our Class B common stock and Series 2012-A Preferred Stock are entitled to one-tenth of a vote per share on all matters on which our stockholders are entitled to vote, while holders of our Class A common stock are entitled to three votes per share. As a result, the ability of holders of our Class B common stock and Series 2012-A Preferred Stock to influence our management is limited.

Holders of our Series 2012-A Preferred Stock are entitled to an annual dividend and such payments may have a negative impact on our cash flow.

Holders of our Series 2012-A Preferred Stock are entitled to receive an annual dividend, payable quarterly in cash. The payment of such dividend could have a negative impact on our cash flow and cash balances. If dividends on any shares of the Series 2012-A Preferred Stock are in arrears for six or more quarters, whether or not consecutive, holders of the Series 2012-A Preferred Stock shall have the right to elect two (2) additional directors to serve on our Board, and this could have a negative impact on the market price of our equity securities.

We are controlled by our principal stockholder, which limits the ability of other stockholders to affect our management.

Howard S. Jonas, our Chairman of the Board, has voting power over 6,161,611 shares of our common stock (which includes 1,574,326 shares of our Class A common stock, which are convertible into shares of our Class B common stock on a 1-for-1 basis, and 4,587,285 shares of our Class B common stock), representing approximately 72% of the combined voting power of our outstanding capital stock, as of March 10, 2017. Mr. Jonas is able to control matters requiring approval by our stockholders, including the election of all of the directors and the approval of significant corporate matters, including any merger, consolidation or sale of all or substantially all of our assets. As a result, the ability of any of our other stockholders to influence our management is limited.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our headquarters are located at 520 Broad St., Newark, New Jersey.

GRE’s Jamestown, New York offices are located at 3315 North Main Street where we lease approximately 12,000 square feet of space. GRE’s Florida office is located in Holiday, Florida where we lease approximately 4,350 square feet. GRE’s Arizona office is located in Chandler, Arizona where we lease approximately 3,300 square feet.

Afek operates out of IDT Corporation's offices in Jerusalem, with an additional office and warehouse that are both rented, and are located in the B'nei Yehuda Industrial Zone in Northern Israel.

Item 3. Legal Proceedings.

On March 13, 2014, named plaintiff, Anthony Ferrare, commenced a putative class-action lawsuit against IDT Energy, Inc. in the Court of Common Pleas of Philadelphia County, Pennsylvania. The complaint was served on IDT Energy on July 16, 2014. The named plaintiff filed the suit on behalf of himself and other former and current electric customers of IDT Energy in Pennsylvania with variable rate plans, whom he contends were injured as a result of IDT Energy's allegedly unlawful sales and marketing practices. On August 7, 2014, IDT Energy removed the case to the United States District Court for the Eastern District of Pennsylvania. On October 20, 2014, IDT Energy moved to stay or, alternatively, dismiss the complaint, as amended, by the named plaintiff. On November 10, 2014, the named plaintiff opposed IDT Energy's motion to dismiss and IDT Energy filed a reply memorandum of law in further support of its motion to dismiss. On June 10, 2015, the Court granted IDT Energy's motion to stay and denied its motion to dismiss without prejudice. The parties participated in mediation, and entered into a Memorandum of Understanding, or MOU, with respect to a proposed settlement of the above-referenced putative class action (as well as the other putative class actions referred to in this section). There are a number of material issues not addressed by the MOU that must be resolved before a settlement can be finalized. The parties notified the Court of that development and are working towards finalizing the settlement, which will need to be approved by the Court. We believe that the claims in this lawsuit are without merit.

On June 20, 2014, the Pennsylvania Attorney General's Office, or AG, and the Acting Consumer Advocate, or OCA, filed a Joint Complaint against IDT Energy, Inc. with the Pennsylvania Public Utility Commission, or PUC. In the Joint Complaint, the AG and the OCA alleged, among other things, various violations of Pennsylvania's Unfair Trade Practices and Consumer Protection Law, the Telemarketing Registration Act and the Pennsylvania PUC's regulations. IDT Energy reached an agreement in principle on a settlement with the AG and the OCA to terminate the litigation with no admission of liability or finding of wrongdoing by IDT Energy. On August 4, 2015, IDT Energy, the AG, and the OCA filed a Joint Petition to the Pennsylvania PUC seeking approval of the settlement terms. Under the settlement, IDT Energy will issue additional refunds to its Pennsylvania customers who had variable rates for electricity supply in January, February and March of 2014. IDT Energy will also implement certain modifications to its sales, marketing and customer service processes, along with additional compliance and reporting requirements. The settlement was approved by the Pennsylvania PUC on July 8, 2016. In July 2016, IDT Energy paid the agreed-upon $2.4 million for additional customer refunds to a refund administrator, and that administrator is currently in the process of issuing the additional refunds to customers.

On July 2, 2014, named plaintiff, Louis McLaughlin, filed a putative class-action lawsuit against IDT Energy, Inc. in the United States District Court for the Eastern District of New York, contending that he and other class members were injured as a result of IDT Energy's allegedly unlawful sales and marketing practices. The named plaintiff filed the suit on behalf of himself and two subclasses: all IDT Energy customers who were charged a variable rate for their energy from July 2, 2008, and all IDT Energy customers who participated in IDT Energy's rebate program from July 2, 2008. On January 22, 2016, the named plaintiff filed an amended complaint on behalf of himself and all IDT Energy customers in New York State against IDT Energy, Inc., Genie Retail Energy, Genie Energy International Corporation, and Genie Energy Ltd. (collectively, "IDT Energy"). On February 22, 2016, IDT Energy moved to dismiss the amended complaint, and the named plaintiff opposed that motion. The parties participated in mediation, and entered into a

MOU with respect to a proposed settlement of the above-referenced putative class action (as well as the other putative class actions referred to in this section). There are a number of material issues not addressed by the MOU that must be resolved before a settlement can be finalized. The parties notified the Court of that development and are working towards finalizing the settlement, which will need to be approved by the Court. We believe that the claims in this lawsuit are without merit.

On July 15, 2014, named plaintiff, Kimberly Aks, commenced a putative class-action lawsuit against IDT Energy, Inc. in New Jersey Superior Court, Essex County, contending that she and other class members were injured as a result of IDT Energy's allegedly unlawful sales and marketing practices. The named plaintiff filed the suit on behalf of herself and all other New Jersey residents who were IDT Energy customers at any time between July 11, 2008 and the present. The parties were engaged in discovery prior to the mediation described below. On April 20, 2016, the named plaintiff filed an amended complaint on behalf of herself and all IDT Energy customers in New Jersey against IDT Energy, Inc., Genie Retail Energy, Genie Energy International Corporation and Genie Energy Ltd. On June 27, 2016, defendants Genie Retail Energy, Genie Energy International Corporation and Genie Energy Ltd. filed a motion to dismiss the amended complaint. On August 26, 2016, the named plaintiff opposed that motion and IDT Energy filed a reply memorandum of law in further support of its motion to dismiss. The Court granted the motion to dismiss, but the parties agreed to set aside that decision to give the plaintiff an opportunity to submit opposition papers that had not been considered by the Court in rendering its decision. The parties participated in mediation, and entered into a MOU with respect to a proposed settlement of the above-referenced putative class action (as well as the other putative class actions referred to in this section). There are a number of material issues not addressed by the MOU that must be resolved before a settlement can be finalized. The parties notified the Court of that development and are working towards finalizing the settlement, which will need to be approved by the Court. We believe that the claims in this lawsuit are without merit.

New York Public Service Commission Orders

On February 23, 2016, the New York PSC issued an order that sought to impose significant new restrictions on REPs operating in New York, including those owned by GRE. The restrictions described in the PSC's order, which were to become effective March 4, 2016, would require that all REPs' electricity and natural gas offerings to residential and small business customers include an annual guarantee of savings compared to the price charged by the relevant incumbent utility or, for electricity offerings, provide at least 30% of the supply from renewable sources. Customers not enrolled in a compliant program would be relinquished back to the local utility at the end of their contract period or, for variable price customers operating on month to month agreements, at the end of the current monthly billing cycle.

On March 4, 2016, a group of parties from the REP industry sought and won a temporary restraining order to stay implementation of the most restrictive portions of the PSC's order pending a court hearing on those parties' motion for a preliminary injunction. On July 25, 2016, the New York State Supreme Court, County of Albany, entered a decision and order granting the Petitioners' petition, vacated provisions 1 through 3 of the Order, and remitted the matter to the PSC for further proceedings consistent with the Court's order.

On December 2, 2016, the PSC noticed an evidentiary hearing scheduled to take place in 2017 to assess the retail energy market in New York. That process is underway and is expected to last several months. We are evaluating the potential impact of any new order from the PSC that would follow from the evidentiary process, while preparing to operate in compliance with any new requirements that may be imposed. Depending on the final language of any new order, as well as our ability to modify our relationships with our New York customers, an order could have a substantial impact upon the operations of GRE-owned REPs in New York.

On July 14, 2016, and on September 19, 2016, the PSC issued Orders restricting REPs, including those owned by GRE, from serving customers enrolled in New York's utility low-income assistance programs. Representatives of the REP industry challenged the ruling in New York State Supreme Court, Albany County, and, on September 27, 2016, the court issued an order temporarily restraining the PSC from implementing the July and September Orders. On December 16, 2016, the PSC issued a prohibition on REP service to customers enrolled in New York's utility low-income assistance programs. As part of a stipulated schedule upon request of the REP industry, the PSC agreed to extend the deadlines for compliance with that order until May 2017. That order is under review in New York State Supreme Court, Albany County.

In addition to the above, we may from time to time be subject to legal proceedings that arise in the ordinary course of business. Although there can be no assurance in this regard, we do not expect any of those legal proceedings to have a material adverse effect on our results of operations, cash flows or financial condition.

Item 4. Mine Safety Disclosures.

Not applicable.

Part II

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

PRICE RANGE OF COMMON STOCK

Our Class B common stock trades on the New York Stock Exchange under the symbol “GNE”.

The table below sets forth the high and low sales prices for our Class B Common Stock as reported by the NYSE for the fiscal periods indicated which represents the only fiscal periods our Class B Common Stock has been trading on the NYSE.

	High	Low
Fiscal year ended December 31, 2015		
First Quarter	$8.06	$5.33
Second Quarter	$14.25	$7.85
Third Quarter	$11.40	$8.06
Fourth Quarter	$14.97	$8.00
Fiscal year ended December 31, 2016		
First Quarter	$11.02	$7.00
Second Quarter	$8.48	$6.32
Third Quarter	$7.49	$5.69
Fourth Quarter	$6.60	$5.07

On March 10, 2017, there were 171 holders of record of our Class B common stock and one holder of record of our Class A common stock. All shares of Class A common stock are beneficially owned by Howard Jonas. These numbers do not include the number of persons whose shares are in nominee or in “street name” accounts through brokers. On March 15, 2017, the last sales price reported on the New York Stock Exchange for the Class B common stock was $5.99 per share.

PRICE RANGE OF PREFERRED STOCK

The Series 2012-A Preferred Stock is listed and traded on the NYSE under the symbol “GNEPRA”. Trading began on the NYSE on October 24, 2012.

The table below sets forth the high and low sales prices for our Series 2012-A Preferred Stock as reported by the NYSE for the fiscal periods indicated.

	High	Low
Fiscal year ended December 31, 2015		
First Quarter	$7.25	$6.27
Second Quarter	$7.50	$6.80
Third Quarter	$7.12	$6.35
Fourth Quarter	$7.92	$6.10
Fiscal year ended December 31, 2016		
First Quarter	$7.65	$6.80
Second Quarter	$7.50	$6.81
Third Quarter	$7.64	$7.15
Fourth Quarter	$8.01	$7.08

On March 10, 2017, there were 4 holders of record of our Series 2012-A Preferred Stock. These numbers do not include the number of persons whose shares are in nominee or in “street name” accounts through brokers. On March 15, 2017, the last sales price reported on the New York Stock Exchange for the Series 2012-A Preferred Stock was $7.50 per share.

Additional information regarding dividends required by this item is incorporated by reference from the Management’s Discussion and Analysis section in Item 7 to Part II and Note 11 to the Consolidated Financial Statements in Item 8 to Part II of this Annual Report.

The information required by Item 201(d) of Regulation S-K will be contained in our Proxy Statement for our Annual Stockholders Meeting, which we will file with the Securities and Exchange Commission within 120 days after December 31, 2016, and which is incorporated by reference herein.

Performance Graph of Stock

The line graph below compares the cumulative total stockholder return on our Class B common stock and our Series 2012-A Preferred Stock with the cumulative total return of the New York Stock Exchange Composite Index and the Standard & Poor's Integrated Oil & Gas Index for the period beginning December 31, 2011 and ending December 31, 2016. The graph and table assume that $100 was invested December 31, 2011 and on October 24, 2012 with respect to the Series 2012-A Preferred Stock (the first day of trading for the Series 2012-A Preferred stock) with the cumulative total return of the NYSE Composite Index and the S&P Integrated Oil & Gas Index, and that all dividends were reinvested. Cumulative total stockholder returns for our Class B common stock, Series 2012-A Preferred Stock, NYSE Composite Index and the S&P Integrated Oil & Gas Index are based on our fiscal year.

	12/11	**3/12**	**6/12**	**10/12**	**12/12**	**3/13**	**6/13**	**9/13**	**12/13**	**3/14**	**6/14**	**9/14**	**12/14**	**3/15**	**6/**
Genie Energy Ltd.	100.00	122.34	99.00	87.88	91.09	118.80	117.39	125.73	130.99	127.91	100.97	90.19	80.00	103.75	13
Genie Energy Ltd. Series 2012 – A Preferred				100.00	93.75	107.61	110.44	113.18	116.96	115.52	114.78	110.38	98.97	111.83	11
NYSE Composite	100.00	110.45	105.83	112.40	115.99	125.91	127.57	134.77	146.47	149.17	156.60	153.52	156.36	158.15	15
S&P Intergrated Oil & Gas	100.00	102.74	99.76	105.36	102.21	109.54	111.36	111.39	124.21	120.87	129.14	120.81	115.85	107.84	10

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Issuer Purchases of Equity Securities

The following table provides information with respect to purchases by us of our shares during the fourth quarter of the year ended December 31, 2016.

	Total Number of Shares Purchased	Average Price per Share	Total Number of Shares Purchased as part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs (1)
October 1 – 31, 2016	—	$ —	—	6,896,669
November 1 – 30, 2016	—	$ —	—	6,896,669
December 1 – 31, 2016	—	$ —	—	6,896,669
Total	—	$ —		

(1) Under our existing stock repurchase program, approved by our Board of Directors on March 11, 2013, we were authorized to repurchase up to an aggregate of 7 million shares of our Class B common stock.

Item 6. Selected Financial Data.

The selected consolidated financial data presented below as of December 31, 2016, 2015, 2014 and 2013, and for each of the four years then ended, has been derived from our Consolidated Financial Statements, which have been audited by BDO USA, LLP, independent registered public accounting firm. The selected consolidated financial data presented below as of December 31, 2012, and for the year ended December 31, 2012 has been derived from our Consolidated Financial Statements, which have been audited by Grant Thornton LLP, independent registered public accounting firm. The selected consolidated financial data should be read in conjunction with the Consolidated Financial Statements and the Notes thereto and other financial information appearing elsewhere in this Annual Report.

	Year ended December 31,				
(in thousands, except per share data)	2016	2015 Revised	2014 Revised	2013 Revised	2012 Revised
STATEMENT OF OPERATIONS DATA:					
Revenues (1)	$212,112	$213,056	$280,963	$285,713	$231,515
Write-off of capitalized exploration costs	41,041	—	—	—	—
Net loss	(32,192)	(8,636)	(27,407)	(5,341)	(2,535)
Loss per common share—basic and diluted	(1.14)	(0.40)	(1.31)	(0.36)	(0.17)

Cash dividend declared per common share	0.24	0.12	0.06	—	0.133

December 31 (in thousands)	2016	2015	2014	2013	2012
BALANCE SHEET DATA:					
Total assets	$121,813	$155,815	$152,928	$158,843	$150,306
Long-term obligations	—	2,000	—	—	—

(1) Revenues in the years ended December 31, 2015, 2014, 2013 and 2012 were increased compared to the amounts originally reported in the amounts of $2.9 million, $5.9 million, $6.5 million and $2.1 million, respectively, to correct the classification of Pennsylvania gross receipt tax that was previously recorded as a reduction to electricity revenue instead of as cost of revenues. See Note 1 to the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report.

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Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

This Annual Report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, including statements that contain the words “believes,” “anticipates,” “expects,” “plans,” “intends” and similar words and phrases. These forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from the results projected in any forward-looking statement. In addition to the factors specifically noted in the forward-looking statements, other important factors, risks and uncertainties that could result in those differences include, but are not limited to, those discussed under Item 1A to Part I “Risk Factors” in this Annual Report. The forward-looking statements are made as of the date of this Annual Report, and we assume no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those projected in the forward-looking statements. Investors should consult all of the information set forth in this report and the other information set forth from time to time in our reports filed with the Securities and Exchange Commission pursuant to the Securities Act of 1933 and the Securities Exchange Act of 1934, including our reports on Forms 10-Q and 8-K.

The following discussion should be read in conjunction with the Consolidated Financial Statements and Notes thereto included in Item 8 of this Annual Report.

OVERVIEW

We own 99.3% of our subsidiary, GEIC, which owns 100% of GRE and 92% of GOGAS. Our principal businesses consist of:

GRE, which owns and operates REPs, including IDT Energy, Residents Energy and Town Square Energy, or TSE, and energy brokerage and marketing services. Its REP businesses resell electricity and natural gas to residential and small business customers primarily in the Eastern United States; and

GOGAS, which is an oil and gas exploration company that consists of an 85.1% interest in Afek, which operates an exploration project in the Golan Heights in Northern Israel, and certain inactive projects.

GRE has outstanding deferred stock units granted to officers and employees that represent an interest of 2.5% of the equity of GRE.

As part of our ongoing business development efforts, we continuously seek out new opportunities, which may include complementary operations or businesses that reflect horizontal or vertical expansion from our current operations. Some of these potential opportunities are considered briefly and others are examined in further depth. In particular, we seek out acquisitions to expand the geographic scope and size of our REP businesses, and additional energy exploration projects to diversify our GOGAS unit's operations, among geographies, technologies and resources.

Genie Retail Energy

GRE operates REPs that resell electricity and natural gas to residential and small business customers in Connecticut, Illinois, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania and Rhode Island, as well as in Washington, D.C. GRE's revenues represented 100% of our consolidated revenues in the years ended December 31, 2016, 2015 and 2014.

GRE's cost of revenues consists primarily of natural gas and electricity purchased for resale. As of November 19, 2015, IDT Energy and certain of its affiliates entered into an Amended and Restated Preferred Supplier Agreement with BP pursuant to which IDT Energy purchases electricity and natural gas at a market rate plus a fee. The agreement's termination date is November 30, 2019, except either party may terminate the agreement on November 30, 2018 by giving the other party notice by May 31, 2018. IDT Energy's ability to purchase electricity and natural gas under this agreement is subject to satisfaction of certain conditions including the maintenance of certain covenants.

As an operator of REPs, GRE does not own electrical power generation, transmission, or distribution facilities, or natural gas production, pipeline or distribution facilities. Instead, GRE's REPs contract with various pipeline and distribution companies for natural gas pipeline, storage and transportation services, and utilizes NYISO, PJM and ISO New England for electric transmission and distribution. GRE's cost of revenues include scheduling costs, ISO fees, pipeline costs and utility service charges for the purchase of these services.

For risk management purposes, GRE utilizes put and call options and swaps as hedges against unfavorable fluctuations in market prices of electricity and natural gas and to reduce exposure from price fluctuations. The put and call options and swaps are recorded at fair value as a current asset or liability and any changes in fair value are recorded in cost of revenues. The impact of these options and swaps on cost of revenues is relatively small in comparison to GRE's purchases of gas and electricity for resale.

The NYISO and PJM perform real-time load balancing for each of the electrical power grids in which GRE REPs operate. Similarly, the utility or the LDC performs load balancing for each of the natural gas markets in which GRE REPs operate. Load balancing ensures that the amount of electricity and natural gas that GRE REPs purchase is equal to the amount necessary to service its REP customers' demands at any specific point in time. GRE manages the differences between the actual electricity and natural gas demands of its customers and its bulk or block purchases by buying and selling in the spot market, and through monthly cash settlements and/or adjustments to futures deliveries in accordance with the load balancing performed by utilities, LDCs, NYISO and PJM. Suppliers and the LDC's charge or credit GRE for balancing the electricity and natural gas purchased and sold for its account.

The local utilities generally meter and deliver electricity and natural gas to GRE's REP customers. The local utilities provide billing and collection services on GRE's behalf for most of GRE's customers. GRE receives the proceeds less the utility's POR fees and in some cases less fees for billing and other ancillary services.

Volatility in the electricity and natural gas markets affects the wholesale cost of the electricity and natural gas that GRE REPs sell to customers. GRE may not always choose to pass along increases in costs to its customers for various reasons including competitive pressures and to protect overall customer satisfaction. In addition, GRE's REPs offer fixed rate products or guaranteed pricing and may be unable to change their sell rates offered to fixed rate and guaranteed pricing customers in response to volatility in the prices of the underlying commodities. This can adversely affect GRE's gross margins and results of operations. Alternatively, increases in GRE's rates charged to REP customers may lead to increased customer churn.

GRE's selling expense consists primarily of sales commissions paid to independent agents and marketing costs, which are the primary costs associated with the acquisition of customers. General and administrative expense includes compensation, benefits, utility fees for billing and collection, professional fees, rent and other administrative costs.

Seasonality and Weather

The weather and the seasons, among other things, affect GRE's revenues. Weather conditions have a significant impact on the demand for natural gas used for heating and electricity used for heating and cooling. Typically, colder winters increase demand for natural gas and electricity, and hotter summers increase demand for electricity. Milder winters and/or summers have the opposite effect. Natural gas revenues typically increase in the first quarter due to increased heating demands and electricity revenues typically increase in the third quarter due to increased air conditioning use. Approximately 43% and 64% of GRE's natural gas revenues for the relevant years were generated in the first quarter of 2016 and 2015, respectively, when demand for heating was highest. Although the demand for electricity is not as seasonal as natural gas (due, in part, to usage of electricity for both heating and cooling), approximately 31% and 29% of GRE's electricity revenues for the relevant years were generated in the third quarter of 2016 and 2015, respectively.

Concentration of Customers and Associated Credit Risk

The GRE-owned REPs reduce their customer credit risk by participating in purchase of receivable programs for a majority of their receivables. In addition to providing billing and collection services, utility companies purchase those REPs' receivables and assume all credit risk without recourse to those REPs. The GRE-owned REPs primary credit risk is therefore nonpayment by the utility companies. Certain of the utility companies represent significant portions of our consolidated revenues and consolidated gross trade accounts receivable balance and such concentrations increase our risk associated with nonpayment by those utility companies.

The following table summarizes the percentage of consolidated revenues from customers by utility company that equal or exceed 10% of consolidated revenues in the period (no other single utility company accounted for more than 10% of consolidated revenues in these periods):

	Year ended December 31,		
	2016	2015	2014
Con Edison	20 %	23 %	23 %
ComEd	13 %	na	na
National Grid USA	**na**	12 %	na
West Penn Power	**na**	na	10 %

na-less than 10% of consolidated revenue in the period

The following table summarizes the percentage of consolidated gross trade accounts receivable by utility company that equal or exceed 10% of consolidated gross trade accounts receivable at December 31, 2016 and 2015 (no other single utility company accounted for 10% or greater of our consolidated gross trade accounts receivable at December 31, 2016 or 2015):

December 31	2016	2015
Con Edison	15 %	22 %
ComEd	10 %	na

na-less than 10% of consolidated gross trade accounts receivable

New York Public Service Commission Orders

On February 23, 2016, the New York PSC issued an order that sought to impose significant new restrictions on REPs operating in New York, including those owned by GRE. The restrictions described in the PSC's order, which were to become effective March 4, 2016, would require that all REPs' electricity and natural gas offerings to residential and small business customers include an annual guarantee of savings compared to the price charged by the relevant incumbent utility or, for electricity offerings, provide at least 30% of the supply from renewable sources. Customers not enrolled in a compliant program would be relinquished back to the local utility at the end of their contract period or, for variable price customers operating on month to month agreements, at the end of the current monthly billing cycle.

On March 4, 2016, a group of parties from the REP industry sought and won a temporary restraining order to stay implementation of the most restrictive portions of the PSC's order pending a court hearing on those parties' motion for a preliminary injunction. On July 25, 2016, the New York State Supreme Court, County of Albany, entered a decision and order granting the Petitioners' petition, vacated provisions 1 through 3 of the Order, and remitted the matter to the PSC for further proceedings consistent with the Court's order.

On December 2, 2016, the PSC noticed an evidentiary hearing scheduled to take place in 2017 to assess the retail energy market in New York. That process is underway and is expected to last several months. We are evaluating the potential impact of any new order from the PSC that would follow from the evidentiary process, while preparing to operate in compliance with any new requirements that may be imposed. Depending on the final language of any new order, as well as our ability to modify our relationships with our New York customers, an order could have a substantial impact upon the operations of GRE-owned REPs in New York.

On July 14, 2016, and on September 19, 2016, the PSC issued Orders restricting REPs, including those owned by GRE, from serving customers enrolled in New York's utility low-income assistance programs. Representatives of the REP industry challenged the ruling in New York State Supreme Court, Albany County, and, on September 27, 2016, the court issued an order temporarily restraining the PSC from implementing the July and September Orders. On December 16, 2016, the PSC issued a prohibition on REP service to customers enrolled in New York's utility low-income assistance programs. As part of a stipulated schedule upon request of the REP industry, the PSC agreed to extend the deadlines for compliance with that order until May 2017. That order is under review in New York State Supreme Court, Albany County.

Afek Oil and Gas, Ltd.

In April 2013, the Government of Israel finalized the award to Afek of an exclusive three-year petroleum exploration license covering 396.5 square kilometers in the southern portion of the Golan Heights in Northern Israel. The license has been extended to April 2018. Israel's Northern District Planning and Building Committee granted Afek a one-year permit that commenced in February 2015, which has been subsequently extended to April 18, 2018, to conduct an up to ten-well oil and gas exploration program. This permit as extended is expected to cover the remainder of Afek's ongoing exploration program in the area covered by its exploration license.

In February 2015, Afek began drilling its first exploratory well. To date, Afek has completed drilling five wells in the Southern region of its license area. In light of the analysis received in the third quarter of 2016 and the information and market conditions at that time, Afek determined that it did not have a clear path to demonstrate probable or possible reserves in the Southern region of its license area over the next 12 to 18 months. Since there was substantial doubt regarding the economic viability of these wells, in the year ended December 31, 2016, Afek wrote off the $41.0 million of capitalized exploration costs incurred in the Southern region.

Afek has turned its operational focus to the Northern region of its license area. The data analyzed to date suggests that the Southern block resources may extend northward at depths potentially sufficient to have induced a greater level of maturation of the resource. To validate this hypothesis, Afek is preparing to drill its sixth exploratory well at one of the Northern sites in its license area. Afek expects to spud this well in March 2017 and complete the well during the second quarter of 2017.

Afek may seek financing for the next phase of activity from a variety of sources, some of which could result in a process by which Afek would become an independent entity.

Afek assesses the economic and operational viability of its project on an ongoing basis. The assessment requires significant estimates and assumptions by management. Should our estimates or assumptions regarding the recoverability of future capitalized exploration costs, if any, prove to be incorrect, we may be required to record impairments of such costs in future periods and such impairments could be material.

GOGAS Inactive Projects

Genie Mongolia

In April 2013, Genie Mongolia and the Petroleum Authority of Mongolia entered into an exclusive, five year, oil shale development agreement to explore and evaluate the commercial potential of oil shale resources in a 34,470 square kilometer area in Central Mongolia. In September 2014, Genie Mongolia signed a prospecting agreement with the Petroleum Authority of Mongolia covering an additional 25,000 square kilometers in Central Mongolia.

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American Shale Oil, LLC

AMSO, LLC holds a research, development and demonstration lease awarded by the U.S. Bureau of Land Management that covers an area of 160 acres in western Colorado. Through April 30, 2016, we accounted for our ownership interest in AMSO, LLC using the equity method since we had the ability to exercise significant influence over its operating and financial matters, although we did not control AMSO, LLC. AMSO, LLC was a variable interest entity, however, we determined that we were not the primary beneficiary.

On February 23, 2016, Total notified AMSO of its decision not to continue to fund AMSO, LLC. On March 23, 2016, Total gave AMSO its notice of withdrawal from AMSO, LLC. The withdrawal was effective on April 30, 2016. As of April 1, 2016, AMSO and Total agreed that Total would pay AMSO, LLC $3.0 million as full payment of its share of all costs associated with the decommissioning, winding up and dissolution of AMSO, LLC. Total will not be refunded any amount if the decommissioning costs are less than $3.0 million. At December 31, 2016, the AMSO, LLC project was substantially decommissioned. Effective April 30, 2016, AMSO, LLC's assets, liabilities, results of operations and cash flows are included in our consolidated financial statements.

We accounted for our acquisition on April 30, 2016 of Total's ownership interest in AMSO, LLC as a business combination. We estimated the fair value of AMSO, LLC to be nil, as it had ceased operations and its shutdown was in progress. We recognized a gain from the acquisition of Total's interest in AMSO, LLC because we acquired the net assets of AMSO, LLC while no consideration was transferred by us, due to our assumption of the risk associated with the shutdown obligations. The gain also included our gain on the remeasurement of AMSO's investment in AMSO, LLC at its acquisition date fair value. The aggregate gain recognized was $1.3 million, which was included in "Gain on consolidation of AMSO, LLC" in the consolidated statements of operations.

Israel Energy Initiatives, Ltd.

IEI had an exclusive Shale Oil Exploration and Production License awarded in July 2008 by the Government of Israel. The license covered approximately 238 square kilometers in the south of the Shfela region in Central Israel. On September 2, 2014, the Jerusalem District Committee for Planning and Building declined to issue IEI a permit to build and operate a pilot drilling project. The Shale Oil Exploration and Production License expired in July 2015.

CRITICAL ACCOUNTING POLICIES

Our financial statements and accompanying notes are prepared in accordance with accounting principles generally accepted in the United States of America, or U.S. GAAP. The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses as well as the disclosure of contingent assets and liabilities. Critical accounting policies are those that require application of management's most subjective or complex judgments, often as a result of matters that are inherently uncertain and may change in subsequent periods. Our critical accounting policies include those related to the allowance for doubtful accounts, goodwill, oil and gas accounting and income taxes. Management bases its estimates and judgments on historical experience and other factors that are believed to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. See Note 1 to the Consolidated Financial Statements in this Annual Report for a complete discussion of our significant accounting policies.

Allowance for Doubtful Accounts

We maintain an allowance for doubtful accounts for estimated losses that result from the inability or unwillingness of our customers to make required payments. The allowance for doubtful accounts was $0.2 million at December 31, 2016 and 2015. Our allowance is determined based on known troubled accounts, historical experience and other currently available evidence. Our estimates of recoverability of customer accounts may change due to new developments, changes in assumptions or changes in our strategy, which may impact our allowance for doubtful accounts balance. We continually assess the likelihood of potential amounts or ranges of recoverability and adjust our allowance accordingly, however, actual collections and write-offs of trade accounts receivable may materially differ from our estimates.

Goodwill

Our goodwill balance of $8.7 million and $3.7 million at December 31, 2016 and 2015, respectively, was allocated to our GRE segment. IDT Energy and REH, which was acquired in November 2016, are the reporting units for our goodwill impairment tests. Goodwill is not amortized since it is deemed to have an indefinite life. It is reviewed annually (or more frequently under various conditions) for impairment using a fair value approach. The goodwill impairment assessment involves estimating the fair value of the reporting unit and comparing it to its carrying amount, which is known as Step 1. If the carrying value of the reporting unit exceeds its estimated fair value, Step 2 is performed to determine if an impairment of goodwill is required. We estimate the fair value of our reporting units using discounted cash flow methodologies, as well as considering third party market value indicators. Goodwill impairment is measured by the excess of the carrying amount of the reporting unit's goodwill over its implied fair value. We have the option to perform a qualitative assessment to determine whether it is necessary to perform the two-step quantitative goodwill impairment test. However, we may elect to perform the two-step quantitative goodwill impairment test even if no indications of a potential impairment exist.

IDT Energy's estimated fair value substantially exceeded its carrying value in Step 1 of our annual impairment tests for the years ended December 31, 2016, 2015 and 2014, therefore it was not necessary to perform Step 2 for these tests. In addition, we do not believe IDT Energy is currently at risk of failing Step 1. At December 31, 2016, goodwill included $5.1 million relating to the acquisition of REH in November 2016 that management believes is not impaired based on its qualitative assessment. In the year ended December 31, 2014, we determined that an impairment of the goodwill from the acquisitions of Diversegy and Epiq Energy, LLC, which was subsequently renamed IDT Energy Network, or IDTEN, was required. We recorded goodwill impairment of $3.6 million, which reduced the carrying amount of the goodwill related to Diversegy and IDTEN to zero. Calculating the fair value of the reporting unit, and allocating the estimated fair value to all of the tangible assets, intangible assets and liabilities, requires significant estimates and assumptions by management. Should our estimates or assumptions regarding the fair value of our reporting units prove to be incorrect, we may be required to record impairments to our goodwill in future periods and such impairments could be material.

In January 2017, the Financial Accounting Standards Board, or FASB, issued an Accounting Standards Update, or ASU, that simplifies the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. Instead, under the amendments in this ASU, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. Early adoption of this standard is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. We plan to adopt this standard for the goodwill impairment test to be performed in 2017.

Oil and Gas Accounting

We account for our oil and gas activities under the successful efforts method of accounting. Under this method, the costs of drilling exploratory wells and exploratory-type stratigraphic test wells are capitalized, pending determination of whether the well has found proved reserves. Other exploration costs are charged to expense as incurred. Unproved properties are assessed for impairment, and if considered impaired, are charged to expense when such impairment is deemed to have occurred. The assessment of unproved properties for impairment requires significant estimates and assumptions by management. Should our estimates or assumptions regarding the recoverability of the unproved properties prove to be incorrect, we may be required to record impairments to our unproved properties in future periods and such impairments could be material.

At December 31, 2016 and 2015, our capitalized exploration costs—unproved oil and gas property were nil and $26.9 million, respectively. In light of the analysis received in the third quarter of 2016 and the information and market conditions at that time, Afek determined that it did not have a clear path to demonstrate probable or possible reserves in the Southern region of its license area over the next 12 to 18 months. Since there was substantial doubt regarding the economic viability of its five wells in the Southern region, in the year ended December 31, 2016, Afek wrote off the $41.0 million of capitalized exploration costs incurred in the Southern region.

Income Taxes

Our current and deferred income taxes and associated valuation allowance are impacted by events and transactions arising in the normal course of business as well as in connection with special and non-routine items. Assessment of the appropriate amount and classification of income taxes is dependent on several factors, including estimates of the timing and realization of deferred income tax assets, the results of Internal Revenue Service audits of our federal income tax returns, and changes in tax laws or regulations.

The valuation allowance on our deferred income tax assets was $53.0 million and $31.8 million at December 31, 2016 and 2015, respectively. We employ a tax strategy that enables us to currently deduct losses from our foreign subsidiaries against our profitable U.S. operations. Because of this strategy and our current projections, we concluded that we do not meet the criteria of more likely than not in order to utilize our deferred federal income tax assets in the foreseeable future.

We use a two-step approach for recognizing and measuring tax benefits taken or expected to be taken in a tax return. We determine whether it is more-likely-than-not that, a tax position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. In evaluating whether a tax position has met the more-likely-than-not recognition threshold, we presume that the appropriate taxing authority that has full knowledge of all relevant information will examine the position. Tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of tax benefit to recognize in the financial statements. The tax position is measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon ultimate settlement. Differences between tax positions taken in a tax return and amounts recognized in the financial statements will generally result in one or more of the following: an increase in a liability for income taxes payable, a reduction of an income tax refund receivable, a reduction in a deferred tax asset, or an increase in a deferred tax liability. We review and adjust our liability for unrecognized tax benefits based on our best estimate and judgment given the facts, circumstances and information available at each reporting date. To the extent that the outcome of these tax positions is different from the amounts recorded, such differences may affect income tax expense and actual tax payments.

RECENTLY ISSUED ACCOUNTING STANDARDS NOT YET ADOPTED

In May 2014, the FASB and the International Accounting Standards Board jointly issued a comprehensive new revenue recognition standard that will supersede most of the current revenue recognition guidance under U.S. GAAP and International Financial Reporting Standards, or IFRS. The goals of the revenue recognition project were to clarify and converge the revenue recognition principles under U.S. GAAP and IFRS and to develop guidance that would streamline and enhance revenue recognition requirements. We are required to adopt this standard on January 1, 2018. Entities have the option of using either a full retrospective or modified retrospective approach for the adoption of the standard. We are evaluating the impact that the standard will have on our consolidated financial statements, and have not yet selected an adoption date or a transition method. We cannot reasonably estimate the impact that the adoption of the standard will have on our consolidated financial statements.

In January 2016, the FASB issued an ASU to provide more information about recognition, measurement, presentation and disclosure of financial instruments. The amendments in the ASU include, among other changes, the following: (1) equity investments (except those accounted for under the equity method or that result in consolidation) will be measured at fair value with changes in fair value recognized in net income, (2) a qualitative assessment each reporting period to identify impairment of equity investments without readily determinable fair values, (3) financial assets and financial liabilities will be presented separately by measurement category and form of financial asset on the balance sheet or the notes to the financial statements, and (4) an entity should evaluate the need for a valuation allowance on a deferred tax asset related to available-for-sale securities in combination with the entity's other deferred tax assets. Entities will no longer be able to recognize unrealized holding gains and losses on equity securities classified as available-for-sale in other comprehensive income. In addition, a practicability exception will be available for equity investments that do not have readily determinable fair values and do not qualify for the net asset value practical expedient. These investments may be measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. Entities will have to reassess at each reporting period whether an investment qualifies for this practicability exception. We will adopt the amendments in this ASU on January 1, 2018. We are evaluating the impact that the ASU will have on our consolidated financial statements.

In February 2016, the FASB issued an ASU related to the accounting for leases. The new standard establishes a right-of-use, or ROU, model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. We will adopt the new standard on January 1, 2019. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. We are evaluating the impact that the new standard will have on our consolidated financial statements.

In June 2016, the FASB issued an ASU that changes the impairment model for most financial assets and certain other instruments. For receivables, loans and other instruments, entities will be required to use a new forward-looking "expected loss" model that generally will result in the earlier recognition of allowance for losses. For available-for-sale debt securities with unrealized losses, entities will measure credit losses in a manner similar to current practice, except the losses will be recognized as allowances instead of reductions in the amortized cost of the securities. In addition, an entity will have to disclose significantly more information about allowances, credit quality indicators and past due securities. The new provisions will be applied as a cumulative-effect adjustment to retained earnings. We will adopt the new standard on January 1, 2020. We are evaluating the impact that the new standard will have on our consolidated financial statements.

In November 2016, the FASB issued an ASU that includes specific guidance on the classification and presentation of changes in restricted cash and cash equivalents in the statement of cash flows. The amendments in this ASU require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Amounts generally described as restricted cash or restricted cash equivalents will be included with cash and cash equivalents when reconciling the beginning of the period and end of the period total amounts shown on the statement of cash flows. The ASU will be applied using a retrospective transition method to each period presented. We will adopt the amendments in this ASU on January 1, 2018. The adoption will impact our beginning of the period and end of the period cash and cash equivalents balance in our statement of cash flows, as well as our net cash provided by operating activities.

In January 2017, the FASB issued an ASU that simplifies the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. In computing the implied fair value of goodwill under Step 2, an entity had to perform procedures to determine the fair value at the impairment testing date of its assets and liabilities (including unrecognized assets and liabilities) following the procedure that would be required in determining the fair value of assets acquired and liabilities assumed in a business combination. Instead, under the amendments in this ASU, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. Early adoption of this standard is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. We plan to adopt this standard for the goodwill impairment test to be performed in 2017.

RESULTS OF OPERATIONS

We evaluate the performance of our operating business segments based primarily on income (loss) from operations. Accordingly, the income and expense line items below income (loss) from operations are only included in our discussion of the consolidated results of operations.

Year Ended December 31, 2016 compared to Year Ended December 31, 2015

Genie Retail Energy Segment

In the year ended December 31, 2015, amounts previously included in "Financing fees" have been reclassified to "Cost of revenues" to conform to the current year's presentation. In addition, electricity revenues and cost of revenues in the year ended December 31, 2015 have been adjusted to correct the classification of Pennsylvania gross receipt tax that was previously recorded as a reduction to electricity revenue instead of as cost of revenues. See Note 1 to the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report.

(in millions)		**2015**	Change	
Year ended December 31,	2016	(Revised)	$	%
Revenues:				
Electricity	$179.5	$ 170.3	$9.2	5.4 %
Natural gas	31.0	40.8	(9.8)	(23.9)
Other	1.6	2.0	(0.4)	(19.9)
Total revenues	212.1	213.1	(1.0)	(0.4)
Cost of revenues	135.2	146.4	(11.2)	(7.7)
Gross profit	76.9	66.7	10.2	15.4
Selling, general and administrative	50.4	55.6	(5.2)	(9.2)
Income from operations	$26.5	$ 11.1	$15.4	138.9%

On November 2, 2016, GRE acquired REH, a privately held owner of REPs that operates as Town Square Energy in eight states. TSE's licenses and customer base expanded GRE's geographic footprint to four new states – New Hampshire, Rhode Island, Massachusetts and Connecticut – and provided additional electricity customers in New Jersey, Maryland, Ohio and Pennsylvania.

Revenues. GRE's electricity revenues increased in 2016 compared to 2015 partially because of the acquisition of REH in November 2016, which added approximately 43,000 electricity-only customers at acquisition and $6.1 million in electricity revenues in November and December 2016, which offset a 6.5% decline in the average rate charged to electricity customers. GRE's electricity consumption in 2016 compared to 2015 increased 12.7%, including the TSE electricity customers. The increase in electricity consumption reflected the increase in average meters served, which increased 14.1% in 2016 compared to 2015, although average consumption per meter decreased 1.3% in 2016 compared to 2015.

GRE's natural gas revenues decreased in 2016 compared to 2015 because of a 16.9% decrease in the average rate charged to customers, and an 8.4% decrease in natural gas consumption. The decrease in natural gas consumption was the result of a 3.6% decrease in average meters served, as well as a 5.0% decrease in average consumption per meter, in 2016 compared to 2015.

GRE's customer base as measured by meters served consisted of the following:

(in thousands)	December 31, 2016	September 30, 2016	June 30, 2016	March 31, 2016	December 31, 2015
Meters at end of quarter:					
Electricity customers	296	263	268	267	264
Natural gas customers	116	120	122	126	128
Total meters	412	383	390	393	392

The total meters at December 31, 2016 included TSE's approximately 44,500 electric-only meters. Gross meter acquisitions in 2016, exclusive of TSE, were 235,000 compared to 275,000 in 2015. In response to the New York PSC developments discussed above, we focused our meter acquisition efforts outside of New York State while simultaneously taking steps to reduce the prospective and contingent impacts of the PSC's orders on our New York operations. Including the impact of the REH acquisition, net meters served increased by 20,000 or 5.0% in 2016 compared to an increase of 29,000 or 8.4% in 2015. Average monthly churn increased from 6.3% in 2015 to 6.4% in 2016.

GRE-owned REPs began operations in Ohio in the second quarter of 2016, and we have applications pending to enter into additional utility service areas, primarily electric and dual meter territories in the states where we currently operate. We continue to evaluate additional, deregulation-driven opportunities in order to expand our business geographically to additional states and utility service areas.

The average rates of annualized energy consumption, as measured by residential customer equivalents, or RCEs, are presented in the chart below. An RCE represents a natural gas customer with annual consumption of 100 mmbtu or an electricity customer with annual consumption of 10 MWh. Because different customers have different rates of energy consumption, RCEs are an industry standard metric for evaluating the consumption profile of a given retail customer base.

(in thousands)	December 31, 2016	September 30, 2016	June 30, 2016	March 31, 2016	December 31, 2015
RCEs at end of quarter:					
Electricity customers	218	174	172	175	178
Natural gas customers	65	67	67	72	81
Total RCEs	283	241	239	247	259

Total RCEs at December 31, 2016 included TSE's approximately 50,600 electric-only RCEs. Exclusive of the impact of the REH acquisition, RCEs decreased at December 31, 2016 compared to December 31, 2015 primarily due to changing weather patterns as well as the declines in electric and natural gas meters served.

Other revenue in 2016 and 2015 includes revenue earned by Diversegy and IDTEN, both of which were acquired in December 2013. Diversegy and IDTEN earn commissions, entry fees and other fees from their retail energy advisory and brokerage business and network marketing business, respectively.

Cost of Revenues and Gross Margin Percentage. GRE's cost of revenues and gross margin percentage were as follows:

(in millions)		**2015**	Change	
Year ended December 31,	2016	(Revised)	$	%
Cost of revenues:				
Electricity	$113.0	$ 112.7	$0.3	0.2 %
Natural gas	21.6	31.5	(9.9)	(31.5)
Other	0.6	2.2	(1.6)	(71.7)
Total cost of revenues	$135.2	$ 146.4	$(11.2)	(7.7)%

Year ended December 31,	2016	2015 (Revised)		Change	
Gross margin percentage:					
Electricity	37.0%	33.8	%	3.2	%
Natural gas	30.5	22.7		7.8	
Other	61.3	(9.5	)	70.8	
Total gross margin percentage	36.3%	31.3	%	5.0	%

Cost of revenues for electricity increased in 2016 compared to 2015 primarily because of the acquisition of REH in November 2016, which added $5.0 million in cost of revenues for electricity in November and December 2016. GRE's electricity consumption in 2016 compared to 2015 increased 12.7%, including the TSE electricity customers. The increase in cost of revenues for electricity was partially offset by an 11.0% decrease in the average unit cost of electricity in 2016 compared to 2015. Gross margin on electricity sales increased in 2016 compared to 2015 because the average rate charged to customers decreased less than the average unit cost of electricity.

Cost of revenues for natural gas decreased in 2016 compared to 2015 primarily because the average unit cost of natural gas decreased 25.3% in 2016 compared to 2015 and natural gas consumption decreased 8.4% in 2016 compared to 2015. Gross margin on natural gas sales increased in 2016 compared to 2015 because the average rate charged to customers decreased less than the average unit cost of natural gas.

Other cost of revenues primarily includes commission expense incurred by Diversegy and IDTEN.

Selling, General and Administrative. The decrease in selling, general and administrative expense in 2016 compared to 2015 was due to a decrease in the cost of regulatory and legal matters, the reorganization of Diversegy and IDTEN that reduced the payroll, office rent and certain other general and administrative expenses of those businesses, and a reduction in customer acquisition costs. In 2015, selling, general and administrative expense included an accrual of $2.7 million for regulatory and legal matters including outside counsel fees. As a percentage of GRE's total revenues, selling, general and administrative expense decreased from 26.1% in 2015 to 23.8% in 2016.

Afek Segment

Afek does not currently generate any revenues, nor does it incur any cost of revenues.

(in millions)			Change	
Year ended December 31,	2016	2015	$	%
General and administrative expense	$1.1	$0.8	$0.3	32.6 %
Research and development	—	0.1	(0.1)	(100.0)
Exploration	6.1	6.6	(0.5)	(7.5)
Write-off of capitalized exploration costs	41.0	—	41.0	nm
Other operating loss, net	0.1	—	0.1	nm
Loss from operations	$48.3	$7.5	$40.8	547.3 %

nm – not meaningful

General and Administrative. General and administrative expense increased in 2016 compared to 2015 primarily because of an increase in payroll expense partially offset by a decrease in consulting and professional fees.

Exploration. In February 2015, Afek began drilling its first exploratory well. To date, Afek has completed drilling five wells in the Southern region of its license area. Afek has turned its operational focus to the Northern region of its license area. Afek is preparing to drill its sixth exploratory well at one of the Northern sites in its license area. Afek expects to spud this well in March 2017 and complete the well during the second quarter of 2017.

Write-Off of Capitalized Exploration Costs. Afek assesses the economic and operational viability of its project on an ongoing basis. The assessment requires significant estimates and assumptions by management. In light of the analysis received in the third quarter of 2016 and the current information and market conditions at the time, Afek determined that it did not have a clear path to demonstrate probable or possible reserves in the Southern region of its license area over the next 12 to 18 months. Since there was substantial doubt regarding the economic viability of these wells, Afek wrote off the $41.0 million of capitalized exploration costs incurred in the Southern region in 2016.

Other Operating Loss, net. In 2016, Afek incurred net expense of $0.1 million from its drilling and related operations for the Mei Golan Water Cooperative, a water cooperative of agricultural settlements in the Golan Heights.

Genie Oil and Gas Segment

Genie Oil and Gas does not currently generate any revenues, nor does it incur any cost of revenues. On March 23, 2016, Total gave AMSO its notice of withdrawal from AMSO, LLC. The withdrawal was effective on April 30, 2016. As a result of Total's withdrawal, beginning on April 30, 2016, AMSO, LLC's assets, liabilities, results of operations and cash flows are included in our consolidated financial statements.

(in millions)			Change	
Year ended December 31,	2016	2015	$	%
General and administrative expense	$(1.0)	$(0.7)	$(0.3)	(18.0)%
Research and development	0.3	(1.9)	2.2	114.0
Gain on consolidation of AMSO, LLC	1.3	—	1.3	nm
Equity in net loss of AMSO, LLC	(0.2)	(0.4)	0.2	44.1
Income (loss) from operations	$0.4	$(3.0)	$3.4	114.3%

nm – not meaningful

General and Administrative. General and administrative expense increased in 2016 compared to 2015 primarily due to the consolidation of AMSO, LLC's general and administrative expense of $0.3 million in 2016 and a reduction in the amount of costs classified as research and development expense, partially offset by a decrease in stock-based compensation expense.

Research and Development. Research and development expense consists of the following:

(in millions) Year ended December 31,	2016	2015
AMSO, LLC	$(0.4)	$—
Genie Mongolia	0.1	1.7
IEI	—	0.2
Total research and development expense	$(0.3)	$1.9

In 2016, AMSO, LLC reversed accrued research and development expense related to its decommissioning, winding up and dissolution. At December 31, 2016, the AMSO, LLC project was substantially decommissioned.

Genie Mongolia's research and development expense in 2016 and 2015 related to the joint geological survey agreement with the Republic of Mongolia, which was executed in April 2013, to explore certain of that country's oil shale deposits. In late 2015, we scaled back operations in Mongolia, and in 2016 we suspended our operations.

IEI had an exclusive Shale Oil Exploration and Production License awarded in July 2008 by the Government of Israel. The license was extended until July 2015 when it expired. Operations at IEI are currently suspended.

Gain on consolidation of AMSO, LLC. On February 23, 2016, Total notified AMSO of its decision not to continue to fund AMSO, LLC. On March 23, 2016, Total gave AMSO its notice of withdrawal from AMSO, LLC. The withdrawal was effective on April 30, 2016. As of April 1, 2016, AMSO and Total agreed that Total would pay AMSO, LLC $3.0 million as full payment of its share of all costs associated with the decommissioning, winding up and dissolution of AMSO, LLC. Total will not be refunded any amount if the decommissioning costs are less than $3.0 million. We accounted for our acquisition on April 30, 2016 of Total's ownership interest in AMSO, LLC as a business combination. We estimated the fair value of AMSO, LLC to be nil, as it had ceased operations and its shutdown was in progress. We recognized a gain from the acquisition of Total's interest in AMSO, LLC because we acquired the net assets of AMSO, LLC while no consideration was transferred by us, due to our assumption of the risk associated with the shutdown obligations. The gain also included our gain on the remeasurement of AMSO's investment in AMSO, LLC at its acquisition date fair value. The aggregate gain recognized was $1.3 million.

Equity in the Net Loss of AMSO, LLC. In part because of AMSO's decisions not to fund all of its share of AMSO, LLC's expenditures in 2014 and 2015, AMSO, LLC allocated its net loss mostly to Total in 2015 and from January 1, 2016 until April 30, 2016, the effective date of Total's withdrawal from AMSO, LLC. Equity in the net loss of AMSO, LLC was $0.2 million and $0.4 million in 2016 and 2015, respectively. As a result of Total's withdrawal, beginning on April 30, 2016, AMSO, LLC's results of operations are included in our consolidated financial statements.

Corporate

Corporate does not generate any revenues, nor does it incur any cost of revenues. Corporate costs include unallocated compensation, consulting fees, legal fees, business development expense and other corporate-related general and administrative expense.

(in millions)			Change	
Year ended December 31,	2016	2015	$	%
General and administrative expense and loss from operations	$9.2	$8.9	$0.3	3.1%

The increase in Corporate general and administrative expense in 2016 compared to 2015 was mostly due to an increase in payroll and related expense, partially offset by a decrease in stock-based compensation expense. As a percentage of our consolidated revenues, Corporate general and administrative expense increased from 4.2% in 2015 to 4.3% in 2016.

Consolidated

Selling, General and Administrative. Pursuant to an agreement between us and IDT, IDT charges us for services it provides to us, and we charge IDT for services that we provide to certain of IDT's subsidiaries. In 2016 and 2015, the amounts that IDT charged us, net of the amounts that we charged IDT, were $1.6 million and $1.8 million, respectively, which were included in consolidated selling, general and administrative expense.

Stock-based compensation expense included in consolidated selling, general and administrative expense was $4.8 million and $5.2 million in 2016 and 2015, respectively. The decrease in stock-based compensation expense was primarily due to unrecognized compensation cost that was fully recognized in 2015. At December 31, 2016, aggregate unrecognized compensation cost related to non-vested stock-based compensation was $5.8 million. The unrecognized compensation cost is recognized over the expected service period.

The following is a discussion of our consolidated income and expense line items below loss from operations.

(in millions)			Change	
Year ended December 31,	2016	2015	$	%
Loss from operations	$(30.5)	$(8.3)	$(22.2)	(266.3)%
Interest income	0.3	0.4	(0.1)	(19.2)
Other income (expense), net	0.2	(0.2)	0.4	207.3
Provision for income taxes	(2.2)	(0.5)	(1.7)	(322.5)
Net loss	(32.2)	(8.6)	(23.6)	(272.8)
Net loss attributable to noncontrolling interests	7.7	1.1	6.6	550.3
Net loss attributable to Genie	$(24.5)	$(7.5)	$(17.0)	(228.9)%

Other Income (Expense), net. In 2016, other income (expense), net included a $0.2 million gain from the repayment of the Maple Bank GmbH revolving credit loan payable. In addition, other income (expense), net, included foreign currency translation gains of $0.1 million in 2016 and foreign currency translation losses of $0.1 million in 2015.

Provision for Income Taxes. The change in the provision for income taxes in 2016 compared to 2015 was primarily due to the change in income tax expense in GRE. GRE includes IDT Energy, certain limited liability companies and our consolidated variable interest entity. For purposes of computing Federal income taxes, we consolidate the GOGAS and Afek entities so that the losses from those businesses offset the taxable income from GRE and reduce the consolidated tax provision to zero. The additional net operating losses are fully offset by a valuation allowance so no additional benefit was recorded. State and local taxes however, have no offset and increased in 2016 compared to 2015. IDT Energy and the limited liability companies are included in our consolidated return. Citizen’s Choice Energy, LLC, or CCE, our consolidated variable interest entity, files a separate tax return since we do not have any ownership interest in CCE. The following table summarizes GRE’s aggregate income before income taxes and provision for income taxes:

(in millions) Year ended December 31,	2016	2015
Genie Retail Energy:		
Aggregate income before income taxes	$27.1	$11.2
Aggregate provision for income taxes	$(11.6)	$(2.1)

Net Loss Attributable to Noncontrolling Interests. The change in the net loss attributable to noncontrolling interests in 2016 compared to 2015 was primarily due to the noncontrolling interest’s share of Afek’s write-off of capitalized exploration costs. In 2016, the noncontrolling interest in Afek increased from 13.5% to 14.9% and the write-off of capitalized exploration costs was $41.0 million.

Year Ended December 31, 2015 compared to Year Ended December 31, 2014

Genie Retail Energy Segment

A confluence of issues in January and February 2014 associated with that winter's polar vortex that were outside the ability of REPs to control, resulted in extraordinarily large spikes in the prices of wholesale electricity and natural gas in markets where GRE and other REPs purchase their supply. These issues included sustained, extremely cold weather in much of GRE's service area, short reserves of natural gas in the wholesale markets, delivery constrictions and unusually volatile commodity trading in the financial markets. Because of dramatic increases in wholesale electricity prices, the retail electricity prices that GRE and many other variable rate electricity suppliers charged to their customers also increased sharply in January and February 2014. These retail electricity price increases resulted in large numbers of customers filing informal and formal complaints to state utility commissions, state attorneys general, and state legislators. IDT Energy was served with several thousand formal and informal customer complaints to state utility commissions and state attorneys general related to the retail price increases. IDT Energy has responded to each customer complaint it has received and attempted to resolve each complaining customer's concerns. GRE also paid approximately $5 million in rebates to affected customers in 2014. GRE was under no obligation to provide such rebates, but did so in order to mitigate the impact of the price increases on its customers notwithstanding that the underlying cause of the price increase was beyond GRE's control.

IDT Energy also received, and in most instances, responded to, formal and informal information requests from state utility commissions, state attorneys general, and state legislators related to the wholesale and retail electricity price increases in the winter of 2014. In addition, the Pennsylvania Attorney General's Office and the Acting Consumer Advocate filed a Joint Complaint against IDT Energy with the Pennsylvania Public Utility Commission in connection with such events. IDT Energy reached an agreement in principle on a settlement with the Pennsylvania Attorney General's Office and the Acting Consumer Advocate to terminate the litigation with no admission of liability or finding of wrongdoing by IDT Energy. Under the settlement, IDT Energy issued additional refunds to its Pennsylvania customers who had variable rates for electricity supply in January, February and March of 2014. IDT Energy also implemented certain modifications to its sales, marketing and customer service processes, along with additional compliance and reporting requirements. The Pennsylvania Public Utility Commission approved the settlement on July 8, 2016. In July 2016, IDT Energy paid the agreed-upon $2.4 million for additional customer refunds to a refund administrator, and that administrator is currently in the process of issuing the additional refunds to customers.

In addition, in 2014, separate putative class action suits against IDT Energy commenced in New York, New Jersey and Pennsylvania, partially related to the price increases during the winter of 2014. In 2016, the various parties participated in mediation, and entered into a memorandum of understanding, or MOU, with respect to a proposed settlement of the putative class actions. There are a number of material issues not addressed by the MOU that must be resolved before a settlement can be finalized. In addition, any settlement will need to be approved by the various Courts. These matters are more fully discussed in Item 3 to Part I "Legal Proceedings" in this Annual Report. IDT Energy does not believe that it was at fault or acted in any way improperly with respect to the events of winter 2014. However, we cannot predict the outcome of the putative class action litigation or the impact on us of these or other actions.

In the years ended December 31, 2015 and 2014, amounts previously included in "Financing fees" have been reclassified to "Cost of revenues" to conform to the current year's presentation. In addition, electricity revenues and cost of revenues in the years ended December 31, 2015 and 2014 have been adjusted to correct the classification of Pennsylvania gross receipt tax that was previously recorded as a reduction to electricity revenue instead of as cost of revenues. See Note 1 to the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report.

(in millions)	**2015**	**2014**	Change	
Year ended December 31,	(Revised)	(Revised)	$	%
Revenues:				
Electricity	$ 170.3	$ 220.4	$ (50.1)	(22.8)%
Natural gas	40.8	57.9	(17.1)	(29.6)
Other	2.0	2.7	(0.7)	(24.0)
Total revenues	213.1	281.0	(67.9)	(24.2)
Cost of revenues	146.4	231.7	(85.3)	(36.8)
Gross profit	66.7	49.3	17.4	35.0
Selling, general and administrative	55.6	45.0	10.6	23.3
Goodwill impairment	—	3.6	(3.6)	(100.0)
Adjustment to estimated contingent payments	—	(0.2)	0.2	100.0
Income from operations	$ 11.1	$ 0.9	$ 10.2	nm

nm – not meaningful

Revenues. GRE's electricity revenues decreased in 2015 compared to 2014 because of both a 14.5% decrease in the average rate charged to customers and a 9.6% decrease in electricity consumption. The decrease in the average rate charged to customers was mostly due to a 28.1% decrease in the underlying commodity cost in 2015 compared to 2014. In the first quarter of 2014, there were extraordinarily large spikes in the prices of wholesale electricity and natural gas in markets where GRE and other REPs purchased their supply because of the polar vortex in January and February 2014. The decrease in electricity consumption was the result of a decrease in average meters served, which decreased 3.9% in 2015 compared to 2014, and a 5.9% decrease in average consumption per meter in 2015 compared to 2014. The decrease in average consumption per meter was the result of higher usage in 2014 due to the prolonged cold temperatures as well as the higher levels of churn that followed the polar vortex being concentrated in relatively higher consuming meters.

GRE's natural gas revenues decreased in 2015 compared to 2014 because of a 21.1% decrease in the average rate charged to customers, and a 10.7% decrease in natural gas consumption. The decrease in the average rate charged to customers for natural gas was due to a 36.6% decrease in the underlying commodity cost in 2015 compared to 2014. The decrease in natural gas consumption was the result of an 8.1% decrease in average meters served, as well as a 2.8% decrease in average consumption per meter, in 2015 compared to 2014. Natural gas consumption in 2014 was upwardly affected by the prolonged cold temperatures during the polar vortex in January and February 2014 and the subsequent churn was concentrated in higher consuming meters.

GRE's customer base as measured by meters served consisted of the following:

(in thousands)	December 31, 2015	September 30, 2015	June 30, 2015	March 31, 2015	December 31, 2014
Meters at end of quarter:					
Electricity customers	264	261	250	232	234
Natural gas customers	128	127	127	126	129
Total meters	392	388	377	358	363

Gross meter acquisitions in 2015 were 275,000 compared to 213,000 in 2014. GRE had success in selling "IDT Energy® SmartBudget" and other offerings with fixed rate characteristics. The increase was also partially due to an intentional slowing of customer acquisitions in 2014 in the territories most impacted by the rising wholesale commodity costs during the effects of the polar vortex. During the second and third quarters of 2014, GRE accelerated acquisitions of new customers in Illinois, and reengaged its marketing efforts in certain Pennsylvania utility territories where it had suspended those activities. Net meters served increased by 29,000 or 8.4% in 2015 compared to a decrease of 64,000 or 15.0% in 2014 due to the increases in gross meter acquisitions and a reduction in customer churn. Average monthly churn decreased from 6.8% in 2014 to 6.3% in 2015, reflecting a return to more normalized churn rates following the unusually high rates recorded in the first and second quarters of 2014 following that winter's polar vortex. Churn rates were also favorably impacted by the successful introduction of the pricing plans with fixed rate characteristics.

The average rates of annualized energy consumption, as measured by RCEs, are presented in the chart below. An RCE represents a natural gas customer with annual consumption of 100 mmbtu or an electricity customer with annual consumption of 10 MWh. Because different customers have different rates of energy consumption, RCEs are an industry standard metric for evaluating the consumption profile of a given retail customer base.

(in thousands)	December 31, 2015	September 30, 2015	June 30, 2015	March 31, 2015	December 31, 2014
RCEs at end of quarter:					
Electricity customers	178	178	168	158	160
Natural gas customers	81	82	83	83	83
Total RCEs	259	260	251	241	243

The RCE increase at December 31, 2015 compared to December 31, 2014 primarily reflects the increase in electricity customers in New Jersey and Illinois utility territories that have relatively high per meter consumption rates compared to our total customer base.

Other revenue in 2015 and 2014 includes revenue earned by Diversegy and IDTEN, both of which were acquired in December 2013.

Cost of Revenues and Gross Margin Percentage. GRE's cost of revenues and gross margin percentage were as follows:

(in millions)	**2015**	**2014**	Change	
Year ended December 31,	(Revised)	(Revised)	$	%
Cost of revenues:				
Electricity	$ 112.7	$ 173.4	$(60.7)	(35.0)%
Natural gas	31.5	55.7	(24.2)	(43.4)
Other	2.2	2.6	(0.4)	(12.9)

Total cost of revenues	$ 146.4	$ 231.7	$(85.3)	(36.8)%

Year ended December 31,	2015 (Revised)		2014 (Revised)		Change	
Gross margin percentage:						
Electricity	33.8	%	21.3	%	12.5	%
Natural gas	22.7		3.9		18.8	
Other	(9.5	)	4.5		(14.0	)
Total gross margin percentage	31.3	%	17.6	%	13.7	%

Cost of revenues for electricity decreased in 2015 compared to 2014 primarily because of the 28.1% decrease in the average unit cost of electricity in 2015 compared to 2014, as well as the 9.6% decrease in electricity consumption in 2015 compared to 2014. Gross margin on electricity sales increased in 2015 compared to 2014 because the average rate charged to customers decreased less than the average unit cost of electricity.

Cost of revenues for natural gas decreased in 2015 compared to 2014 primarily because the average unit cost of natural gas decreased 36.6% in 2015 compared to 2014 and natural gas consumption decreased 10.7% in 2015 compared to 2014. Gross margin on natural gas sales increased in 2015 compared to 2014 because the average rate charged to customers decreased less than the average unit cost of natural gas.

Other cost of revenues primarily includes commission expense incurred by Diversegy and IDTEN.

Selling, General and Administrative. The increase in selling, general and administrative expense in 2015 compared to 2014 was due to increases in customer acquisition costs and payroll and related expenses. In addition, in 2015, the increase included an accrual of $2.7 million for regulatory and legal matters including outside counsel fees. These increases were partially offset by decreases in billing costs and bad debt expense in 2015 compared to 2014. GRE’s bad debt expense in 2014 was $0.3 million compared to expense reversal of $29,000 in 2015. Bad debt expense in 2014 was mostly related to amounts due from a utility company that was under dispute. As a percentage of GRE’s total revenues, selling, general and administrative expense increased from 16.0% in 2014 to 26.1% in 2015.

Goodwill Impairment. In 2014, our annual goodwill impairment test resulted in the impairment of the goodwill of the Diversegy and IDTEN reporting unit primarily because of continuing losses since the acquisitions of those companies. We recorded goodwill impairment of $3.6 million in 2014, which reduced the carrying amount of the goodwill related to Diversegy and IDTEN to zero. We estimated the fair value of the reporting unit and compared the estimated fair value to the reporting unit's carrying amount. We measured the fair value of the reporting unit by discounting its estimated future cash flows using an appropriate discount rate. Since the carrying value of the reporting unit including goodwill exceeded the estimated fair value, we performed the required additional steps and determined that the goodwill was fully impaired. Goodwill impairment is not a cash expenditure, therefore the impairment did not impact our liquidity at December 31, 2014, nor will goodwill impairment impact our future liquidity. No impairment was recorded as a result of our 2015 annual impairment test.

Adjustment to Estimated Contingent Payments. In 2014, we reduced our estimate of our contingent payment liability related to our acquisition of Diversegy and IDTEN and recorded a gain of $0.2 million.

Afek Segment

Afek does not currently generate any revenues, nor does it incur any cost of revenues.

(in millions)			Change	
Year ended December 31,	2015	2014	$	%
General and administrative expense	$0.8	$0.2	$0.6	351.9%
Research and development	0.1	0.1	—	(56.0)
Exploration	6.6	7.0	(0.4)	(5.6)
Loss from operations	$7.5	$7.3	$0.2	2.2 %

General and Administrative. General and administrative expense increased in 2015 compared to 2014 primarily because of increases in payroll expense and consulting and professional fees.

Exploration. In 2014, Afek was issued a permit by Israel's Northern District Planning and Building Committee to conduct an up to ten-well exploratory drilling program. In connection with a petition from the Israel Union for Environmental Defense and certain local residents, Israel's High Court of Justice issued an interim injunction against Afek, restricting Afek from building installations or changing the surface of the ground until the Court ruled on the petition. In December 2014, the High Court rejected the petition challenging the permits, and lifted its injunction on Afek's exploratory program in Northern Israel. In February 2015, Afek initiated drilling on its first exploratory well pursuant to its up to ten-well exploratory program.

Genie Oil and Gas Segment

Genie Oil and Gas does not currently generate any revenues, nor does it incur any cost of revenues.

(in millions)			Change	
Year ended December 31,	2015	2014	$	%
General and administrative expense	$0.7	$1.1	$(0.4)	(31.9)%
Research and development	1.9	5.4	(3.5)	(64.4)
Equity in net loss of AMSO, LLC	0.4	—	0.4	nm
Loss from operations	$3.0	$6.5	$(3.5)	(52.8)%

nm – not meaningful

General and Administrative. General and administrative expense decreased in 2015 compared to 2014 primarily due to decreases in payroll, travel, rent, consulting and professional expenses.

Research and Development. Research and development expense consists of the following:

(in millions) Year ended December 31,	2015	2014
Genie Mongolia	$1.7	$2.7
IEI	0.2	2.6
Other	—	0.1
Total research and development expense	$1.9	$5.4

Genie Mongolia's research and development expense in 2015 and 2014 related to the joint geological survey agreement with the Republic of Mongolia, which was executed in April 2013, to explore certain of that country's oil shale deposits. In 2014, Genie Mongolia acquired approximately 40 kilometers of 2D seismic results and drilled in three different basins within the license areas. Genie Mongolia also continued surface mapping and other geophysical evaluation work within the areas.

During 2014, the environmental documents portion of IEI's permit application for the construction and operation of its oil shale pilot test facility was under review by the Ministry of Environment. In addition, as per the required permitting process, IEI continued laboratory work, engineering work and associated preparation of environmental permit applications related to the planned pilot. IEI submitted its application for the construction and operation of its oil shale pilot test facility to the Jerusalem District Committee for Planning and Building, and on September 2, 2014, the Committee declined to issue IEI a permit to build and operate a pilot drilling project.

Equity in the Net Loss of AMSO, LLC. Equity in the net loss of AMSO, LLC was $0.4 million in 2015 and nil in 2014. AMSO had the right to decide at each capital call whether or not to fund AMSO, LLC. AMSO did not fund the capital calls for any quarter from the fourth quarter of 2013 through the second quarter of 2015. AMSO funded an aggregate of $0.3 million from the third quarter of 2015 through the first quarter of 2016, which was 28% of its share of the capital calls. In the period from January 2014 through January 2016, Total funded an aggregate of $4.6 million for AMSO's share of the capital calls that AMSO did not fund. In part because of AMSO's decisions not to fund all of its share of AMSO, LLC's expenditures, AMSO, LLC allocated its net loss beginning January 2014 as follows: $12.1 million of losses were allocated to Total, then it allocated any remaining losses proportionately. AMSO, LLC's net loss was $5.2 million and $8.2 million in 2015 and 2014, respectively.

Corporate

Corporate does not generate any revenues, nor does it incur any cost of revenues. Corporate costs include unallocated compensation, consulting fees, legal fees, business development expense and other corporate-related general and administrative expense.

(in millions)			Change	
Year ended December 31,	2015	2014	$	%
General and administrative expense and loss from operations	$8.9	$15.4	$(6.5)	(42.0)%

The decrease in Corporate general and administrative expense in 2015 compared to 2014 was mostly due to a decrease in stock-based compensation expense, which decreased to $4.5 million in 2015 from $9.7 million in 2014. Stock-based compensation in 2014 related primarily to the December 2013 grant of options to purchase 3.0 million shares of our Class B common stock at an exercise price of $10.30 per share to Howard Jonas, our Chairman of the Board and Chief Executive Officer, and the subsequent amendment of that compensation arrangement. The options were initially vesting in five equal annual installments commencing on December 31, 2014. The estimated total value of the options on the grant date was $19.3 million. In July and August 2014, in connection with our entry into a Second Amended and Restated Employment Agreement with Mr. Jonas, the options were cancelled and Mr. Jonas purchased an aggregate of 3.6 million shares of our Class B common stock. The decrease in Corporate general and administrative expense in 2015 compared to 2014 was also due to a decrease in payroll expense. As a percentage of our consolidated revenues, Corporate general and administrative expense decreased from 5.5% in 2014 to 4.2% in 2015.

Consolidated

Selling, General and Administrative. Pursuant to an agreement between us and IDT, IDT charges us for services it provides, and we charge IDT for services that we provide to certain of IDT's subsidiaries. In 2015 and 2014, the amounts that IDT charged us, net of the amounts that we charged IDT, were $1.8 million and $2.9 million, respectively, which were included in consolidated selling, general and administrative expense.

Stock-based compensation expense included in consolidated selling, general and administrative expense was $5.2 million and $10.8 million in 2015 and 2014, respectively. The decrease in stock-based compensation expense was primarily due to unrecognized compensation cost that was fully recognized in 2014. At December 31, 2015, aggregate unrecognized compensation cost related to non-vested stock-based compensation was $12.4 million. The unrecognized compensation cost is recognized over the expected service period.

The following is a discussion of our consolidated income and expense line items below loss from operations.

(in millions)			Change	
Year ended December 31,	2015	2014	$	%
Loss from operations	$(8.3)	$(28.2)	$19.9	70.4 %
Interest income	0.4	0.5	(0.1)	(12.4)
Other (expense) income, net	(0.2)	0.4	(0.6)	(149.6)
Provision for income taxes	(0.5)	(0.1)	(0.4)	(452.6)
Net loss	(8.6)	(27.4)	18.8	68.5
Net loss attributable to noncontrolling interests	1.1	0.9	0.2	28.0
Net loss attributable to Genie	$(7.5)	$(26.5)	$19.0	71.8 %

Other (Expense) Income, net. The change in other (expense) income, net in 2015 compared to 2014 was mainly due to the change in foreign currency translation gains (losses), from gains of $0.4 million in 2014 to losses of $0.1 million in 2015.

Provision for Income Taxes. The increase in the provision for income taxes in 2015 compared to 2014 was primarily due to the change in state income tax expense in GRE. GRE's income before income taxes and provision for income taxes increased in 2015 compared to 2014. GRE includes IDT Energy, certain limited liability companies and our consolidated variable interest entity. IDT Energy and the limited liability companies are included in our consolidated return. CCE, our consolidated variable interest entity, files a separate tax return since we do not have any ownership interest in CCE. The following table summarizes GRE's aggregate income before income taxes and provision for income taxes:

(in millions)		
Year ended December 31,	2015	2014
Genie Retail Energy:		
Aggregate income before income taxes	$ 11.2	$ 1.2
Aggregate provision for income taxes	$ (2.1)	$ (0.4)

Net Loss Attributable to Noncontrolling Interests. The change in the net loss attributable to noncontrolling interests in 2015 compared to 2014 was due to a decrease in the net income of CCE, partially offset by the change in the net loss attributable to noncontrolling interests in GOGAS. CCE is a variable interest entity that is consolidated within our GRE segment. We do not have any ownership interest in CCE, therefore, 100% of the net income or loss incurred by CCE has been attributed to noncontrolling interests. CCE's net income in 2015 was $0.2 million compared to $0.8

million in 2014. CCE's net income decreased primarily due to a decrease in gross profit and a reduction in benefit from income taxes.

LIQUIDITY AND CAPITAL RESOURCES

General

We currently expect that our operations in the next twelve months and the $35.2 million balance of unrestricted cash and cash equivalents that we held at December 31, 2016 will be sufficient to meet our currently anticipated cash requirements, including Afek's anticipated expenditures, for at least the year ending December 31, 2017.

Afek may seek financing for the next phase of activity from a variety of sources, some of which could result in a process by which Afek would become an independent entity.

At December 31, 2016, we had working capital (current assets less current liabilities) of $56.7 million.

	Year ended December 31,		
(in millions)	2016	2015	2014
Cash flows provided by (used in):			
Operating activities	$15.6	$(3.1)	$(19.1)
Investing activities	(9.5)	(31.6)	(1.8)
Financing activities	(9.7)	1.6	19.5
Effect of exchange rate changes on cash and cash equivalents	—	—	(0.6)
Decrease in cash and cash equivalents	$(3.6)	$(33.1)	$(2.0)

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Operating Activities

Our cash flow from operations varies significantly from quarter to quarter and from year to year, depending on our operating results and the timing of operating cash receipts and payments, specifically trade accounts receivable and trade accounts payable, including payments relating to our exploration and research and development activities.

CCE is a consolidated variable interest entity. We determined that, since the acquisition of the interest in CCE, we had the power to direct the activities of CCE that most significantly impact its economic performance, and we have the obligation to absorb losses of CCE that could potentially be significant to CCE on a stand-alone basis. We therefore determined that we are the primary beneficiary of CCE, and as a result, we consolidate CCE within our GRE segment. We provided CCE with all of the cash required to fund its operations. In 2016 and 2014, we provided CCE with net funding of $0.9 million and $0.3 million, respectively, to finance its operations. In 2015, CCE repaid $1.0 million to us.

As of November 19, 2015, IDT Energy and certain of its affiliates entered into an Amended and Restated Preferred Supplier Agreement with BP. The agreement's termination date is November 30, 2019, except either party may terminate the agreement on November 30, 2018 by giving the other party notice by May 31, 2018. IDT Energy's obligations to BP are secured by a first security interest in deposits or receivables from utilities in connection with their purchase of IDT Energy's customer's receivables, and in any cash deposits or letters of credit posted in connection with any collateral accounts with BP. IDT Energy's ability to purchase electricity and natural gas under this agreement is subject to satisfaction of certain conditions including the maintenance of certain covenants. At December 31, 2016, we were in compliance with such covenants. At December 31, 2016, restricted cash—short-term of $0.7 million and trade accounts receivable of $31.7 million were pledged to BP as collateral for the payment of IDT Energy's trade accounts payable to BP of $11.5 million at December 31, 2016.

In July 2016, in accordance with a settlement approved by the Pennsylvania Public Utility Commission, IDT Energy paid the agreed-upon $2.4 million to a refund administrator for refunds (in addition to other refunds that IDT Energy had voluntarily paid to affected customer in prior periods) to its Pennsylvania customers in January, February and March of 2014 who had variable rates for electricity supply (see Item 3 to Part I "Legal Proceedings" included in this Annual Report).

We are subject to audits in various jurisdictions for various taxes. Amounts asserted by taxing authorities or the amount ultimately assessed against us could be greater than accrued amounts. Accordingly, additional provisions may be recorded in the future as revised estimates are made or underlying matters are settled or resolved. Imposition of assessments as a result of tax audits could have an adverse effect on our results of operations, cash flows and financial condition.

On February 23, 2016, the New York PSC issued an order that sought to impose significant new restrictions on REPs operating in New York, including those owned by GRE. The restrictions described in the PSC's order, which were to become effective March 4, 2016, would require that all REPs' electricity and natural gas offerings to residential and small business customers include an annual guarantee of savings compared to the price charged by the relevant incumbent utility or, for electricity offerings, provide at least 30% of the supply from renewable sources. Customers not enrolled in a compliant program would be relinquished back to the local utility at the end of their contract period or, for variable price customers operating on month to month agreements, at the end of the current monthly billing cycle.

On March 4, 2016, a group of parties from the REP industry sought and won a temporary restraining order to stay implementation of the most restrictive portions of the PSC's order pending a court hearing on those parties' motion for a preliminary injunction. On July 25, 2016, the New York State Supreme Court, County of Albany, entered a decision and order granting the Petitioners' petition, vacated provisions 1 through 3 of the Order, and remitted the matter to the PSC for further proceedings consistent with the Court's order.

On December 2, 2016, the PSC noticed an evidentiary hearing scheduled to take place in 2017 to assess the retail energy market in New York. That process is underway and is expected to last several months. We are evaluating the potential impact of any new order from the PSC that would follow from the evidentiary process, while preparing to operate in compliance with any new requirements that may be imposed. Depending on the final language of any new order, as well as our ability to modify our relationships with our New York customers, an order could have a substantial impact upon the operations of GRE-owned REPs in New York.

On July 14, 2016, and on September 19, 2016, the PSC issued Orders restricting REPs, including those owned by GRE, from serving customers enrolled in New York's utility low-income assistance programs. Representatives of the REP industry challenged the ruling in New York State Supreme Court, Albany County, and, on September 27, 2016, the court issued an order temporarily restraining the PSC from implementing the July and September Orders. On December 16, 2016, the PSC issued a prohibition on REP service to customers enrolled in New York's utility low-income assistance programs. As part of a stipulated schedule upon request of the REP industry, the PSC agreed to extend the deadlines for compliance with that order until May 2017. That order is under review in New York State Supreme Court, Albany County.

Investing Activities

Our capital expenditures were $0.6 million, $0.3 million and $1.4 million in 2016, 2015 and 2014, respectively.

In 2016, 2015 and 2014, we used cash of $12.9 million, $27.0 million and nil, respectively, for investments in Afek's unproved oil and gas property in the Golan Heights in Northern Israel. We had purchase commitments of $39.6 million at December 31, 2016 that included commitments for capital expenditures and exploration costs. We currently anticipate that our total expenditures for Afek's exploration costs and other capital expenditures in the year ending December 31, 2017 will be between $8 million and $10 million.

On February 23, 2016, Total notified AMSO of its decision not to continue to fund AMSO, LLC. On March 23, 2016, Total gave AMSO its notice of withdrawal from AMSO, LLC. The withdrawal was effective on April 30, 2016. As of April 1, 2016, AMSO and Total agreed that Total would pay AMSO, LLC $3.0 million as full payment of its share of all costs associated with the decommissioning, winding up and dissolution of AMSO, LLC. Total will not be refunded any amount if the decommissioning costs are less than $3.0 million. Effective April 30, 2016, AMSO, LLC's assets, liabilities, results of operations and cash flows are included in our consolidated financial statements. We accounted for our acquisition on April 30, 2016 of Total's ownership interest in AMSO, LLC as a business combination. We estimated the fair value of AMSO, LLC to be nil, as it had ceased operations and its shutdown was in progress. We recognized a gain from the acquisition of Total's interest in AMSO, LLC because we acquired the net assets of AMSO, LLC while no consideration was transferred by us, due to our assumption of the risk associated with the shutdown obligations. The gain also included our gain on the remeasurement of AMSO's investment in AMSO, LLC at its acquisition date fair value. The aggregate gain recognized was $1.3 million, which was included in 2016 in "Gain on consolidation of AMSO, LLC" in the consolidated statements of operations.

In 2016 and 2015, cash used for capital contributions to AMSO, LLC was $0.1 million and $0.3 million, respectively. No contributions were made in 2014.

On November 2, 2016, GRE acquired REH, a privately held owner of REPs, for $9.5 million plus $1.4 million for REH's working capital, or an aggregate cash payment of $10.9 million. The amount paid for REH's working capital is subject to adjustment. At acquisition, REH had cash of $2.2 million.

In 2016, 2015 and 2014, we used cash of $3.0 million, $8.8 million and $4.7 million, respectively, to purchase certificates of deposits. In 2016, 2015 and 2014, proceeds from maturities of certificates of deposit were $11.9 million, $4.7 million and $4.3 million, respectively.

Financing Activities

In each of 2016, 2015, and 2014, we paid aggregate Base Dividends per share of $0.6376 on our Series 2012-A Preferred Stock. The aggregate preferred stock dividends paid in 2016, 2015, and 2014 were $1.5 million, $1.5 million, and $1.4 million, respectively. On February 15, 2017, we paid a quarterly Base Dividend of $0.1594 per share on our Series 2012-A Preferred Stock for the fourth quarter of 2016 to stockholders of record as of the close of business on February 6, 2017.

In 2016, 2015 and 2014, we paid aggregate dividends per share of $0.24, $0.12 and $0.06, respectively, to stockholders of our Class A common stock and Class B common stock. The aggregate dividends paid in 2016, 2015 and 2014 were $5.9 million, $3.0 million and $1.5 million, respectively. On March 7, 2017, our Board of Directors declared a quarterly dividend of $0.075 per share on our Class A common stock and Class B common stock for the fourth quarter of 2016 to stockholders of record as of the close of business on March 20, 2017. The dividend will be paid on or about March 24, 2017.

In December 2013, IDT Energy acquired 100% of the outstanding membership interests of Diversegy and IDTEN. Cash paid for the acquisitions, net of cash acquired, was $0.8 million. In addition, IDT Energy agreed to additional cash payments of $1.2 million and contingent payments that were estimated to be $1.3 million. In 2016, 2015 and 2014, we paid an aggregate of $0.2 million, $0.4 million and $1.1 million, respectively, in scheduled and contingent payments. In addition, in 2014, we reduced our estimate of our contingent payment liability related to our acquisition of Diversegy and IDTEN and recorded a gain of $0.2 million. At December 31, 2016, there were estimated contingent payments of $0.2 million outstanding.

REH has a Credit Agreement with Vantage Commodities Financial Services II, LLC for a revolving line of credit for up to a maximum principal amount of $7.5 million. The principal outstanding incurs interest at one-month LIBOR plus 5.25% per annum, payable monthly. The outstanding principal and any accrued and unpaid interest is due on the maturity date of October 31, 2017. The collateral for the revolving line of credit consists of REH’s accounts receivable, bank account balances and other assets. REH pays an unused commitment fee each month equal to one-month LIBOR per annum on the difference between $7.5 million and the average daily outstanding principal balance of the note. In 2016, subsequent to the acquisition of REH, REH borrowed $3.7 million under the line of credit and repaid $4.9 million. At December 31, 2016, $0.7 million was outstanding under the line of credit.

On December 17, 2015, GRE, IDT Energy and certain affiliates entered into a Credit Agreement with Maple Bank GmbH for a revolving loan facility. On December 17, 2015, GRE borrowed $2.0 million under the facility. In February 2016, the German banking regulator, Bafin, closed Maple Bank GmbH due to impending financial over-indebtedness related to tax-evasion investigations. In September 2016, GRE and its affiliates entered into a settlement agreement with the court appointed liquidator of Maple Bank. Under this agreement, GRE paid $1.8 million as a full settlement of all of its obligations, and the revolving loan facility was terminated. Accordingly, GRE recorded a gain from this settlement of $0.2 million.

On July 30, 2014, we entered into a Second Amended and Restated Employment Agreement and a Restricted Stock Sale Agreement with Howard Jonas. Pursuant to these agreements, in July and August 2014, we sold an aggregate of 3.6 million shares of our Class B common stock to Mr. Jonas for an aggregate purchase price of $24.6 million. The 3.6 million shares of our Class B common stock are subject to repurchase by us at $6.82 per share upon certain terminations of Mr. Jonas' employment by us, and such repurchase right lapses in six increments of 0.6 million shares from July 30, 2014 through December 31, 2018.

We received proceeds from the exercise of our stock options of nil, $0.2 million, and $28,000 in 2016, 2015, and 2014, respectively.

In December 2016, Afek sold a 1% equity interest to Dr. Harold Vinegar, Chief Scientist of the Company, for $1.0 million paid in cash.

In June 2011, GOGAS issued a stock option to Michael Steinhardt at an exercise price of $5.0 million. The expiration date was April 9, 2015. The expiration date was extended for one month, and on May 9, 2015, the option was exercised. Mr. Steinhardt and an affiliate received interests of approximately 1.5% in each of Afek, Genie Mongolia and IEI. In addition, Mr. Steinhardt and the affiliate received an approximately 1.7% interest in AMSO. The exercise price of $5.0 million was paid $2.5 million in cash and $2.5 million in promissory notes due in November 2015. The notes bear interest at 0.43% per annum, and are secured by 50% of the shares received in the exercise. In November 2015, we received cash of $0.8 million to repay one-third of the principal amount of the promissory notes. At December 31, 2016 and 2015, the notes receivable of $1.7 million were included in "Receivables for issuance of equity" in the consolidated balance sheet. The remaining notes are expected to be repaid in 2017.

In November 2010, GOGAS sold a 0.5% equity interest to Rupert Murdoch for $1.0 million paid with a promissory note. The note was secured by a pledge of the shares issued in exchange for the note. The note accrued interest at 1.58% per annum. We received an aggregate of $1.1 million for the payment of the principal and accrued interest on the maturity date of November 15, 2015.

In October 2015, GRE paid $0.2 million to the owner of the limited liability company interests in CCE, and loaned CCE $0.5 million in exchange for an option to purchase 100% of the issued and outstanding limited liability company interests of CCE for one dollar plus the forgiveness of the $0.5 million loan. The option expires on October 22, 2023.

In 2016, we paid $29,000 to repurchase 3,096 shares of our Class B common stock. In 2015, we paid $27,000 to repurchase 4,220 shares of our Class B common stock. In 2014, we paid $0.2 million to repurchase 31,392 shares of our Class B common stock. These shares were tendered by employees of ours to satisfy tax withholding obligations in connection with the lapsing of restrictions on awards of restricted stock. Such shares were repurchased by us based on their fair market value on the trading day immediately prior to the vesting date.

On March 11, 2013, our Board of Directors approved a stock repurchase program for the repurchase of up to an aggregate of 7.0 million shares of our Class B common stock. In 2014, we repurchased 103,331 shares of Class B common stock under this program for an aggregate purchase price of $0.8 million. There were no repurchases under the program in 2016 and 2015. At December 31, 2016, 6.9 million shares remained available for repurchase under the stock repurchase program.

As of April 23, 2012, we and IDT Energy entered into a Loan Agreement with JPMorgan Chase Bank for a revolving line of credit for up to a maximum principal amount of $25.0 million. The proceeds from the line of credit may be used to provide working capital and for the issuance of letters of credit. We agreed to deposit cash in a money market account at JPMorgan Chase Bank as collateral for the line of credit equal to the greater of (a) $10.0 million or (b) the sum of the amount of letters of credit outstanding plus the outstanding principal under the revolving note. We are not permitted to withdraw funds or exercise any authority over the required balance in the collateral account. The principal outstanding will bear interest at the lesser of (a) the LIBOR rate multiplied by the statutory reserve rate established by the Board of Governors of the Federal Reserve System plus 1.0% per annum, or (b) the maximum rate per annum permitted by whichever of applicable federal or Texas laws permit the higher interest rate. Interest is payable at least every three months and all outstanding principal and any accrued and unpaid interest is due on the maturity date of May 31, 2017. We pay a quarterly unused commitment fee of 0.08% per annum on the difference between $25.0 million and the average daily outstanding principal balance of the note. In addition, as of April 23, 2012, GEIC issued a Corporate Guaranty to JPMorgan Chase Bank whereby GEIC unconditionally guarantees the full payment of all indebtedness of ours and IDT Energy under the Loan Agreement. At December 31, 2016, there were no amounts borrowed under the line of credit, and cash collateral of $10.0 million was included in “Restricted cash—short-term” in the consolidated balance sheet. In addition, at December 31, 2016, letters of credit of $8.1 million were outstanding.

Series 2012-A Preferred Stock

At December 31, 2016, there were 2.3 million shares of our Series 2012-A Preferred Stock issued and outstanding with an aggregate liquidation preference of $19.7 million. Each share of our Series 2012-A Preferred Stock has a liquidation preference of $8.50 (the “Liquidation Preference”), and is entitled to receive an annual dividend per share equal to the sum of (i) $0.6375 (the “Base Dividend”) plus (ii) seven and one-half percent (7.5%) of the quotient obtained by dividing (A) the amount by which the EBITDA for a fiscal year of our retail energy provider business exceeds $32 million by (B) 8,750,000 (the “Additional Dividend”), payable in cash. EBITDA consists of income (loss) from operations exclusive of depreciation and amortization and other operating gains (losses).

The Series 2012-A Preferred Stock is redeemable, in whole or in part, at our option following October 11, 2017 at 101% of the Liquidation Preference plus accrued and unpaid dividends, and 100% of the Liquidation Preference plus accrued and unpaid dividends following October 11, 2018.

During any period when we have failed to pay a dividend on the Series 2012-A Preferred Stock and until all unpaid dividends have been paid in full, we are prohibited from paying dividends or distributions on our Class B or Class A common stock.

The Base Dividend is payable (if declared by our Board of Directors, and accrued, if not declared) quarterly on each February 15, May 15, August 15 and November 15, and to the extent that there is any Additional Dividend payable with respect to a fiscal year, it will be paid to holders of Series 2012-A Preferred Stock with the May dividend. With respect to the payment of dividends and amounts upon liquidation, dissolution or winding up, the Series 2012-A Preferred Stock is equal in rank to all other equity securities we issue, the terms of which specifically provide that such equity securities rank on a parity with the Series 2012-A Preferred Stock with respect to dividend rights or rights upon our liquidation, dissolution or winding up; senior to our common stock; and junior to all of our existing and future indebtedness.

Each share of Series 2012-A Preferred Stock has the same voting rights as a share of Class B common stock, except on certain matters that only impact our common stock, as well as additional voting rights on specific matters or upon the occurrence of certain events.

Changes in Trade Accounts Receivable and Inventory

Gross trade accounts receivable increased to $37.0 million at December 31, 2016 from $27.4 million at December 31, 2015 reflecting mainly the increase in our revenues in the three months ended December 31, 2016 compared to the three months ended December 31, 2015.

Inventory of natural gas decreased to $0.6 million at December 31, 2016 from $1.6 million at December 31, 2015 due to a 51% decrease in the average unit cost and an 18% decrease in quantity, at December 31, 2016 compared to December 31, 2015. Inventory at December 31, 2016 and 2015 also included $5.4 million and $9.8 million, respectively, in renewable energy credits.

CONTRACTUAL OBLIGATIONS AND OTHER COMMERCIAL COMMITMENTS

The following tables quantify our future contractual obligations and commercial commitments at December 31, 2016:

Contractual Obligations

Payments Due by Period

(in millions)	Total	Less than 1 year	1—3 years	4—5 years	After 5 years
Purchase obligations	$39.6	$ 32.0	$ 7.6	$ —	$ —
Renewable energy credits purchase obligations	42.5	15.0	19.9	7.6	—
Revolving credit loan payable (1)	0.8	0.8	—	—	—
Operating leases	0.5	0.2	0.2	0.1	—
Other liabilities (2)	0.3	0.3	—	—	—
TOTAL CONTRACTUAL OBLIGATIONS (3)	$83.7	$ 48.3	$ 27.7	$ 7.7	$ —

(1) The above table includes principal outstanding at December 31, 2016, expected interest payments and expected unused commitment fees.

(2) The above table does not include estimated contingent payments of $0.2 million in connection with the acquisition of Diversegy and IDTEN due to the uncertainty of the amount and/or timing of any such payments.

(3) The above table does not include our unrecognized income tax benefits for uncertain tax positions at December 31, 2016 of $0.6 million due to the uncertainty of the amount and/or timing of any such payments. Uncertain tax positions taken or expected to be taken on an income tax return may result in additional payments to tax authorities. We are not currently able to reasonably estimate the timing of any potential future payments. If a tax authority agrees with the tax position taken or expected to be taken or the applicable statute of limitations expires, then additional payments will not be necessary.

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Other Commercial Commitments

Payments Due by Period

(in millions)	Total	Less than 1 year	1—3 years	4—5 years	After 5 years
Standby letter of credit (1)	$ 8.2	$ 4.2	$ 4.0	$ —	$ —

(1) The above table does not include an aggregate of $7.7 million in performance bonds at December 31, 2016 due to the uncertainty of the amount and/or timing of any payments.

OFF-BALANCE SHEET ARRANGEMENTS

We do not have any “off-balance sheet arrangements,” as defined in relevant SEC regulations that are reasonably likely to have a current or future effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources, other than the following.

GRE has performance bonds issued through a third party for the benefit of various states in order to comply with the states’ financial requirements for retail energy providers. At December 31, 2016, GRE had aggregate performance bonds of $7.7 million outstanding.

In connection with our Spin-Off in October 2011, we and IDT entered into various agreements prior to the Spin-Off including a Separation and Distribution Agreement to effect the separation and provide a framework for our relationship with IDT after the Spin-Off, and a Tax Separation Agreement, which sets forth the responsibilities of us and IDT with respect to, among other things, liabilities for federal, state, local and foreign taxes for periods before and including the Spin-Off, the preparation and filing of tax returns for such periods and disputes with taxing authorities regarding taxes for such periods. Pursuant to the Separation and Distribution Agreement, among other things, we indemnify IDT and IDT indemnifies us for losses related to the failure of the other to pay, perform or otherwise discharge, any of the liabilities and obligations set forth in the agreement. Pursuant to the Tax Separation Agreement, among other things, IDT indemnifies us from all liability for taxes of IDT with respect to any taxable period, and we indemnify IDT from all liability for taxes of ours with respect to any taxable period, including, without limitation, the ongoing tax audits related to our business.

Item 7A. Quantitative and Qualitative Disclosures about Market Risks.

Our primary market risk exposure is the price applicable to our natural gas and electricity purchases and sales. The sales price of our natural gas and electricity is primarily driven by the prevailing market price. Hypothetically, if our gross profit per unit in 2016 had remained the same as in 2015, our gross profit from electricity sales would have decreased by $1.6 million in 2016 and our gross profit from natural gas sales would have decreased by $1.0 million in 2016.

The energy markets have historically been very volatile, and we can reasonably expect that electricity and natural gas prices will be subject to fluctuations in the future. In an effort to reduce the effects of the volatility of the cost of electricity and natural gas on our operations, we have adopted a policy of hedging electricity and natural gas prices from time to time, at relatively lower volumes, primarily through the use of put and call options and swaps. While the use of these hedging arrangements limits the downside risk of adverse price movements, it also limits future gains from favorable movements. We do not apply hedge accounting to these swaps or options, therefore the mark-to-market change in fair value is recognized in cost of revenue in our consolidated statements of operations.

The summarized volume of GRE’s outstanding contracts and options at December 31, 2016 was as follows (MWh – Megawatt hour and Dth – Decatherm):

Commodity	Settlement Dates	Volume
Electricity	January 2017	141,200 MWh
Electricity	February 2017	608,000 MWh
Electricity	March 2017	250,240 MWh
Electricity	July 2017	70,400 MWh
Electricity	August 2017	80,960 MWh
Electricity	October 2017	158,400 MWh
Electricity	November 2017	151,200 MWh
Electricity	December 2017	240,000 MWh
Electricity	January 2018	45,760 MWh
Electricity	February 2018	41,600 MWh
Electricity	October 2018	73,600 MWh
Electricity	November 2018	67,200 MWh
Electricity	December 2018	64,000 MWh
Natural gas	February 2017	730,000 Dth
Natural gas	March 2017	1,000,000 Dth
Natural gas	April 2017	600,000 Dth
Natural gas	February 2018	69,720 Dth

Item 8. Financial Statements and Supplementary Data.

Our Consolidated Financial Statements and supplementary data and the report of the independent registered public accounting firm thereon set forth starting on page F-1 herein are incorporated herein by reference.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our Chief Executive Officer and Chief Financial Officer have evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended), as of the end of the period covered by this Annual Report on Form 10-K. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were not effective as of December 31, 2016 because of a material weakness in our internal control over financial reporting relating to management review controls associated with the completeness and accuracy of computations relating to domestic and foreign income tax accounts and disclosures.

Report of Management on Internal Control over Financial Reporting

We, the management of Genie Energy Ltd. and subsidiaries (the “Company”), are responsible for establishing and maintaining adequate internal control over financial reporting of the Company.

The Company’s internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) promulgated under the Securities Exchange Act of 1934 as a process designed by, or under the supervision of, the Company’s principal executive and principal financial officers and effected by the Company’s board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external purposes in accordance with generally accepted accounting principles in the United States and 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 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.

Management has assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2016. In making this assessment, the Company's management used the criteria established in *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of our internal control over financial reporting, as prescribed above, as of December 31, 2016. Based on our evaluation, our principal executive officer and principal financial officer concluded that the Company's internal control over financial reporting as of December 31, 2016 was not effective due to the existence of the material weakness as described below.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis.

DEFICIENCY IN OUR INTERNAL CONTROL OVER FINANCIAL REPORTING

Based on an evaluation of the effectiveness of the design and operation of its controls and procedures conducted by the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, the Company has concluded that, due to the below material weakness in financial reporting, these controls and procedures were not effective as of December 31, 2016.

We have identified the following material weakness in our controls:

- Management review controls associated with the completeness and accuracy of computations relating to domestic and foreign income tax accounts and disclosures were not effective.

REMEDIATION

As set forth below, following the Audit Committee's independent review, the Company's management plans to take the following steps to remediate the material weakness identified above and improve internal control over financial reporting. Notwithstanding the material weakness described above, we have performed additional analyses and other procedures to enable management to conclude that our financial statements included in this Form 10-K fairly present, in all material respects, our financial condition and results of operations as of and for the years ended December 31, 2016 and 2015.

- Explore engaging an independent third party to assist in preparation of and perform a comprehensive review of tax calculations and related disclosures;
- Enhance the review of calculations and disclosure of deferred income tax balances;
- Implement additional internal analytical procedures to validate tax accounting tax-related balances; and
- Enhance internal documentation support related to the Company's tax position.

Management and our Audit Committee will monitor these remedial measures and the effectiveness of our internal controls and procedures.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. 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.

We acquired Retail Energy Holdings, LLC in November 2016. Management has excluded the operations of this business from our evaluation of, and conclusion on, the effectiveness of our internal controls over financial reporting as of December 31, 2016. Retail Energy Holdings, LLC constituted 13.8% and 14.0% of total assets and net assets, respectively, as of December 31, 2016, and 2.9% and 0.6% of revenues and net loss, respectively, for the year then ended. Management plans to fully integrate the operations of this business into its assessment of the effectiveness of our internal control over financial reporting in 2017.

BDO USA, LLP has provided an attestation report on the Company's internal control over financial reporting as of December 31, 2016.

Changes in Internal Control over Financial Reporting

In addition to the material weakness described above, in the third quarter of 2016, we identified material weaknesses in our internal controls as a result of the following errors in our financial records:

1. GRE prepays various electricity costs that are subsequently charged to cost of revenues when the related electricity revenue is recognized. In the consolidated statement of operations, Pennsylvania gross receipt tax was recorded as a reduction to electricity revenue instead of as a cost of revenues. Electricity revenues and cost of revenues have been adjusted to correct the classification in prior periods.

2. In the third quarter of 2016, we concluded that certain amounts included in "Prepaid expenses" in our consolidated balance sheets at March 31, 2016 and June 30, 2016 should have been charged to cost of revenues in the first and second quarters of 2016. During the third quarter of 2016, we revised our financial statements for the first and second quarters of 2016 by reducing prepaid expenses and increasing electricity cost of revenues.

We believe these errors occurred due to inadequate review and approval over the preparation of certain schedules used to record cost of revenues, primarily because of personnel changes made in early 2016. As a result, we implemented the following changes to our processes:

1. We expanded our general ledger closing checklists to include all transactions, processes and key spreadsheets to ensure completeness of all recurring transactions with documented responsibilities, review, approval and timing of the completion of each item. This represented an improvement to existing preventative controls, which are controls designed to proactively discourage errors or irregularities from occurring.

2. We implemented a detailed, entity level balance sheet review, identifying supporting schedules and applicable reconciliations for all balance sheet accounts, excluding certain intercompany and equity accounts, which have alternate controls. This represented a new detective control, which is a reactive control designed to find errors and irregularities after they have occurred.

We believe the material weaknesses identified in the third quarter of 2016 were remediated by December 31, 2016.

As described above, during the quarter ended December 31, 2016, we made changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance.

The following is a list of our directors and executive officers along with the specific information required by Rule 14a-3 of the Securities Exchange Act of 1934:

Executive Officers

Howard S. Jonas—Chairman of the Board and Chief Executive Officer

Avi Goldin—Chief Financial Officer

Michael Stein—Chief Operating Office

Geoffrey Rochwarger—Vice Chairman

Ira Greenstein—President

Michael Jonas—Executive Vice President

Directors

Howard S. Jonas—Chairman of the Board and Chief Executive Officer of the Company

James A. Courter—Vice Chairman of the Board of the Company

W. Wesley Perry—Owner and operator of S.E.S. Investments, Ltd., an oil and gas investment company

Alan B. Rosenthal—Founder and managing partner of ABR Capital Financial Group LLC, an investment fund

Allan Sass—Former President and Chief Executive Officer of Occidental Oil Shale Corporation, a subsidiary of Occidental Petroleum

The remaining information required by this Item will be contained in our Proxy Statement for our Annual Stockholders Meeting, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2016, and which is incorporated by reference herein.

Corporate Governance

We have included as exhibits to this Annual Report on Form 10-K certificates of our Chief Executive Officer and Chief Financial Officer certifying the quality of our public disclosure.

We make available free of charge through the investor relations page of our web site (*www.idt.net/ir*) our Annual Reports on Form 10–K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports, and all beneficial ownership reports on Forms 3, 4 and 5 filed by directors, officers and beneficial owners of more than 10% of our equity, as soon as reasonably practicable after such reports are electronically filed with the Securities and Exchange Commission. We have adopted codes of business conduct and ethics for all of our employees, including our principal executive officer, principal financial officer and principal accounting officer. Copies of the codes of business conduct and ethics are available on our web site.

Our web site and the information contained therein or incorporated therein are not intended to be incorporated into this Annual Report on Form 10-K or our other filings with the SEC.

Item 11. Executive Compensation.

The information required by this Item will be contained in our Proxy Statement for our Annual Stockholders Meeting, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2016, and which is incorporated by reference herein.

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

The information required by this Item will be contained in our Proxy Statement for our Annual Stockholders Meeting, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2016, and which is incorporated by reference herein.

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

The information required by this Item will be contained in our Proxy Statement for our Annual Stockholders Meeting, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2016, and which is incorporated by reference herein.

Item 14. Principal Accounting Fees and Services.

The information required by this Item will be contained in our Proxy Statement for our Annual Stockholders Meeting, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2016, and which is incorporated by reference herein.

Part IV

Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as part of this Report:

1. Report of Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting

   Report of Independent Registered Public Accounting Firm on Consolidated Financial Statements

   Consolidated Financial Statements covered by Report of Independent Registered Public Accounting Firm

2. Financial Statement Schedules.

   All schedules have been omitted since they are either included in the Notes to Consolidated Financial Statements or not required or not applicable.

3. The exhibits listed in paragraph (b) of this item. Exhibit Numbers 10.01, 10.03, 10.04 and 10.05 are management contracts or compensatory plans or arrangements.

(b) Exhibits.

Exhibit Number	Description of Exhibits
3.01(1)	Amended and Restated Certificate of Incorporation of the Registrant.
3.02(2)	Amended and Restated Certificate of Designation of Series 2012-A Preferred Stock of the Registrant.
3.03(3)	Amended and Restated By-Laws of the Registrant.
10.01(4)	Second Amended and Restated Employment Agreement, effective as of July 30, 2014, between the Registrant and Howard S. Jonas.
10.03(5)	Amended and Restated Employment Agreement, effective as of August 19, 2014, between the Registrant and Avi Goldin.
10.04(6)	Addendum to Amended and Restated Employment Agreement, effective as of April 20, 2015, between the Registrant and Avi Golden.

10.05(7)	Employment Agreement, dated June 17, 2015, between the Registrant, Genie Energy E&P Ltd. and Geoffrey Rochwarger.
10.06(8)	2011 Stock Option and Incentive Plan of Genie Energy Ltd.
10.07(1)	Preferred Supplier Agreement between IDT Energy, Inc. and BP Energy Company, dated June 29, 2009, as amended.
21.01*	Subsidiaries of the Registrant.
23.01*	Consent of BDO USA, LLP
31.01*	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.02*	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.01*	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.02*	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document

Exhibit Number	Description of Exhibits
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

* filed herewith.

(1) Incorporated by reference to Form 10-12G/A, filed October 7, 2011.

(2) Incorporated by reference to Exhibit 99(A)(1)(A) to Schedule TO, filed May 22, 2014.

(3) Incorporated by reference to Form 8-K filed August 9, 2012.

(4) Incorporated by reference to Form 8-K, filed August 1, 2014.

(5) Incorporated by reference to Form 8-K, filed August 25, 2014.

(6) Incorporated by reference to Form 8-K/A, filed May 14, 2015.

(7) Incorporated by reference to Form 8-K/A, filed June 23, 2015.

(8) Incorporated by reference to Form 10-12G/A, filed October 27, 2011.

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 Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

GENIE ENERGY LTD.

By: /s/ Howard S. Jonas
Chairman of the Board and Chief Executive Officer
Date: March 16, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Titles	Date
/s/ Howard S. Jonas **Howard S. Jonas**	Chairman of the Board and Director and Chief Executive Officer (Principal Executive Officer)	March 16, 2017
/s/ Avi Goldin **Avi Goldin**	Chief Financial Officer (Principal Financial Officer)	March 16, 2017
/s/ James A. Courter **James A. Courter**	Vice Chairman of the Board and Director	March 16, 2017
/s/ W. Wesley Perry **W. Wesley Perry**	Director	March 16, 2017
/s/ Alan B. Rosenthal **Alan B. Rosenthal**	Director	March 16, 2017
/s/ Allan Sass **Allan Sass**	Director	March 16, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders

Genie Energy Ltd.

Newark, New Jersey

We have audited the internal control over financial reporting of Genie Energy Ltd. (a Delaware corporation) and subsidiaries' (the "Company") as of December 31, 2016, based on criteria established in *Internal Control–Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). 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 Report of Management on Internal Control Over Financial Reporting under Item 9A. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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 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.

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.

As indicated in the accompanying “Management’s Report on Internal Control over Financial Reporting”, management’s assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Retail Energy Holdings, LLC, which was acquired on November 2, 2016, and which is included in the consolidated balance sheet of Genie Energy Ltd. as of December 31, 2016, and the related consolidated statements of operations, comprehensive loss, equity and cash flows for the year then ended. Retail Energy Holdings, LLC constituted 13.8% and 14.0% of total assets and net assets, respectively, as of December 31, 2016, and 2.9% and 0.6% of revenues and net loss, respectively, for the year then ended. Management did not assess the effectiveness of internal control over financial reporting of Retail Energy Holdings, LLC because of the timing of the acquisition which was completed on November 2, 2016. Our audit of internal control over financial reporting of Genie Energy Ltd. also did not include an evaluation of the internal control over financial reporting of Retail Energy Holdings, LLC.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company’s annual or interim financial statements will not be prevented or detected on a timely basis. A material weakness regarding management review controls associated with the completeness and accuracy of computations relating to domestic and foreign income tax accounts and disclosures has been identified and described in management’s assessment. This material weakness was considered in determining the nature, timing, and extent of audit tests applied in our audit of the December 31, 2016 financial statements, and this report does not affect our report dated March 16, 2017 on those financial statements.

In our opinion, the Company did not maintain, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We do not express an opinion or any other form of assurance on management’s statements referring to any corrective actions taken by the Company after the date of management’s assessment.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of the Company as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, equity, and cash flows for each of the three years in the period ended December 31, 2016 and our report dated March 16, 2017 expressed an unqualified opinion thereon.

/s/ BDO USA, LLP

Woodbridge, New Jersey

March 16, 2017

GENIE ENERGY LTD.

Index to Consolidated Financial Statements