

ATN INTERNATIONAL, INC.

FORM 10-K (Annual Report)

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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 10-K

(Mark One)

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

For the transition period from _____ to _____

Commission File No. 001-12593

ATN INTERNATIONAL, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)
500 Cummings Center
Beverly, Massachusetts
(Address of principal executive offices)

47-0728886
(I.R.S. Employer
Identification No.)

01915
(Zip Code)

(978) 619-1300

(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
Common Stock, par value \$.01 per share	The NASDAQ Stock Market LLC

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

(Title of each class)

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 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 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 (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer
(Do not check if a
smaller reporting company)

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 Common Stock held by non-affiliates of the registrant as of June 30, 2016, was approximately \$ 841 million based on the closing price of the registrant's Common Stock as reported on the NASDAQ Global Select Market.

As of March 1, 2017, the registrant had 16,144,061 outstanding shares of Common Stock, \$.01 par value.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Definitive Proxy Statement for the 2017 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K (this “Report”) contains statements about future events and expectations, or forward-looking statements, all of which are inherently uncertain. We have based those forward-looking statements on our current expectations and projections about future results. When we use words such as “anticipates,” “intends,” “plans,” “believes,” “estimates,” “expects,” or similar expressions, we do so to identify forward-looking statements. These forward-looking statements are based on estimates, projections, beliefs, and assumptions and are not guarantees of future events or results. Actual future events and results could differ materially from the events and results indicated in these statements as a result of many factors, including, among others, (1) our ability to operate our newly acquired businesses in Bermuda and the U.S. Virgin Islands and integrate these operations into our existing operations; (2) the general performance of our operations, including operating margins, revenues, and the future growth and retention of our major customers and subscriber base and consumer demand for solar power; (3) government regulation of our businesses, which may impact our FCC and other telecommunications licenses or our renewables business; (4) economic, political and other risks facing our operations; (5) our ability to maintain favorable roaming arrangements; (6) our ability to efficiently and cost-effectively upgrade our networks and information technology (“IT”) platforms to address rapid and significant technological changes in the telecommunications industry; (7) the loss of or an inability to recruit skilled personnel in our various jurisdictions, including key members of management; (8) our ability to find investment or acquisition or disposition opportunities that fit our strategic goals for the Company; (9) increased competition; (10) our ability to operate and expand our renewable energy business; (11) our reliance on a limited number of key suppliers and vendors for timely supply of equipment and services relating to our network infrastructure; (12) the adequacy and expansion capabilities of our network capacity and customer service system to support our customer growth; (13) the occurrence of weather events and natural catastrophes; (14) our continued access to capital and credit markets; (15) the risk of currency fluctuation for those markets in which we operate; (16) our ability to realize the value that we believe exists in our businesses and (17) our ability to satisfy other conditions needed to complete the pending sale of our Northeast U.S. Wireline business. These statements are based on our management’s beliefs and assumptions, which in turn are based on currently available information. These assumptions could be proven inaccurate. These forward-looking statements may be found under the captions “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Risk Factors” and “Business,” as well as in this Report generally.

You should keep in mind that any forward-looking statement made by us in this Report or elsewhere speaks only as of the date on which we make it. New risks and uncertainties arise from time to time, and it is impossible for us to predict these events or how they may affect us. In any event, these and other important factors may cause actual results to differ materially from those indicated by our forward-looking statements, including those set forth in Item 1A of this Report under the caption “Risk Factors.” We have no duty to, and do not intend to, update or revise the forward-looking statements made by us in this Report after the date of this Report, except as may be required by law.

In this Report the words “ATN,” “the Company,” “we,” “our,” “ours” and “us” refer to ATN International, Inc. and its subsidiaries. This Report contains trademarks, service marks and trade names that are the property of ATN International, Inc., and its subsidiaries or licensed from others.

References to dollars (\$) refer to U.S. dollars unless otherwise specifically indicated.

PART I

ITEM 1. BUSINESS

Overview

We are a holding company that, through our operating subsidiaries, (i) owns and operates wireless and wireline telecommunications service providers in North America, Bermuda and the Caribbean, (ii) owns and operates commercial distributed generation solar power systems in the United States and India, and (iii) owns and operates terrestrial and submarine fiber optic transport systems in the United States and the Caribbean. We were incorporated in Delaware in 1987 and began trading publicly in 1991. Since that time, we have engaged in strategic acquisitions and investments to grow our operations. We continue to actively evaluate additional domestic and international acquisition and investment opportunities and other strategic transactions in the telecommunications, energy-related and other industries that meet our return-on-investment and other acquisition criteria. For a discussion of our investment strategy and risks involved, see “*Risk Factors—We are actively evaluating investment, acquisition and other strategic opportunities, which may affect our long-term growth prospects.*”

We offer the following principal services:

- **Wireless.** In the United States, we offer wholesale wireless voice and data roaming services to national, regional, local and selected international wireless carriers in rural markets located principally in the Southwest and Midwest United States. We also offer wireless voice and data services to retail customers in Bermuda, Guyana, the U.S. Virgin Islands and in other smaller markets in the Caribbean and the United States.
- **Wireline.** Our wireline services include local telephone and data services in Bermuda, Guyana, the U.S. Virgin Islands, and in other smaller markets in the Caribbean and the United States. Our wireline services also include video services in Bermuda and the U.S. Virgin Islands. As of December 31, 2016, we also offered facilities-based integrated voice and data communications services and wholesale transport services to enterprise and residential customers in New England, primarily Vermont, and in New York State. In addition, we offer wholesale long-distance voice services to telecommunications carriers.
- **Renewable Energy.** In the United States, we provide distributed generation solar power to corporate, utility and municipal customers. Beginning in April 2016, we began developing projects in India to provide distributed generation solar power to corporate and industrial customers.

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The following chart summarizes the operating activities of our principal subsidiaries, the segments in which the Company reports its revenue and the markets it served as of December 31, 2016:

Segment	Services	Markets	Tradenames
U.S. Telecom	Wireless	United States (rural markets)	Commnet, Choice, Choice NTUA Wireless
	Wireline	United States (New England and New York State)	Sovernet, ION, Essexel
International Telecom	Wireline	Guyana, Bermuda, U.S. Virgin Islands	GTT+, One, Innovative, Logic
	Wireless	Bermuda, Guyana, U.S. Virgin Islands	One, GTT+, Innovative, Choice
	Video Services	Bermuda, U.S. Virgin Islands, Cayman Islands, British Virgin Islands, St. Maarten	One, Innovative, Logic, BVI Cable TV
Renewable Energy	Solar	United States and India	Ahana Renewables, Vibrant Energy

We provide management, technical, financial, regulatory, and marketing services to our subsidiaries and typically receive a management fee equal to a percentage of their revenues, which is eliminated in consolidation. For information about our financial segments and geographical information about our operating revenues and assets, see Notes 1 and 16 to the Consolidated Financial Statements included in this Report.

Our principal corporate offices are located at 500 Cummings Center, Beverly, Massachusetts, 01915. The telephone number at our principal corporate offices is (978) 619-1300.

Strategy

The key elements of our strategy consist of the following:

- **Target Under-served Markets or Industries Where We Can Compete Successfully.** We operate our telecommunications businesses primarily in smaller, rural or under-served markets where we believe we are or will be one of the leading providers of telecommunications services. Our businesses typically have strong local brand identities and market positions. By leveraging these attributes, along with our lower cost of capital and our senior management expertise at the holding company level, we seek to improve and expand available products and services in our targeted markets to better meet the needs of our customers and expand our customer bases and revenues. We are particularly interested in investing in businesses that have the potential to provide a platform for future organic and strategic growth. Our solar company investments have afforded us entry into an emerging industry in which we believe there are attractive investment return opportunities and the potential to expand our business.
- **Collaborate with Local Management.** We believe that strong local management enhances our close relationship with customers and reduces risk. Wherever feasible, we seek to partner with local investors, owners or management teams who have demonstrated a successful track record or have extensive knowledge of the industry. We seek to enhance our strong market position by maintaining these relationships and by leveraging our comprehensive management experience and technical and financial expertise to assist them in further improving operations.
- **Maintain a Disciplined Earnings-Oriented Approach.** We carefully assess the potential for earnings stability and growth when we evaluate the performance of our subsidiaries, new investment opportunities and prospective acquisitions or dispositions. In managing our more mature businesses, we seek to solidify our brands, improve customer satisfaction, add new services, control costs and preserve cash flow. In

managing newer, early-stage businesses, we seek to invest capital to improve our competitive position, increase our market share and generate strong revenue and cash flow potential. We consider new investments, acquisitions and dispositions on a disciplined, return-on-investment basis.

Acquisitions

During the twelve months ended December 31, 2016, we completed acquisitions within our International Telecom, Renewable Energy and U.S. Telecom segments (the “2016 Acquisitions”).

International Telecom

During the fiscal year ended December 31, 2016, we completed our acquisitions of a controlling interest in One Communications, formerly KeyTech Limited, (the “One Communications Acquisition”) as well as all of the membership interests of Caribbean Asset Holdings LLC, the holding company for the Innovative group of companies (the “Innovative Acquisition”).

One Communications (formerly KeyTech Limited)

On May 3, 2016, we completed our acquisition of a controlling interest in KeyTech Limited (“KeyTech”), a publicly held Bermuda company listed on the Bermuda Stock Exchange (“BSX”) that provides broadband and cable video services and other telecommunications services to residential and enterprise customers under the “Logic” name in Bermuda and the Cayman Islands. Subsequent to the completion of our acquisition of KeyTech, KeyTech changed its name, and the “Logic” name, to One Communications Ltd (“One Communications”). Prior to our acquisitions, One Communications also owned a minority interest of approximately 43% in the Company’s consolidated subsidiary, Bermuda Digital Communications Ltd. (“BDC”), which provides wireless services in Bermuda under the “CellOne” name. As part of the transaction, the Company contributed its ownership interest of approximately 43% in BDC and approximately \$42 million in cash in exchange for a 51% ownership interest in One Communications. As part of the transaction, BDC was merged with and into a company within the One Communications group and the approximate 15% interest in BDC held, in the aggregate, by BDC’s other minority shareholders was converted into the right to receive common shares in One Communications. Following the transaction, BDC became wholly owned by One Communications, and One Communications continues to be listed on the BSX. A portion of the cash proceeds that One Communications received upon closing was used to fund a one-time special dividend to One Communications’ existing shareholders and to retire One Communications subordinated debt. On May 3, 2016, we began consolidating the results of One Communications within our financial statements in our International Telecom segment.

The One Communications Acquisition was accounted for as a business combination of a controlling interest in One Communications in accordance with ASC 805, *Business Combinations* , and the acquisition of an incremental ownership interest in BDC in accordance with ASC 810, *Consolidation* . The total purchase consideration of \$41.6 million of cash was allocated to the assets acquired and liabilities assumed at their estimated fair values as of the date of the acquisition.

Innovative

On July 1, 2016, we completed our acquisition of all of the membership interests of Caribbean Asset Holdings LLC, the holding company for the Innovative group of companies operating video services, Internet, wireless and landline services in the U.S. Virgin Islands, British Virgin Islands and St. Maarten (“Innovative”), from the National Rural Utilities Cooperative Finance Corporation (“CFC”). We acquired the Innovative operations for a contractual purchase price of \$145 million, reduced by purchase price adjustments of \$4.9 million (the “Innovative Transaction”). In connection with the transaction, we financed \$60 million of the purchase price with a loan from an affiliate of CFC, the Rural Telephone Finance Cooperative (“RTFC”) on the terms and conditions of a Loan Agreement by and among RTFC, CAH and ATN VI Holdings, LLC, the parent entity of CAH and a wholly-owned subsidiary of the Company. We funded \$51.9 million of the purchase price in cash and subsequently paid \$22.5 million to fund Innovative’s pension and other postretirement benefit obligations in the fourth quarter of 2016. Following the purchase, our current operations in the U.S. Virgin Islands under the “Choice” name were combined with Innovative to

deliver residential and business subscribers a full range of telecommunications and media services. On July 1, 2016, we began consolidating the results of Innovative within our financial statements in our International Telecom segment.

The Innovative Transaction was accounted as a business combination in accordance with ASC 805. The \$111.9 million of consideration transferred and used for the purchase price allocation, differed from the contractual purchase price of \$145.0 million, due to certain GAAP purchase price adjustments related primarily to changes in working capital of \$5.3 million and our agreeing to subsequently settle assumed pension and other postretirement benefit liabilities of \$27.8 million. As of December 31, 2016, we transferred consideration of \$111.9 million to the seller that was allocated to the assets acquired and liabilities assumed at their estimated fair values as of the date of the acquisition. The final purchase price represents a reduction of \$0.4 million from the preliminary purchase price. The decrease was due to settlement of working capital adjustments.

Renewable Energy

Vibrant Energy

On April 7, 2016, we completed our acquisition of a solar power development portfolio in India from Armstrong Energy Global Limited (“Armstrong”), a well-known developer, builder, and owner of solar farms (the “Vibrant Energy Acquisition”). The business operates under the name Vibrant Energy. We also retained several Armstrong employees in the United Kingdom and India who are employed by us to oversee the development, construction and operation of the India solar projects. The projects to be developed initially are located in the states of Andhra Pradesh and Telangana and are based on a commercial and industrial business model, similar to our existing renewable energy operations in the United States. As of April 7, 2016, we began consolidating the results of Vibrant Energy in its financial statements within its Renewable Energy segment.

The Vibrant Energy Acquisition was accounted for as a business combination in accordance with ASC 805, *Business Combinations* (“ASC 805”). The total purchase consideration of \$6.2 million cash was allocated to the assets acquired and liabilities assumed at their estimated fair values as of the date of the acquisition.

U.S. Telecom

In July 2016, we acquired certain telecommunications fixed assets and the associated operations in the western United States. The acquisition qualified as a business combination for accounting purposes. We transferred \$9.1 million of cash consideration in the acquisition. The consideration transferred was allocated to \$10.2 million of acquired fixed assets, \$3.5 million of deferred tax liability, and \$0.7 million to other net liabilities, resulting in goodwill of \$3.1 million. Results of operations for the business are included in the U.S. Telecom segment and are not material to our historical results of operations.

Our Services

Wireless Services

We provide mobile wireless voice and data communications services in the United States, Bermuda, Guyana and the Caribbean. Our revenues from wireless services were approximately 50% of our consolidated revenues for fiscal year 2016. The U.S. portion of our business constitutes a significant portion of our consolidated revenue. Our revenues from U.S. wireless services were approximately 32%, 44%, and 37% of our consolidated revenues for the years ended December 31, 2016, 2015 and 2014, respectively. Our U.S. wireless service revenues have historically had high operating margins and therefore have contributed a large percentage of operating income.

U.S. Telecom Segment

In the United States, we provide wholesale wireless voice and data roaming services in rural markets to national, regional, local and selected international wireless carriers. Our largest wholesale networks are located

principally in the western United States. We also offer wireless voice and data services to retail customers in certain rural markets already covered by our wholesale networks.

Services. The revenue and profits of our U.S. wholesale wireless business are primarily driven by the number of sites and base stations in operation, the amount of voice and data traffic that each of these sites generates, and the rates we receive from our carrier customers on that traffic. Many of our sites are located in popular tourist and seasonal visitor areas, which has resulted in higher wholesale revenues in those areas during the summer months.

We currently have roaming agreements with approximately 43 United States- based wireless service providers and, as of December 31, 2016, had roaming arrangements with each of the four U.S. national wireless network operators: AT&T, Sprint, T-Mobile and Verizon Wireless. Other than the agreements with the national carriers, our standard roaming agreements are usually terminable within 90 days. Occasionally, we may agree or strategically decide to lower rates or build a new mobile network at a specified location as part of a long-term roaming agreement to offer our roaming partner pricing certainty in exchange for priority designation with respect to their customers' wireless traffic. Once we complete building a rural network, we then benefit from the use of that network under existing roaming agreements with other international, national, regional, and local carriers to supplement our initial revenues. In 2016, the four national wireless service providers together accounted for a substantial portion of our wholesale wireless revenues, with AT&T and Verizon accounting for 14% and 12% respectively, of our total consolidated revenue for the year.

Network and Operations. Our roaming network offers mobile communications service through a digital wireless voice and data network that utilizes multiple cellular mobile technologies including UMTS/HSPA, CDMA/EvDO and LTE that often will be deployed at a single cell site location in order to maximize revenue opportunities. We provide wireless communications network products and services with owned and leased spectrum primarily in the 700 megahertz (MHz), 800 megahertz (MHz) and 1900 megahertz (MHz) spectrum ranges. In 2016, we continued the efforts we began in the 2015 fiscal year to upgrade our cell sites with advanced 4G LTE technology throughout our service areas. Our networks comprise base stations and radio transceivers located on owned or leased towers and buildings, telecommunications switches and owned or leased transport facilities. We design and construct our network in a manner that will provide high-quality service to substantially all types of compatible wireless devices. Network reliability is carefully considered and redundancy is employed in many aspects of our network design.

Route diversity, redundant equipment, ring topologies and the use of emergency standby power is used to enhance network reliability and minimize service disruptions from any particular network element failure. We operate high-capacity, carrier-class digital wireless switching systems that are capable of serving multiple markets through a single mobile telephone switching office. Centralized equipment used for network and data management is located in high-availability facilities supported by multiple levels of power and network redundancy. Our systems are designed to incorporate Internet Protocol (IP) packet-based Ethernet technology, which allows for increased data capacity and a more efficient network. Interconnection between the mobile telephone switching office and the cell sites utilizes Ethernet technology over fiber or microwave links for virtually all of our 4G LTE sites.

As of December 31, 2016, we owned and operated a total of approximately 1,000 domestic base stations on nearly 540 owned and leased sites, a Network Operations Center (or "NOC"), a switching center, and presence in numerous leased data centers designed to support network virtualization and provide network resiliency. Our NOC provides dedicated, 24-hour, year-round monitoring of our network to ensure quality and reliable service to our customers. In 2016, we continued to expand and improve our network, adding nearly 130 new base stations and approximately 25 new sites and upgraded approximately 100 sites to more advanced 4G LTE data technology.

Competition. We compete with wireless service providers that operate networks in our markets and offer wholesale roaming services. However, the most significant competitive challenge we face in our U.S. wholesale wireless business is the extent to which our carrier customers choose not to roam on our networks or elect to build or acquire their own infrastructure in a market in which we operate, reducing or eliminating their need for our services in those markets. We address this competitive threat mainly by providing a service that would be more costly for the carrier to provide itself, or, at least, a less attractive expenditure than alternative investments in its network or business elsewhere.

Occasionally, we have entered into buildout projects with existing carrier customers to help the customer accelerate the buildout of a given area. Pursuant to these arrangements, we agree to incur the cost of building and operating a network in a newly designated area meeting specified conditions. In exchange, the carrier agrees to license us spectrum in that area and enter into a contract with specific pricing and term. These arrangements typically include a purchase right in favor of the carrier to purchase that portion of the network, depending on when the option to purchase is exercised. For example, as previously disclosed in December 2012, we sold a portion of our network to a carrier customer pursuant to an option contained in a roaming and buildout agreement with that carrier. We currently have one buildout arrangement of approximately 100 built cell sites that provides the carrier with an option to purchase such sites, which option is exercisable beginning in 2018. This portion of our network accounted for approximately \$13.4 million in wholesale revenue during the twelve months ended December 31, 2016. At this time, we believe the holder is likely to exercise the option and proceeds from the exercise to be minimal.

Our ability to maintain appropriate capacity and relevant technology to respond to our roaming partners' needs also shapes our competitive profile in the markets in which we operate. We believe that currently available technologies and appropriate capital additions will allow sufficient capacity on our networks to meet anticipated demand for voice and data services over the next few years. However, increasing demand for high-speed data may require the acquisition of additional spectrum licenses to provide sufficient capacity and throughput.

International Telecom Segment

We provide wireless voice and data service to retail and business customers in Bermuda under the "One" name, in Guyana under the "GTT" name and in the U.S. Virgin Islands under the "Innovative" and "Choice" brand names. We also provide roaming services for many of the largest U.S. providers' customers visiting these locations. As of December 31, 2016, we had approximately 312,000 wireless subscribers in our International Telecom segment. As of December 31, 2016, more than 86% of our wireless subscribers were on prepaid plans.

Products and Services. In Bermuda, a majority of our customers subscribe to one of our postpaid plans, which allow customers to select a plan with a given amount of voice minutes, text messaging, data and other features that recur on a monthly basis. In Guyana, nearly all of our customers (approximately 96%) and, in our other markets, a substantial majority of our customers, subscribe to our prepaid plans, which require customers to purchase an amount of voice minutes, text messages or data prior to use. In the U.S. Virgin Islands and other international markets, we also provide Internet access services via a variety of wireless and wireline broadband technologies.

Network. We currently operate multiple advanced wireless voice and data technologies in our international markets in the 850, 900, 1800, 1900 and 2500 MHz frequency bands, including GSM/EDGE, UMTS/HSPA+ and CDMA/EVDO and we added LTE technology in certain of our markets in 2016. We have extensive backbone facilities linking our sites, switching facilities and international interconnection points. Off-island connectivity is provided by leased and owned fiber-based interconnections.

Sales and Marketing. We maintain retail stores in our markets and allow customers to pay their bills and "top up", or add additional minutes to their prepaid plans, through payment terminals at local stores, business centers or our website or, by purchase of prepaid calling cards, or via mobile or web-based apps. We advertise frequently through print and electronic media, radio station spots and sponsor various events and initiatives. Our handsets, prepaid cards and prepaid accounts are also sold through independent dealers that we pay on a commission basis.

Handsets and Accessories. We offer a diverse line-up of wireless devices and accessories designed to meet both the personal and professional needs of our customers. Our device assortment includes a wide range of smartphones including those featuring the Android and IOS operating systems in addition to a full line of feature phones, wireless hot spots and various wireless solutions for small businesses. To complement our phone offerings, we sell a complete range of original equipment manufacturer and after-market accessories that allow our customers to personalize their wireless experience, including phone protection, battery charging solutions and Bluetooth hands-free kits.

Competition. We believe we compete for wireless retail customers in our international properties based on features, price, technology deployed, network coverage (including through roaming arrangements), quality of service

and customer care. We compete against Digicel, which is a large mobile telecommunications company in the Caribbean region, and in some markets, against one or more U.S. national operators or the wireless division of the incumbent telephone companies.

Wireline Service s

Our wireline services include operations in Guyana, Bermuda, the U.S. Virgin Islands, the British Virgin Islands, the Cayman Islands, and the mainland United States. Our revenues from wireline services were approximately 41%, 25% and 29% of our consolidated revenues for fiscal years 2016, 2015 and 2014, respectively.

International Telecom Segment

Voice services. We offer voice services that include local exchange, regional and long distance calling and voice messaging services in Bermuda, Guyana, the U.S. Virgin Islands, and in other smaller markets in the Caribbean and the United States. As of December 31, 2016, we had an aggregate of approximately 180,000 access lines in service in our markets, which represent both residential and commercial subscribers. Across our businesses, residential customers account for approximately three-quarters of the wireline local telephone service revenue while commercial customers account for approximately one-quarter.

In Guyana, we are the exclusive licensed provider of domestic wireline local and long-distance telephone services into and out of the country and in the U.S. Virgin Islands, we are the incumbent local exchange carrier and sole fixed telephony provider. With respect to our international long-distance business, we also collect payments from foreign carriers for handling international long-distance calls originating from the foreign carriers' country and terminating on our network. We also make payments to foreign carriers for international calls originating on one of our networks and terminating in the foreign carrier's country and collect from our subscribers or a local originating carrier a rate that is market based or set by regulatory tariff.

Internet services . We offer high-speed Internet services with varying speeds to address different customer needs and price requirements in our various markets. Internet services accounted for 16.6% of our revenues in our International Telecom segment in 2016. As of December 31, 2016, we had approximately 97,000 Internet customers across our markets.

Video services . We also offer video service over our co-axial cable and fiber-optic networks in our international markets. In the U.S. Virgin Islands we are the only authorized video services operator and are the sole provider of video services to customers in Bermuda and the British Virgin Islands. From July 1, 2016 through January 3, 2017, we also provided cable TV services in St. Maarten. As of December 31, 2016, we had approximately 61,000 video customers across our markets. We have several offerings available to our video customers, including basic and tiered local and cable TV channels grouped into various content categories, such as news, sports and entertainment.

Network. All of our fixed access lines are digitally switched from our switching centers in the U.S. Virgin Islands, Bermuda and Guyana. Our switching centers provide dedicated monitoring of our network to ensure quality and reliable service to our customers.

In the U.S. Virgin Islands, we deliver our services via a hybrid fiber coaxial ("HFC") cable network and continue to transition our traditional copper network to our voice, video and data services on this network. The HFC network gives us expanded Internet access coverage to more than 95% of homes passed in the U.S. Virgin Islands with speeds up to 100 Mbps for residential customers. In 2016, we began migrating our existing fixed wireless internet customers in the U.S. Virgin Islands network to the HFC network, and expect to be able to offer faster, more reliable voice, data and internet services to customers in the U.S. Virgin Islands as compared to our previous fixed wireless network.

Our international voice and data networks are linked with the rest of the world principally through undersea fiber-optic cables. In Guyana we co-own the Suriname-Guyana Submarine Cable System with Telesur, the government-owned telecommunications provider in Suriname, that provides us with more robust redundancy, the

capacity to meet growing data demands in Guyana, and the opportunity to provide new and enhanced IP centric services such as Internet service. We also lease capacity on certain satellites to provide both international and local backhaul services.

Sales and Marketing. Our businesses utilize four key sales channels: stores, telesales, business-to-business (“B2B”) channels and residential sales (inbound). The telesales department makes outbound calls to existing customers to promote bundling and other upgrade opportunities and our B2B sales channel focuses on selling data and voice products to business and government accounts. Certain residential sales are made through inbound communications to customer service representatives who assist with a wide range of inquiries and sell different product offerings to help retain customers or improve their service with upgrades or bundles. Our revenues for our wireline services are derived from installation charges for new lines, monthly line charges, data and video services and value added services, such as hosting or enterprise voice and data solutions. For our voice wireline services, rates differ for residential and commercial customers and in certain markets, may be set by regulatory authorities.

Competition. We compete with a limited number of other providers for various products, including Digicel. In 2016, we acquired our wireline businesses in Bermuda and the U.S. Virgin Islands in order to provide us with greater scale in those markets and the capability to offer a “quad play” of connectivity: high speed internet, mobility, video and voice services. We expect our competition in Bermuda to seek to match that capability. Nonetheless, we believe this breadth of services and economies of scale will provide us with a strong competitive position and the ability to win and retain an economically viable share of those markets.

In Guyana, we have the exclusive right to provide domestic fixed and international voice and data services. As the initial term of our license was scheduled to expire in December 2010, we notified the Government of Guyana of our election to renew our exclusive license for an additional 20 year term expiring in 2030 and received return correspondence from the Government that our exclusive license had been renewed until such time that new legislation is implemented with regard to the Government’s intention to introduce competition into the sector. We believe, however, our exclusive license continues to be valid unless and until such time as we enter into an alternative agreement with the Government. See “—Guyana Regulation—Regulatory Developments” and “Risk Factors—Our exclusive license to provide local exchange and international voice and data services in Guyana is subject to significant political and regulatory risk.”

U.S. Telecom Segment

Network. We provide voice and data services using a network comprising telecommunications switching and related equipment that we own and telecommunications lines that we typically leased from the incumbent telephone company. We operate high capacity fiber-optic ring networks in Vermont and New York State that we use to connect our enterprise markets and to provide wholesale data transport services to other carriers. As of December 31, 2016, we had approximately 434,000 business and 6,000 residential access line equivalents (“ALEs”), in billing. ALEs are calculated by determining the number of individual voice or data lines, in 64 kbps segments, that generate a monthly recurring charge within an end user circuit or circuits. As of December 31, 2016, we also provided broadband services to approximately 3,600 accounts in Vermont and western New Hampshire.

Sales and Marketing. We sell our services primarily through a direct sales force that assists customers in choosing tailored solutions for their specific communication needs. Our direct sales staff focuses on selling integrated voice and data to small and medium-sized businesses and other organizations, while residential services are largely sold through advertising and word of mouth. We advertise on television and radio through cooperative arrangements and engage in other promotional activities from time to time.

Our wholesale transport and capacity customers are predominately telecommunications carriers such as local exchange carriers, wireless carriers and interstate integrated providers, which were served by our direct sales force.

Competition. We competed for retail customers by offering customized voice and data solutions designed to meet the specific needs of our two targeted subsets of customers by providing superior customer service and competitive pricing. Our primary retail competitor is Fairpoint Communications, which acquired the incumbent local exchange

business of Verizon Communications in northern New England. We also compete with cable companies, such as Comcast, and other competitive service providers who target small and medium sized businesses. Our wholesale competitors include Level 3 and Verizon Communications, other regional wholesale providers and cable television companies that operate fiber-optic networks.

During June 2016, as a result of recent industry consolidation activities and a review of strategic alternatives for the Company's U.S. Wireline business in the Northeast, the Company identified factors indicating the carrying amount of certain assets may not be recoverable. More specifically, the factors included the competitive environment, recent industry consolidation, and the Company's view of future opportunities in the market that began to evolve in the second quarter of 2016.

On August 8, 2016, we announced that we entered into an agreement to sell our U.S. Wireline business in the Northeast, including our integrated voice and data operations in New England and our wholesale transport operations in New York. Following the completion of the sale, we will retain our wholesale long-distance business in our U.S. Telecom segment. The transaction is expected to close in the first quarter 2017, following the satisfaction of customary closing conditions.

Renewable Energy Services

Domestic

On December 24, 2014, we acquired a provider of distributed generation solar power services in the United States, specifically in Massachusetts, California and New Jersey (the "Ahana Acquisition"). As of December 31, 2016, we owned and operated 28 commercial solar projects at 59 sites (each, a "Facility") with an aggregate 45.8 megawatts DC peak ("MWp") of electricity generating capacity. We own the Facilities through various indirect subsidiaries that were formed for the purpose of financing the development of, and owning and operating, the Facilities (the "Special Purpose Entities").

Services. Generally, our solar projects are in the "commercial and industrial" ("C&I") sector of the solar market, which is distinguished from utilities and residential customers. Our customers or "oftakers" include high-credit quality corporates, utilities, schools, and municipalities, which purchase electricity from us under the terms of long-term power purchase agreements ("PPAs"). Each Facility is built on the customer's owned or leased site and reduces the customer's dependence on traditional energy suppliers, thereby mitigating the price volatility often associated with traditional energy suppliers and transmissions systems. Our PPA terms range from ten to twenty-five years in duration and are typically priced at or below then-prevailing local retail electricity rates, allowing the customer to secure electricity at predictable and stable prices over the duration of their long-term contract. As such, the PPAs provide us with high-quality contracted cash flows, which will continue over their average remaining life, weighted by MWp, of 12.5 years as of December 31, 2016. Certain of our PPAs provide for early termination for a variety of reasons, including in the event that (a) an oftaker is unable to appropriate funds from state and local governments, (b) there is a change of law that substantially reduces the value of utility credits, (c) termination for convenience, or (d) the Facility causes damage to the premises or roof and our customer fails to repair or causes the customer to be in violation of law, or the customer ceases to hold tenancy or fee interest in the premises. All of our Facilities have been in commercial operation for at least three years and are substantially located as follows:

State	Number of Facilities	Total Capacity (MW - DC)
California	33	17.271
Massachusetts	16	26.999
New Jersey	10	1.524
Total	59	45.794

In developing each solar project, we facilitate the project's design, development and construction and obtain project-level financing, and we take a controlling interest in the Special Purpose Entity that owns the project Facility in

exchange for a PPA. Our solar projects may be financed using a combination of tax equity, bank financing that we secure and our cash on hand. A substantial majority of our acquired Facilities received tax equity financing, pursuant to which third party investors hold equity in the Special Purpose Entities that were formed to finance the development of, and own and operate, such Facilities. In return, the tax equity investors receive a preferred return on their investment up to a contractually agreed amount and the benefits of various tax credits those Facilities generate. Of these projects, approximately one-third of our acquired Facilities are still subject to tax equity financing and will be subject to the payment of preferred returns to our tax equity partners until late 2018. In addition, the Facilities located in California receive revenue from performance based incentive payments (“PBIs”) and those located in Massachusetts and New Jersey receive revenue from the sale of solar renewable energy credit (“SREC”) contracts, which revenue we retain as the Facilities’ operator. In the future, we intend to focus on growing our project portfolio through additional investments with favorable credit quality offtakers in markets that offer favorable government policies to encourage renewable energy projects and where our projects can generate electricity at a cost that is less than or equal to the price of purchasing power from traditional energy sources.

We contract with utilities through an interconnection agreement to export excess energy generated by our Facilities to another offtaker and/or the utility electrical grid.

Infrastructure.

Our existing Facilities are comprised of rooftop, ground-mounted and elevated solar support structure photovoltaic (“PV”) installations. Our Facilities are located on our customers’ buildings, parking structures, landfill sites and other locations pursuant to leases or easements granted to us by our customers. These Facilities use crystalline silicon PV modules mounted in ballasted, tracking or roof penetrating fixed-tilt configurations. All of our existing Facilities were designed, engineered and constructed by Borrego Solar Systems, Inc. (“Borrego”), a former sister company of our acquired solar operations, pursuant to engineering, procurement and construction, or “EPC”, agreements. Borrego now also maintains our Facilities at a committed fee through long-term Operations and Maintenance Agreements (“O&M Agreements”). Each O&M Agreement commits Borrego to provide maintenance of a Facility for ten years after such Facility is placed in service, including systems monitoring and troubleshooting, inspection, preventative maintenance and any other services on an as-needed basis at our request at an additional cost.

We are dependent on a limited number of key suppliers for the PV modules that we purchase for installation at our Facilities, with the majority of Facilities constructed with PV modules supplied by Yingli Green Energy Holding Company Limited, a Chinese company that sources cells from Taiwanese manufacturers and assembles them in China. Typically, the PV modules carry materials and workmanship warranties from 5-10 years in duration, with power warranties for a 25-year useful life.

Competition.

We compete with the traditional electric power industry, as well as with other solar energy companies that may have greater financial resources or brand name recognition than we do, disadvantaging our ability to attract new customers. The solar energy industry is highly competitive and continually evolving and as such, we expect to compete for future project opportunities with new entrants as well. We believe that we compete with the traditional utilities primarily based on price and the predictability of that price, while we compete with other solar energy providers based on our ability to structure the development and financing of a project for our potential customers or developers on favorable terms.

International

On April 7, 2016, we acquired a solar power development portfolio in India and since that time, have been constructing distributed generation solar power projects in the states of Andhra Pradesh and Telangana based on a commercial and industrial business model, similar to our domestic renewable energy operations. In November 2016, we connected the first 4.9 megawatts DC peak (“MWp”) of our first project to the grid in Andhra Pradesh and since that time, have been banking the energy exported without generating any revenue as of December 31, 2016. As of February 28, 2017, we have five solar farms (each a “Facility”) at five separate sites. In addition to the 4.9 MWp that is already

injecting energy to the grid, we have a further 36 MWp under construction and 22 MWp where we have completed the construction and are now awaiting approval to evacuate electricity to the local grid. Together, we expect these five Facilities to have a total installed capacity of 63 MWp by the third quarter of 2017.

We currently target having 100 MWp operational by the end of 2017 and 250-300 MWp operational by the end of 2018, although that could change as we refine our strategy and respond to the market. Solar projects are capital intensive and the greatest challenge to achieving these goals is our ability to secure third party debt to fund the installation of the additional capacity. Our ability to achieve these goals will also depend on, among other things, our ability to acquire the required land for the new capacity, our ability to secure agreements to sell the power on terms that our financing sources consider to be bankable, our willingness to compete with local solar businesses who may be willing to build projects with a lower risk/return profile than ours, and the need to further strengthen our systems and processes to manage the ensuing growth opportunities. For a discussion of the risks associated with executing our short and long term growth plans in India, see “*Risk Factors—India Operations.*”

Market Opportunity .

India has issued ambitious plans for the development and production of solar energy, with a goal of 100 gigawatts DC peak (“GWp”) by 2022 (as compared to 8.7 GWp installed in India as of October 31, 2016). There has historically been a close correlation between the growth in India’s gross domestic product and its installed electricity generating base, and we expect this to continue for the next few years to come. India’s ambitious economic growth plans are therefore expected to be dependent on access to reliable and affordable electricity. India is a country where many regions currently have significant supply deficits at periods of peak demand, resulting in both industrial and commercial consumers, and households having to suffer either regular power cuts or to make their own arrangements for backup power.

Given these macroeconomic factors, solar power is an attractive option for meeting India’s energy requirements. This has been recognized by both the central Government and state Governments across India, many of whom have introduced ambitious targets for the installation of solar power and differing regulatory support mechanisms, without the need to provide the direct governmental subsidies that have been required in other countries for production of solar energy at this scale.

The following trends have made India an attractive investment opportunity for our Renewable Energy business:

- *Speed of deployment .* In India, as in other countries, the development and construction periods for large scale conventional power plants (nuclear, coal and gas) are typically very long, with the period from commencing development to starting to generate power likely to be between five to ten years. This is a challenge for a country which is in need of massive investment in new generation capacity. By contrast, a large scale solar farm can potentially be operational within 12 – 18 months of commencing development.
- *Cost competitiveness .* The installation cost of solar projects in India have continued to fall sharply since we made our initial investment in April 2016, driven in large part by the continued decrease in cost of solar panels. While the rate of such price reductions is likely to slow in the future, we currently expect the cost of installation to continue to fall in the next five to ten years, albeit at a slower pace. We also expect that the cost of debt for solar projects in India will decrease in the next five to ten years, as it has done in other countries. These factors will make the price at which solar farms are able to supply electricity ever more cost competitive with conventional forms of power generation. We are now able to sell the electricity that we generate to potential commercial and industrial customers at a discount to the price that they would otherwise purchase electricity from the grid.

- *Balance of payments and energy security* . The majority of India’s electricity generating capacity is currently coal. Much of the coal used in these power stations is imported and purchased in foreign currencies, resulting in significant exposure of the Indian electricity sector to movements in the cost of raw materials and currency fluctuations. Solar plants require no raw materials to operate once installed and so have a much lower long-term risk profile compared with conventional sources of power generation.
- *Massive demand for new generation capacity* . India requires massive investment in its electricity sector to power its economic growth. Despite recently overtaking China as the fastest growing major economy in the world, India’s installed electricity generation capacity is still a fraction of that of China. To maintain high rates of economic growth through increased industrialization, India will require massive investment in new electricity generation capacity. Despite adding 112GWp in the past five years, many parts of India continue to suffer persistent demand/supply mismatch with a five-year average energy deficit of approximately 7% and a five-year average peak deficit of approximately 8% according to the Ministry of Power.
- *Strong government support* . In order to reduce dependence on energy imports and curtail the current trade deficit and resulting impact on the rupee, the Indian government has taken a number of steps to incentivize the use of renewable sources of energy, including establishing state-level renewable power purchase obligations and tax breaks for the import of solar equipment and modules.
- *Environmental viability* . India is known for its dry, sunny weather – ideal for the generation of solar energy. India ranks among the highest irradiation-receiving countries in the world with more than 300 days of sunshine per year in much of the country and the resource is widely available throughout the country. In addition, as solar plants can be built near the point of consumption, power produced generally does not incur expensive transmission charges or require infrastructure or transmission investments. By contrast, conventional power plants such as coal and nuclear may face mid to long-term challenges to their viability due to the need for massive amounts of water for cooling these facilities. Recently, reports in India have circulated that some coal power plants have suspended operations during periods of heat due to the lack of available water for cooling.

We consider India to be an attractive market for solar power without the need to rely on governmental subsidies. This is in contrast with most countries, including the United States, where the mass deployment of solar power and other forms of renewable energy has required, and continues to require, some form of governmental support (either through direct subsidy or tax breaks) to be economically viable. While we currently expect the landscape for solar power to change over time in India, and potentially materially as the market matures, we believe that the core principal behind our investment in our Indian solar business - that solar power can compete with fossil fuels on a level playing field for the long-term - remains valid. Indeed, adverse regulatory change is likely to be the primary reason why this would change in the future, and we currently consider the risk of such adverse regulatory change to be low given the country’s fundamental requirement for new electricity generation capacity.

Services. We own our Facilities through various indirect subsidiaries that were formed for the purpose of financing the development of, and owning and operating, the Facilities (the “Special Purpose Entities”). We expect our initial Facilities to sell electricity to commercial and industrial (“C&I”) customers as we establish our business, although in time we may diversify our customer base to also sell power to state utility companies. We do not expect to sell power directly to residential customers. Our target C&I customers or “offtakers” for our initial Facilities are high-credit quality corporates, including banks, manufacturers, hotel groups, and hospital groups, which purchase electricity from us under the terms of PPAs. The PPA terms agreed upon with our initial customer base are typically five years in duration and priced below the rate that the customer is currently purchasing electricity from the grid, with annual paid escalators, allowing such customer to secure electricity at predictable and stable prices over the duration of their long-term contract. As such, the PPAs provide us with high-quality contracted cash flows, which will continue over their average remaining life. Our PPAs typically have penalties for the non-delivery of power and as such, we typically try to enter into binding PPAs late in the development process when the connection date of the solar farm can be predicted with greater

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confidence. Current regulations allow us to sell power to any commercial or industrial customer within 500 kilometers of our grid connection. Currently, we have approximately 30 MWp committed, meaning the aggregate megawatt rated capacity of solar power plants pursuant to such PPAs is signed or allotted but not yet commissioned and operational as of the reporting date. As of December 31, 2016, we began banking power to the grid, but had not yet derived any revenue pursuant to existing PPAs. Our Facilities are located as follows:

State	Number of Facilities	Total Capacity (MW-DC)	
		Built	Under Construction
Andhra Pradesh	5	4.9	35
Telangana			22
Total	5	4.9	57

In developing each solar project, we hire third party engineering and procurement contractors to design and construct our Facilities and actively manage their performance through our in-house technical and quality assurance team. Our in-house team is also responsible for sourcing and purchasing our material equipment items, such as solar panels and inverters. We have constructed our Facilities with mostly equity and intercompany debt and following the completion of construction, intend to finance each Facility to raise the funds to construct additional Facilities in 2017. While we intend to continue to focus our operations on attracting a C&I customer base, in the future we may also consider selling power to state utility companies to enable the Company to expand its installed operating base more quickly.

Our local, in house staff also provides us with the expertise to provide additional revenue from Operations & Maintenance (“O&M”) agreements that we have entered into with third parties for the maintenance, development and construction oversight of other solar power projects owned by such third parties in India. Currently, our team is focused on supporting the construction of our own projects in India, however, may look in the future to engage in support for additional third parties to produce additional management and O&M revenue for our Company.

Infrastructure.

Our existing Facilities are comprised of ground-mounted solar photovoltaic (“PV”) installations. The majority of our Facilities are single-axis tracking systems to increase the generating capability of our Facilities. Our Facilities are located on land that we have purchased from local owners and will continue to own throughout the duration of each project. Our team in India executes a rigorous due diligence process with respect to any land that we seek to purchase for construction of a project, attempting to minimize the risks typically associated with land purchase and ownership in India. For a more detailed discussion of the risks associated with land procurement and ownership in India, see “*Risk Factors—India Operations.*”

All of our existing Facilities were designed, engineered and constructed by KEC International Limited (“KEC”), a global power infrastructure engineering and construction firm, pursuant to engineering, procurement and construction, or “EPC”, agreements. We maintain our Facilities ourselves and have staff employed – both in our corporate office in Hyderabad and at each of our Facilities - who provide year-round maintenance, systems monitoring and troubleshooting, inspection, preventative maintenance and any other services on an as-needed basis for each of our projects.

We depend on a limited number of key suppliers for the PV modules that we purchase for installation at our Facilities, with the majority of Facilities constructed with PV modules supplied by GCL System Integration Technology Limited, a Chinese company. Typically, the PV modules carry materials and workmanship warranties of 10 years in duration, with power warranties for a 25-year useful life.

Competition.

We compete with the traditional electric power industry; however, our primary competitors are other solar energy companies that may have greater financial resources or brand name recognition than we do, disadvantaging our ability to attract new customers. The solar energy industry is highly competitive and there are low barriers to entry for companies with sufficient financial resources. The market is continually evolving, as demonstrated by the ever-decreasing prices tendered in India utility power auctions during 2016, and as such, we expect new entrants to the market as it continues to evolve. However, we believe that the availability of expansion capital from third party financing sources, rather than competition from third parties, is the major risk factor that inhibits our achieving our near-term goals for our Renewable Energy segment. Over the longer term, some of our competitors may have advantages over us in terms of larger size, access to expansion capital, internal access to solar panels and greater operational, financial, technical, management, lower cost of capital or other resources. See “Risk Factors — Risks Related to Our Business and Industry — We face significant competition from traditional and renewable energy companies.”

Employee s

As of December 31, 2016, we had approximately 1,800 employees, of whom approximately 800 were employed in the United States (including in the U.S. Virgin Islands). At the holding company level, we employ our executive management team and staff. Approximately half of our Guyana and U.S. Virgin Island full-time work forces are represented by unions. In addition, approximately 20% of our Bermuda fulltime workforce is also represented by unions. We believe we have good relations with our employees.

Regulation

Telecom Regulation

Our wireless and wireline operations and our video services operations in the United States and the U.S. Virgin Islands are governed by the Communications Act of 1934, as amended (or “Communications Act”), the implementing regulations adopted thereunder by the Federal Communications Commission (“FCC”), judicial and regulatory decisions interpreting and implementing the Communications Act, and other federal statutes.

U.S. Federal Regulatio n

Our wireless and wireline telecommunications and video services operations are subject to extensive governmental regulation in each of the jurisdictions in which we provide services. The following summary of regulatory developments and legislation does not purport to describe all present and proposed federal, state, local, and foreign regulation and legislation that may affect our businesses. Legislative or regulatory requirements currently applicable to our businesses may change in the future and legislative or regulatory requirements may be adopted by those jurisdictions that currently have none. Any such changes could impose new obligations on us that would adversely affect our operating results.

Wireless Services

The FCC regulates, among other things; the licensed and unlicensed use of radio spectrum; the ownership, lease, transfer of control and assignment of wireless licenses; the ongoing technical, operational and service requirements applicable to such licenses; the timing, nature and scope of network construction; the provision of certain services, such as E-911; and the interconnection of communications networks in the United States.

Licenses. We provide our wireless services under various commercial mobile radio services (or “CMRS”) licenses, such as cellular, broadband Personal Communications Services (or “PCS”) or 700 MHz licenses, Advanced Wireless Service (or “AWS”), and Broadband Radio Service (or “BRS”) licenses granted by the FCC, pursuant to special temporary authority (or “STA”) to use certain BRS spectrum for which we do not hold a license, and pursuant to leases of spectrum from FCC-licensed operators. Some of these licenses and STAs are site- based while others cover specified geographic market areas, typically Cellular Market Areas (or “CMAs”) and Basic Trading Areas (or “BTAs”),

as defined by the FCC. The technical and service rules, the specific radio frequencies and the authorized spectrum amounts vary depending on the licensed service. The FCC generally allocates CMRS licenses through periodic auctions, after determining how many licenses to make available in particular frequency ranges, the applicable service rules, and the terms on which the license auction will be conducted. Such licenses are also available via secondary market mechanisms, using procedures and regulations set forth by the FCC. There is no certainty as to when additional spectrum will be made available for wireless broadband services, the amount of spectrum that might ultimately be made available, the timing of the auction of any such spectrum, the likely configuration of any such additional spectrum and conditions that might apply to it, or the usability of any of this spectrum for wireless services competitive with our services or by us.

Construction Obligations. The FCC conditions licenses on the satisfaction of certain obligations to construct networks covering a specified geographic area or population by specific dates. The obligations vary depending on the licensed service. Failure to satisfy an applicable construction requirement can result in the assessment of fines and forfeitures by the FCC, a reduced license term, or automatic license cancellation. We are substantially in compliance with the applicable construction requirements that have arisen for the licenses we currently hold and expect to meet our future construction requirements as well. If we fail to meet the build out requirements by the end of the license term for any individual 700 MHz license, we will lose our authority to serve any unserved area within that particular 700 MHz licensed area and also could be subject to fines and forfeitures, including a revocation of that particular 700 MHz licenses. We currently have met the build out or waiver requirements with respect to that particular 700 MHz licenses except one license as to which we are pursuing a timely – filed waiver request.

With respect to some of our licenses, if we were to discontinue operation of a wireless system for a period of time, (at least 90 consecutive days for cellular licenses), our license for that area would be automatically forfeited.

License Renewals. Our FCC licenses generally expire between 2017 and 2022 and are renewable upon application to the FCC. License renewal applications may be denied if the FCC determines, after appropriate notice and hearing, that renewal would not serve the public interest, convenience, or necessity. At the time of renewal, if we can demonstrate that we have provided “substantial” service during the past license term and have complied with the Communications Act and applicable FCC rules and policies, then the FCC will award a renewal expectancy to us and will generally renew our existing licenses without considering any competing applications. The FCC defines “substantial” service as service that is sound, favorable and substantially above a level of mediocre service that might only minimally warrant renewal. If we do not receive a renewal expectancy, then the FCC will accept competing applications for the license and conduct a comparative hearing. In that situation, the FCC may award the license to another applicant. While our licenses have been renewed regularly by the FCC in the past, there can be no assurance that all of our licenses will be renewed in the future.

In 2011, the FCC, in a Notice of Proposed Rule Making (“NPRM”), proposed to establish more consistent requirements for the renewal of licenses, uniform policies governing discontinuances of service, and to clarify certain construction obligations across all of the wireless service bands. The proposed changes to the applicable renewal and discontinuance of service requirements may be applied to existing licenses that will be renewed in the future. This process remains pending. We are unable to predict with any certainty the likely timing or outcome of this wireless renewal standards proceeding.

The FCC may deny license applications and, in extreme cases, revoke licenses if it finds that an entity lacks the requisite qualifications to be a licensee. In making that determination, the FCC considers whether an applicant or licensee has been the subject of adverse findings in a judicial or administrative proceeding involving felonies, the possession or sale of unlawful drugs, fraud, antitrust violations, or unfair competition, employment discrimination, misrepresentations to the FCC or other government agencies, or serious violations of the Communications Act or FCC regulations. To our knowledge, there are no activities and no judicial or administrative proceedings involving either us or the licensees in which we hold a controlling interest that would warrant such a finding by the FCC.

License Acquisitions. Prior FCC approval typically is required for transfers or assignments of a controlling interest in any license or construction permit, or of any rights thereunder. The FCC may approve or prohibit such transactions altogether, or approve subject to certain conditions such as divestitures or other requirements.

Non-controlling minority interests in an entity that holds an FCC license generally may be bought or sold without FCC approval, subject to any applicable FCC notification requirements. The FCC permits licensees to lease spectrum to third parties under certain conditions, subject to prior FCC approval, or in some instances, notification to the FCC. These mechanisms provide additional flexibility for wireless providers to structure transactions and create additional business and investment opportunities.

The FCC no longer caps the amount of CMRS spectrum in which an entity may hold an attributable interest and now engages in a case-by-case review of proposed wireless transactions, including spectrum acquired via auction, to ensure that the proposed transaction serves the public interest and would not result in a rule violation or an undue concentration of market power.

In reviewing proposed transactions that involve the transfer or assignment of mobile wireless spectrum, the FCC utilizes a spectrum aggregation screen to determine whether the transaction requires additional scrutiny. The FCC in June 2014 adopted an Order which updated the spectrum screen that the FCC uses in order to conduct its competitive review of proposed secondary market transactions. The FCC's Order continued the FCC's policy of conducting a case-by-case analysis of a combined entity's spectrum screen holdings for proposed transactions, revised its existing spectrum screen to reflect the current suitability and availability of spectrum for mobile wireless services, and adopted certain limitations with respect to the purchase and transfer of 600 MHz spectrum. A transaction will trigger additional FCC scrutiny if it will result in the geographic overlap of CMRS spectrum in a given area that is equal to or in excess of 141 MHz, 163.5 MHz, 171 MHz, or 194 MHz, depending on the availability of BRS and AWS spectrum in an overlap area. A transaction will also be reviewed by the FCC with heightened scrutiny if it will result in the resulting entity having over 45 MHz of spectrum under 1 GHz. The FCC's additional scrutiny would also be triggered if a proposed transaction results in a material change in the post-transaction market share in a particular market as measured by the Herfindahl-Hirschman Index. We are well below the spectrum aggregation screen in the majority of geographic areas in which we hold or have access to licenses, and thus we may be able to acquire additional spectrum either from the FCC in an auction or from third parties in private transactions in most locations in which we operate. Similarly, our competitors may be able to strengthen their operations by making additional acquisitions of spectrum in our markets or by further consolidating the industry.

Other Requirements. The Communications Act and the FCC's rules impose a number of additional requirements upon wireless service providers. A failure to meet or maintain compliance with the Communications Act and/or the FCC's rules may subject us to fines, forfeitures, penalties or other sanctions.

Wireless licensees must satisfy a variety of FCC requirements relating to technical and reporting matters. Licensees must often coordinate frequency usage with adjacent licensees and permittees to avoid interference between adjacent systems. In addition, the height and power of transmitting facilities and the type of signals emitted must fall within specified parameters. For certain licensed services, a variety of incumbent government and non-government operations may have to be relocated before a licensee may commence operations, which may trigger the payment of relocation costs by the incoming licensee.

The radio systems towers that we own and lease are subject to Federal Aviation Administration and FCC regulations that govern the location, marking, lighting, and construction of towers and are subject to the requirements of the National Environmental Policy Act, National Historic Preservation Act, and other environmental statutes enforced by the FCC. The FCC has also adopted guidelines and methods for evaluating human exposure to radio frequency emissions from radio equipment. We believe that all of our radio systems on towers that we own or lease comply in all material respects with these requirements, guidelines, and methods.

The FCC has adopted requirements for cellular, PCS and other CMRS providers to implement basic and enhanced 911, or E-911, services. These services provide state and local emergency service providers with the ability to better identify and locate 911 callers using wireless services, including callers using special devices for the hearing impaired. Because the implementation of these obligations requires that the local emergency services provider have certain facilities available, our specific obligations are set on a market-by-market basis as emergency service providers request the implementation of E-911 services within their locales. As part of an E-911 initiative, the FCC adopted stronger rules regarding E-911 location accuracy. The extent to which we are required to deploy E-911 services will

affect our capital spending obligations. Federal law limits our liability for uncompleted 911 calls to a degree commensurate with wireline carriers in our markets.

In 2013, the FCC adopted rules requiring wireless carriers and certain other text messaging service providers to send an automatic ‘bounce-back’ text message to consumers who try to text 911 where text-to-911 is not available, indicating the unavailability of such services. In August 2014, the FCC required all wireless carriers as well as other providers of interconnected text messaging applications, to be capable of supporting text-to-911 service by December 31, 2014, and to provide such service to requesting PSAPs by June 30, 2015 or six months after a request from a PSAP, whichever is later. The FCC has also sought further comment regarding additional regulations pertaining to the provision of text-to-911 service.

In addition to CMRS licenses, our wireless business relies on FCC licensed spectrum for “Common Carrier Fixed Point to Point Microwave” referred to as Common Carrier Microwave. We currently operate over 200 licensed microwave links. Common Carrier microwave stations are generally used in a point-to-point configuration for cellular site connections or to connect points on the telephone network which cannot be connected using standard wireline or fiber optic cable because of cost or terrain. The majority of our license grants are for a period of 10 years.

In 2008 the FCC issued Further Notice of Proposed Rulemaking (FNPRM) which established a Commercial Mobile Alert System (CMAS) allowing CMRS providers to transmit emergency alerts to the public. In February 2013, the FCC introduced obligation to indicate whether carriers have opted in or out of providing this service to its subscribers. We have chosen to opt into the service and we are currently providing it to all of our retail wireless customers.

The FCC’s rules require CMRS providers to offer “roaming” services to other providers. Roaming enables one provider’s customers to obtain service from another provider when the customer is using their wireless device in an area served by the second provider. These rules apply to voice, messaging, and data services, including Internet access, although the roaming rules vary somewhat among these services. We are obligated to offer roaming, and we have the right to seek roaming from other providers, on reasonable terms and conditions. The FCC has identified a variety of factors that are relevant to whether an offer to provide roaming is reasonable, including the price, terms and conditions, and whether the two providers’ networks are technologically compatible. Changes in the FCC’s roaming regulation may affect the terms under which we provide roaming services to third parties and may affect our ability to secure roaming arrangements with other CMRS providers on behalf of our retail wireless customers.

We are obligated to pay certain annual regulatory fees and assessments to support FCC wireless industry regulation, as well as fees supporting federal universal service programs, number portability, regional database costs, centralized telephone numbering administration, telecommunications relay service for the hearing-impaired and application filing fees. These fees are subject to change periodically by the FCC and the manner in which carriers may recoup these fees from customers is subject to various restrictions.

Wireline Services

Local Competition. The Communications Act encourages competition in local telecommunications markets by removing barriers to market entry and imposing on non-rural incumbent local exchange carriers (or “ILECs”) various requirements related to, among other things, interconnection, access to unbundled network elements, collocation, access to poles, ducts, conduits, and rights-of-way, wholesale and resale obligations, and telephone number portability. These requirements continue to evolve through their implementation by the FCC and through FCC decisions forbearing from applying these rules to certain services and facilities. Most recently, in July 2016, the FCC issued an order largely deregulating the provision of switched access services by ILECs. Further future action by the FCC in connection with these requirements may have an effect on the financial condition or operations of our U.S. Wireline segment. Our operations on the U.S. mainland have benefited from the reduced costs in acquiring required communication services, such as ILEC interconnection, as a result of these requirements. Provisions relating to interconnection, telephone number portability, equal access, and resale could, however, subject us to increased competition and additional economic and regulatory burdens. Our ILEC operations in the U.S. Virgin Islands through Innovative are exempt from most of these requirements pursuant to a rural exemption.

While the FCC to date has declined to classify interconnected VoIP service as a telecommunications service or information service, it has imposed a number of consumer protection and public safety obligations on interconnected VoIP providers, relying in large part on its general ancillary jurisdiction powers. To the extent that we provide interconnected VoIP service we will be subject to a number of these obligations.

Video Services. Video services systems are regulated by the FCC under the Communications Act. The FCC regulates our programming selection through local broadcast TV station mandatory carriage obligations, constraints on our retransmission consent negotiations with local broadcast TV stations, and limited regulation of our carriage negotiations with cable programming networks. The FCC also imposes rules governing, among other things, leased cable set-top boxes, our ability to collect and disclose subscribers' personally identifiable information, access to inside wiring in multiple dwelling units, cable pole attachments, customer service and technical standards, and disability access requirement. Failure to comply with these regulations could subject us to penalties.

Wireless and Wireline Services

Universal Service. In general, all telecommunications providers are obligated to contribute to the federal Universal Service Fund (or "USF"), which is used to promote the availability of wireline and wireless telephone service to individuals and families qualifying for federal assistance, households located in rural and high-cost areas, and to schools, libraries and rural health care providers. Contributions to the federal USF are based on end user interstate and international telecommunications revenue. Some states have similar programs that also require contribution. The FCC has suggested that it may examine the way in which it collects carrier contributions to the USF, including a proposal to base collections on the number of telephone numbers or network connections in use by each carrier. We contribute to the USF as required by the rules throughout the U.S., and receive funds from the USF for providing service in rural areas of the United States and the U.S. Virgin Islands. The collection of USF fees and distribution of USF support is under continual review by state and federal legislative and regulatory bodies, and changes to these programs could affect our revenues. We are subject to audit by the Universal Service Administration Corporation (or "USAC") with respect to our contributions and our receipts of universal service funding. We believe we are substantially compliant with all FCC and state regulations related to the receipt and collection of universal service support.

In November 2011, the FCC released an order reforming the USF program to phase out the current level of high-cost USF support for wireless carriers over a period of five years, beginning in 2012. The scheduled phase out, however, was suspended in 2013 as the FCC addresses a delay in implementing phase two of its Mobility Fund program. We cannot predict the impact of any such changes on the amounts we pay or receive in USF funds and consequently, our efforts to build and maintain networks in certain rural markets. As part of the USF reforms, the FCC created two new replacement funds, the Connect America Fund and the Mobility Fund, both of which allow for the use of USF funds for broadband services, in addition to voice services. The new funds are intended to provide targeted financial support to areas that are unserved or under-served by voice and broadband service providers and will be initiated during the phase out of USF support.

In July 2012, the FCC initiated the application process for the Mobility Fund I program, a reverse auction for a one-time distribution of up to \$300 million intended to stimulate third- and fourth-generation wireless coverage in unserved and under-served geographic areas. A number of our subsidiaries participated in the Mobility Fund I reverse auction on September 27, 2012 and bid successfully for approximately \$21.7 million in one-time support to expand voice and broadband networks in certain geographic areas in order to offer either 3G or 4G coverage. These subsidiaries have completed the construction of the facilities funded by this support and are finalizing the submissions necessary to document this in order to receive their final payments.

Our newly acquired business in the U.S. Virgin Islands also benefits from USF support and expects to continue to receive its current annual support of approximately \$16 million for the foreseeable future, subject to performance requirements to be outlined by the FCC. To continue to receive these funds, we must commit to comply with certain additional FCC construction and other requirements. We are participating in ongoing FCC proceedings that will establish the obligations that will be associated with these funds and the term over which they will continue to be disbursed but we cannot predict the outcome of this proceeding or its effects on our operations, if any.

Intercarrier Compensation. Under federal and state law, telecommunications providers are generally required to compensate one another for originating and terminating traffic for other carriers. Consistent with these provisions, we currently receive compensation from other carriers and also pay compensation to other carriers. In October 2011, the FCC, significantly revised its intercarrier compensation regime. Under the revised intercarrier compensation regime, where there is no pre-existing agreement between a CMRS carrier and a local exchange carrier (or “LEC”) for the exchange of local traffic, such traffic between CMRS providers and the LEC is to be compensated pursuant to a default bill-and-keep regime, in which each carrier agrees to terminate calls from the other at no charge. The FCC’s revised intercarrier compensation regime also sets forth a transition schedule that will result in most traffic between telecommunications carriers being exchanged on a bill-and-keep basis. Specifically, the rules call for most terminating traffic exchanged with larger LECs to be exchanged on a bill-and-keep basis beginning July 1, 2017, and all terminating traffic with all LECs to be exchanged on a bill-and-keep basis by July 1, 2020. These rules may affect the manner in which we are charged or compensated for the exchange of traffic. We cannot predict the impact of any changes to these requirements on the amounts that we pay or receive.

Net Neutrality. The FCC, in March 2015, adopted net neutrality rules for broadband Internet providers, including mobile broadband Internet providers, under which such providers would not be able to engage in various forms of blocking, throttling or paid prioritization with respect to Internet content, subject to reasonable network management. The FCC also adopted enhanced transparency rules and a general conduct rule regarding behavior of broadband Internet providers. In doing so, the FCC reclassified broadband Internet service as a Title II telecommunications service under the Communications Act. The FCC, in reclassifying broadband Internet service as a Title II service, specifically forbore from applying many legacy common carrier regulations to broadband Internet service providers. These network neutrality rules were upheld by the United States Court of Appeals for the District of Columbia, and challengers have asked the court to reconsider its decision. We cannot predict with any certainty the likely timing or outcome of any Court action. Press reports and statements by the new FCC leadership indicate that the FCC is likely to relax or eliminate the net neutrality rules.

Telecommunications Privacy Regulations. The FCC, in October 2016, adopted new privacy rules that impose certain transparency, consumer choice, data security, and data breach notification requirements on telecommunications providers, including broadband Internet providers. Among other things, the rules prohibit broadband providers from using or sharing their customers’ web browsing history or app usage information for advertising purposes without customers’ opt-in consent. They also require certain enhanced disclosure and consent requirements for offering consumers financial incentives, such as discounts, to permit the use and sharing of their data. Several parties have petitioned the FCC for reconsideration of the new rules, most of which are not yet effective. These requirements are scheduled to go into effect March 2, 2017, whereas the new notice and choice requirements will not be effective until at least December 2, 2017. The new Administration has publicly stated that it intends to modify or eliminate these rules, and we cannot predict the likely timing or outcome of any such action.

CALEA. Under certain circumstances, federal law also requires telecommunications carriers to provide law enforcement agencies with capacity and technical capabilities to support lawful wiretaps pursuant to the Communications Assistance for Law Enforcement Act (or “CALEA”). Federal law also requires compliance with wiretap-related record-keeping and personnel-related obligations. We are in compliance with all such requirements currently applicable to us. The FCC has adopted rules that apply CALEA obligations to high speed Internet access and voice-over Internet protocol (or “VoIP”) services. Maintaining compliance with these law enforcement requirements may impose additional capital spending obligations on us to make necessary system upgrades.

Obligations Due to Economic Stimulus Grants

Three of our subsidiaries have received awards from the Broadband Technology Opportunities Program (“BTOP”) of the U.S. Department of Commerce (“DOC”) pursuant to the American Recovery and Reinvestment Act of 2009 (“ARRA”). As a BTOP awardee, we are subject to the various terms and conditions included in the agency’s Notice of Funds Availability published in the Federal Register on July 9, 2009. Among these requirements are Interconnection and Non-Discrimination requirements by which any awardee must comply with the following requirements: (i) adhere to the principles contained in the FCC’s Internet Policy Statement (FCC 05-151, adopted August 5, 2005) or any subsequent ruling or statement; (ii) not favor any lawful Internet applications and content over

others; (iii) display network management policies in a prominent location on its web page and provide notice to customers of changes to these policies; (iv) connect to the public Internet directly or indirectly, so that the project is not an entirely private closed network; and (v) offer interconnection, where technically feasible without exceeding current or reasonably anticipated capacity limitations, at reasonable rates and terms to be negotiated with requesting parties. While FCC rules regarding these issues may apply to all our operations, these particular requirements apply only to our BTOP-funded projects.

As a BTOP awardee, we are also required to comply with other terms and conditions of the individual DOC grants, including reporting, transparency and audit requirements pursuant to Section 1512 of the ARRA, and notification and reporting obligations set forth in the Office of Management and Budget Memorandum, *Implementing Guidance for Reports on Use of Funds Pursuant to the American Recovery and Reinvestment Act of 2009* (OMB M-09-21, June 22, 2009). We believe we are currently in material compliance with all BTOP and DOC requirements applicable to our grants.

U.S. State Regulation

Federal law preempts state and local regulation of the entry of, or the rates charged by, any CMRS provider. As a practical matter, we are free to establish rates and offer new products and service with a minimum of regulatory requirements. The states in which we operate maintain nominal oversight jurisdiction. For example, although states do not have the authority to regulate the entry or the rates charged by CMRS providers, states may regulate the “other terms and conditions” of a CMRS provider’s service. Most states still maintain some form of jurisdiction over complaints as to the nature or quality of services and as to billing issues. Since states may continue to regulate “other terms and conditions” of wireless service, and a number of state authorities have initiated actions or investigations of various wireless carrier practices, the outcome of these proceedings is uncertain and could require us to change certain of our practices and ultimately increase state regulatory authority over the wireless industry. States and localities assess on wireless carriers taxes and fees that may equal or even exceed federal obligations.

The location and construction of our wireless transmitter towers and antennas are subject to state and local environmental regulation, as well as state or local zoning, land use and other regulation. Before we can put a system into commercial operation, we must obtain all necessary zoning and building permit approvals for the cell site and tower locations. The time needed to obtain zoning approvals and requisite state permits varies from market to market and state to state. Likewise, variations exist in local zoning processes. If zoning approval or requisite state permits cannot be obtained, or if environmental rules make construction impossible or infeasible on a particular site, our network design might be adversely affected, network design costs could increase and the service provided to our customers might be reduced.

In December 2016, the FCC initiated a proceeding to consider further streamlining the regulations governing the siting of wireless facilities on municipal rights-of-way. The FCC will consider in this proceeding whether to impose requirements on state and local jurisdictions to facilitate wireless tower siting. Although we cannot predict the outcome of this proceeding, and such streamlining of tower siting requirements may benefit our ability to expand our wireless network coverage.

U.S. Virgin Islands Regulation

Virgin Islands Public Service Commission

Pursuant to the USVI Public Utilities Code, the Virgin Islands Public Service Commission (“PSC”) regulates certain telecommunications and cable TV services that Innovative provides in the U.S. Virgin Islands through Innovative. In addition, certain of our subsidiaries entered into a transfer of control agreement with the PSC on July 1, 2016, which imposes certain operational obligations on the Innovative companies. Among other things, the PSC establishes the rates and fees that we may charge local exchange residential and enterprise customers in the U.S. Virgin Islands. The PSC is required by US Virgin Islands law to review local utility rates every five years. In June 2016, the PSC adopted an order increasing the rates and fees that we may charge subject to certain conditions and future obligations. We believe that we have satisfied these requirements. In addition, as a condition to Innovative’s receipt of

universal service funds from the FCC, the PSC is required to certify on annual basis that Innovative is in compliance with certain eligible telecommunication carrier (“ETC”) obligations. We believe that we comply with all such obligations but we cannot predict the outcome of future PSC proceedings relating to Innovative’s ETC status. Further, our subsidiaries provide cable TV service in the U.S. Virgin Islands pursuant to two franchises granted by the PSC. Each franchise was renewed in July 2015 by an order issued by the PSC, but the PSC has not yet issued new franchise agreements memorializing these renewals. We understand that the renewal franchise agreements contain substantially similar terms and conditions as the prior franchise agreements, including a 15-year term.

Virgin Islands Research and Technology Park

Our video and wireless companies in the U.S. Virgin Islands also receive tax benefits as qualifying participants in the USVI’s Research & Technology Park (“RTPark”) program. RTPark was chartered with the goal of promoting technology-based economic development in the territory and offering attractive economic incentives to companies that contribute to the development of the Virgin Islands through local employment and sourcing, as well as significant contributions to both the economy and the non-profit sectors of the community. As part of the program, our participating entities currently receive a 100% tax exemption applied against gross receipts and excise taxes as well as a 90% exemption against income taxes. These benefits equate to an annualized range of \$2.0 to \$2.5 million in expected tax exemptions for the year ended December 31, 2016. In order to qualify, we are required to maintain certain capital investments over the first five years of the agreement, pay monthly management fees of 0.4% of tenant company revenue, make annual charitable contributions to the University of the Virgin Islands, purchase products and services locally when feasible and provide in-kind services to RTPark. As part of our acquisition of our newly acquired business in the U.S. Virgin Islands, we expect to work with the RTPark in the 2017 fiscal year to consolidate our legacy wireless operations with our newly acquired operations as a single participant in the RTPark.

Guyana Regulation

Our subsidiary, Guyana Telephone & Telegraph Limited (“GTT”), in which we hold an 80% interest, is subject to regulation in Guyana under the provisions of GTT’s License from the Government of Guyana, the Guyana Public Utilities Commission Act of 1999 as amended (or “PUC Law”) and the Guyana Telecommunications Act 1990 (or “Telecommunications Law”). The Public Utilities Commission of Guyana (or “PUC”) is an independent statutory body with the principal responsibility for regulating telecommunications rates and services in Guyana. The Ministry of Telecommunications, an agency of the Government of Guyana, has formal authority over telecommunications licensing and related issues.

Licenses. GTT provides domestic fixed (both wireline and wireless) and international voice and data services in Guyana pursuant to a License from the Government of Guyana granting GTT the exclusive right to provide the following: public telephone, radio telephone, and pay telephone services; domestic fixed services (both wireline and wireless); international voice and data services; sale of advertising in any telephone directories; and switched or non-switched private line service. The License, which was issued in December 1990, had an initial 20-year term. Pursuant to the License, GTT also provides mobile wireless telephone service in Guyana on a non-exclusive basis pursuant to an initial twenty-year term. In November 2009, GTT notified the Government of its election to renew both the exclusive and non-exclusive license grants for an additional 20 year term expiring in 2030. In exercising this option, GTT reiterated to the Government that GTT and the Company would be willing to voluntarily relinquish the exclusivity aspect of GTT’s licenses, but only as part of an alternative agreement with the Government. On December 15, 2010, the Government, through the Office of the President, sent a letter to GTT indicating that GTT’s License was renewed until such time as a new legislative and regulatory regime to reform the telecommunications sector in Guyana is brought into force; however, GTT formally notified the Government that it is entitled to an unconditional renewal of both the exclusive and non-exclusive license grants for an additional period of twenty years or until such time as GTT and the Company enter into an alternative agreement with the Government.

PUC Law and Telecommunications Law. The PUC Law and the Telecommunications Law provide the general framework for the regulation of telecommunications services in Guyana. As a general matter, the PUC has authority to regulate GTT’s domestic and international telecommunications services and rates and to require GTT to supply certain

technical, administrative and financial information as it may request. The PUC claims broad authority to review and amend any of GTT's programs for development and expansion of facilities or services, although GTT has challenged the PUC's view on the scope of its authority. For a description of recent actions of the PUC, see Note 13 to the Consolidated Financial Statements included in this Report.

Regulatory Developments. In 2016, the Government of Guyana passed new telecommunications legislation introducing material changes to many features of Guyana's existing telecommunications regulatory regime with the intention of introducing additional competition into Guyana's telecommunications sector. The legislation that passed, however, has not yet been implemented and does not include a provision that permits other telecommunications carriers to receive licenses automatically upon signing of the legislation, nor does it have the effect of terminating our exclusive license. Instead, the legislation, as passed, requires the Minister of Telecommunications to conduct further proceedings and issue implementing orders to enact the various provisions of the legislation. We have met with the Government of Guyana, including as recently as December 2016, to discuss modifications of our exclusivity rights and other rights under its existing agreement and license. However, there can be no assurance that those discussions will be concluded before the Government issues new licenses as contemplated by the legislation or at all, or that they will satisfactorily address the Company's contractual exclusivity rights. Although we believe that we would be entitled to damages or other compensation for any involuntary termination of its contractual exclusivity rights, we cannot guarantee that we would prevail in a proceeding to enforce our rights or that our actions would effectively halt any unilateral action by the Government.

FCC Rule-Making and International Long-Distance Rates. The actions of foreign telecommunications regulators, especially the FCC in the United States, can affect the settlement or termination rate payable by foreign carriers to GTT for incoming international voice calls. While the FCC continues to monitor and evaluate termination rate levels and benchmarks, we cannot predict when and if the FCC will further reduce settlement rates or the effect lower rates will have on revenue in our International Integrated Telephony segment.

Caribbean and Bermuda Regulation

In Bermuda, we were historically subject to Bermuda's Telecommunications Act of 1986 that authorized it to use spectrum to deliver services under its "Class B" license. In 2013, the Regulatory Authority implemented the Electronic Communications Act of 2011 ("ECA"), which allows communications service providers to enter new lines of business and introduces competition in the sector. As the government of Bermuda reforms the local telecommunications market, it has imposed regulatory and other fees and adopted additional regulation that have increased the regulatory costs incurred by and could otherwise impact our Bermuda operations. In 2017, the Regulatory Authority is expected to conduct a review of the market as required by the ECA. We cannot now accurately predict the impact to the competitive position of our Bermuda business or limitations that such actions will have on our ability to grow.

In the British Virgin Islands ("BVI"), the local government (rather than the government of the United Kingdom) has authority over telecommunications matters in the BVI, with the Ministry of Communications and Works acting as the licensing authority and the Telecommunications Regulatory Commission ("TRC") acting as the regulator. With the adoption of the Telecommunications Act, 2006, the BVI telecommunications market was substantially liberalized and reformed. In 2007, BVI Cable received a unitary license authorizing it to provide fixed, mobile, broadband, and video services. The unitary license has a 15-year term and is eligible for renewal for subsequent 15-year terms.

Renewable Energy Services Regulation

U.S. Federal Regulation

All of our currently owned projects in operation are solar "qualifying facilities" under the Public Utility Regulatory Policies Act of 1978, as amended ("PURPA"). As such, the projects and the respective project company that own the projects are exempt from ratemaking and certain other regulatory provisions of the Federal Power Act, as amended ("FPA"), and from state organizational and financial regulation of electric utilities.

Our projects are also subject to compliance with the applicable mandatory reliability standards developed by the North American Electric Reliability Corporation and approved by FERC under the FPA.

Additionally, certain of the project companies that own projects or the “offtakers” of the electricity from the projects have entered into interconnection agreements with the local utility that allows the project companies or the offtakers to deliver excess electricity to the utility distribution system. In almost all cases, interconnection agreements are standard form agreements that have been preapproved by the local public utility commission or other state regulatory agencies with jurisdiction over interconnection agreements.

India Regulation

The Electricity Act, 2003

The Electricity Act, 2003, or Electricity Act, regulates and governs the generation, transmission, distribution, trading and use of electricity in India. Under the Electricity Act, the transmission, distribution and trade of electricity are regulated activities that require licenses from the relevant electricity regulatory commission (Central Electricity Regulatory Commission), State Electricity Regulatory Commissions, or “SERCs”, or the joint commission (constituted by an agreement entered into by two or more state governments or the central government in relation to one or more state governments, as the case may be).

In terms of the Electricity Act, any generating company may establish, operate and maintain generating stations without obtaining a license if it complies with prescribed technical standards relating to grid connectivity. The generating company is required to establish, operate and maintain generating stations, tie-lines, sub-stations and dedicated transmission lines.

Further, the generating company may supply electricity to any licensee or even directly to consumers, subject to availing open access to the transmission and distribution systems and payment of transmission charges, including wheeling charges and open access charges, as may be determined by the relevant electricity regulatory commission. In terms of the Electricity Act, open access means the non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system, by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the relevant electricity regulatory commission.

The relevant electricity regulatory commission is empowered to, among other things, determine or adopt the tariff for supply of electricity from the generating company to a distribution licensee (such as the distribution utility companies), for transmission of electricity, wheeling of electricity and retail sale of electricity. However, the relevant electricity regulatory commission may, in case of shortage of supply of electricity, fix the minimum and maximum tariffs for sale or purchase of electricity under agreements between a generating company and a licensee or between licensees, for a period not exceeding one year, to ensure reasonable prices of electricity. While determining the tariff, commissions are required to be guided by, among other things, the promotion of co-generation and generation of electricity from renewable sources of energy.

The Electricity (Amendment) Bill, 2014 was introduced in the lower house of the Indian Parliament to amend certain provisions of the Electricity Act. Among other things, the amendment empowers the Indian government to establish and review a national renewable energy policy, tariff policy and electricity policy. Further, the Indian government may, in consultation with the state governments, notify policies and adopt measures for promotion of renewable energy generation including through tax rebates, generation linked incentives, creation of a national renewable energy fund, development of renewable industry and for effective implementation and enforcement of such measures.

The generating company is also required to ensure compliance with certain other regulations, including the Central Electricity Authority (Safety Requirements for Construction, Operation and Maintenance of Electrical Plants and Electric Lines) Regulations, 2011.

The National Electricity Policy, 2005

The Indian government approved the National Electricity Policy on February 12, 2005, in accordance with the provisions of the Electricity Act. The National Electricity Policy, 2005 has material effects on our business since it

provides the policy framework to the central and state Electricity Regulatory Commission in developing the power sector, supplying electricity and protecting interests of consumers and other stakeholders, while keeping in view the availability of energy resources, technology available to exploit such resources, economics of generation using different resources and energy security issues. The National Electricity Policy emphasizes the need to promote generation of electricity based on non-conventional sources of energy.

The National Electricity Policy provides that the SERCs should specify appropriate tariffs in order to promote renewable energy, until renewable energy power producers relying on non-conventional technologies can compete with conventional sources of energy. The SERCs are required to ensure progressive increase in the share of generation of electricity from renewable energy sources and provide suitable measures for connectivity with the grid and sale of electricity to any person. Further, the SERCs are required to specify, for the purchase of electricity from renewable energy sources, a percentage of the total consumption of electricity in the area of a distribution licensee. Furthermore, the National Electricity Policy provides that such purchase of electricity by distribution companies should be through a competitive bidding process. The National Electricity Policy permits the SERCs to determine appropriate differential prices for the purchase of electricity from renewable energy power producers, in order to promote renewable sources of energy.

The National Tariff Policy, 2006

The Indian government approved the National Tariff Policy on January 6, 2006, in accordance with the provisions of the Electricity Act. The National Tariff Policy, 2006 indirectly impacts our business because it provides the policy framework to the Electricity Regulation Commissions as described below. The National Tariff Policy requires all the SERCs to specify minimum percentages for electricity to be purchased from renewable energy sources. While deciding such percentage, the SERCs must take into account the availability of such resources in the region and its impact on retail tariffs. The National Tariff Policy further provides that procurement of electricity by distribution companies from renewable energy power producers must be done at preferential tariffs determined by the SERCs. Such procurement of electricity by distribution companies for future requirements is to be done, as far as possible, through a competitive bidding process in accordance with the provisions of the Electricity Act among suppliers offering energy from same type of non-conventional sources.

Central Electricity Regulatory Commission (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2012

The Central Electricity Regulatory Commission has announced the Central Electricity Regulatory Commission (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2012, or Tariff Regulations, which prescribes the criteria that may be taken into consideration by the SERCs while determining the tariff for the sale of electricity generated from renewable energy sources which include, among other things, return on equity, interest on loan capital and depreciation. Accordingly, such tariff cannot be determined independently by renewable energy power producers such as our company. Pursuant to the National Tariff Policy, the Central Electricity Regulatory Commission is required to determine the rate of return on equity which may be adopted by the SERCs to determine the generic tariff, keeping in view the overall risk and prevalent cost of capital, which factors are also to be taken into consideration by SERCs while determining the tariff rate. The Tariff Regulations prescribe that the normative return on equity shall be 20% per annum for the first 10 years and 24% per annum from the 11th year onwards.

The Tariff Regulations also provide the mechanism for sharing of carbon credits from approved clean development mechanism projects between renewable energy power producers and the concerned beneficiaries. Under the Tariff Regulations, the project developer is entitled to retain 100% of the gross proceeds on account of clean development mechanism project benefits in the first year after the date of commercial operation of the generating station. Subsequently, in the second year, the share of the beneficiaries is increased to 10% and then progressively increased by 10% every year until it reaches 50% after which the clean development mechanism project proceeds are to be shared equally between the generating company and the beneficiaries.

Renewable Purchase Obligations

The Electricity Act promotes the development of renewable sources of energy by requiring the SERCs to ensure grid connectivity and the sale of electricity generated from renewable sources. In addition, it requires the SERCs

to specify, for the purchase of electricity from renewable sources, a percentage of the total consumption of electricity within the area of a distribution licensee, which are known as RPOs. Pursuant to this mandate, most of the SERCs have specified solar and non-solar RPOs in their respective states. In terms of the RPO regulations, RPOs are required to be met by obligated entities (that is, distribution licensees, captive power plants and open access consumers) by purchasing renewable energy, either by entering into PPAs with renewable energy power producers or by purchasing renewable energy certificates. The RPO regulations require the obligated entities to purchase power from renewable energy power producers such as our company. In the event of default by an obligated entity in any fiscal year, the SERCs may direct the obligated entity to deposit an amount determined by the relevant SERC, into a fund to be utilized for, among other things, the purchase of renewable energy certificates. Additionally, pursuant to the Electricity Act, a defaulting obligated entity may also be liable to pay a penalty as determined by the SERCs.

In May 2015, the Supreme Court of India upheld a regulation that made it compulsory for captive power plants and open access consumers to purchase electricity to fulfill their RPOs. This landmark judgment is expected to boost the demand for renewable energy by captive players and also improve the marketability of renewable energy certificates in India.

Safety and Environmental Laws

We are governed by certain safety and environmental legislations, including the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, and the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008.

Under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, failure to comply with the orders and restrictions passed by the State Pollution Control Boards may result in imprisonment of a minimum term of one and a half years. Additionally, certain acts including the destruction of property of the State Pollution Control Boards, failure to intimate the emission of pollutants or failure to furnish information to the State Pollution Control Boards may attract monetary penalties of up to Rs. 0.01 million and imprisonment of up to three months.

The failure to comply with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 may attract monetary penalties of Rs. 0.1 million and imprisonment of up to five years.

Labor Laws

We are required to comply with certain labor and industrial laws, which includes the Factories Act, 1948, the Industrial Disputes Act, 1947, the Employees State Insurance Act, 1948, the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Minimum Wages Act, 1948, the Payment of Bonus Act, 1965, the Workmen Compensation Act, 1923, the Payment of Gratuity Act, 1972, the Contract Labour (Regulation and Abolition) Act, 1970 and the Payment of Wages Act, 1936.

Each of these legislations carry a penalty provision for non-compliance, which prescribe monetary penalties ranging from Rs. 0.001 million to Rs. 0.005 million and imprisonment for periods ranging from one month to three years.

Available Information

Our website address is www.atni.com. The information on our website is not incorporated by reference in this Report and you should not consider information provided on our website to be part of this Report. Investors may access, free of charge, our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, plus amendments to such reports as filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, through the "Financials & Filings" portion of the "Investor Relations" section of our website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission. In addition, paper copies of these documents may be obtained free of charge upon request by writing to us at 500 Cummings Center, Beverly, Massachusetts 01915, Attention: Investor Relations, by calling us at (978) 619-1300 or by emailing us at ir@atni.com.

We have adopted a written Code of Ethics that applies to all of our employees and directors, including, but not limited to, our principal executive officer, principal financial officer, and principal accounting officer or controller, or persons performing similar functions. Our Code of Ethics, along with our Compensation Committee Charter, Audit Committee Charter and Nominating and Corporate Governance Committee Charter, are available at the Corporate Governance section of our website. We intend to make any disclosure required under the SEC rules regarding amendments to, or waivers from, our Code of Ethics on our website.

ITEM 1A. RISK FACTORS

In addition to the other information contained in, or incorporated by reference into, this Report, you should carefully consider the risks described below that could materially affect our business, financial condition or future results. These risks are not the only risks facing us. Additional risks and uncertainties not presently known to us or that we currently believe are immaterial also may materially adversely affect our business, financial condition and/or results of operations.

Risks Related to our U.S. Telecom Segment

A significant portion of our U.S. wholesale wireless revenue is derived from a small number of customers.

A substantial portion of our U.S. Wireless revenue is generated from four national wireless service providers. Our U.S. wholesale wireless revenues accounted for approximately 28% of our consolidated revenues in 2016.

Our relationships with our roaming customers generally are much more financially significant for us than for our customers. Frequently, our relationships with our roaming customers do not require them to “prefer” our networks or require them to send us a minimum amount of traffic. Instead, roaming customers may choose to utilize other networks, if available, for their subscribers’ roaming use. If our markets currently included in our roaming partners’ home calling areas are instead subject to the imposition of additional roaming charges or if we fail to keep any of our roaming customers satisfied with our service offerings or economic terms, we could lose their business, experience less roaming traffic or be unable to renew or enter into new agreements with these customers on beneficial terms (including pricing), resulting in a substantial loss of revenue, which would have a materially adverse effect on our results of operations and financial condition. In addition, if these customers build or acquire wireless networks in our service areas we would lose revenue. Should any of these customers take such actions over a significant portion of the areas we serve, it may have a materially adverse effect on our results of operations and financial condition.

We may have difficulty meeting the growing demand for data services.

Demand for smartphones and data services continues to grow across all of our wireless markets and our value to our customers in some markets depends in part on our network’s ability to provide high-quality and high capacity network service to smartphone devices. Indeed, much of the revenue growth in our wireless businesses in 2016 was attributable to increased demand for data services. However, if data usage increases faster than we anticipate and exceeds the then-available capacity of any of our networks, our costs to deliver roaming services may be higher than we anticipate. In the United States, the dearth of available spectrum and or non-transparent spectral allocation practices in our industry means that we cannot guarantee that we will be able to acquire additional spectrum at a reasonable cost or at all to ensure our ability to maintain or grow our business and traffic volumes. As demand for advanced mobile data services continues to grow, we may have difficulty satisfying our retail and wholesale customers’ demand for these services without substantial upgrades and additional capital expenditures and operating expenses, which could have an adverse effect on our results of operations and financial condition.

Risks Relating to Our International Telecom Segment

If we have difficulties integrating our newly acquired Bermuda and U.S. Virgin Islands businesses our business, financial condition and results of operations could be adversely affected.

This past year, we have undertaken the integration of two of our newly acquired businesses in our International Telecom segment: the Innovative group of companies operating video, Internet, wireless and landline services in the U.S. Virgin Islands and British Virgin Islands and One Communications, a Bermuda company that provides broadband and video services and other telecommunications services to residential and enterprise customers in Bermuda and the Cayman Islands. In connection with the Innovative Acquisition, we recruited a management team to operate the new business, and in both markets have added approximately 450 new employees that work in the acquired service markets. We have devoted and will continue to devote a significant amount of time and attention to integrating these operations with our existing network and technical operations team and transitioning certain accounting and other systems and processes to our own. Among the challenges we face in doing so are (1) the need to integrate a large number of new employees, (2) the need to integrate and upgrade our acquired network with our legacy network, switching and other core network facilities, (3) integrating and aligning numerous business and work processes, including customer billing, with the information systems necessary to track and handle those processes and (4) completing technology upgrades for fiber and other networks in construction or pending integration at the time of our acquisition of these businesses.

The integration process poses many challenges and significant unexpected difficulties in building or improving business and work processes, transitioning billing, inventory, point-of-sale systems or other systems, integrating our networks and engaging in costly technology upgrades. These challenges and difficulties could materially and negatively impact our customers' experience leading to widespread dissatisfaction, higher rates of customer churn, unsatisfactory employee relations, increased expense and reduced collected revenue. If any of the above events were to occur or if we have other difficulties with the transition process or our ability to integrate and manage these new businesses, it could harm our reputation and have a material adverse effect on our business, financial condition or results of operations.

Changes in Universal Service Fund (“USF”) funding could have an adverse impact on our financial condition or results of operations.

In November 2011, the FCC released an order reforming the USF program for all types of USF support recipients beginning in 2012, including Innovative. This order, and follow-on orders issued by the FCC, include, among other things, new services and reporting obligations applicable to USF support recipients. Changes in the FCC's leadership, including their implementation of an agenda to be set by the new U.S. Administration, could materially impact the amount of support that we expect to receive or the performance obligations attached thereto. Innovative currently receives high cost USF support, which was approximately \$16 million for the year ended December 31, 2016. Although we cannot predict the impact of such changes on the amounts we pay or receive in USF funds, the changes, or any future changes, could impact Innovative's USF funding negatively, and consequently, our efforts to build and maintain networks in the U.S. Virgin Islands market and our ability to provide services supported by USF funds, which could adversely affect the revenues of our International Telecom segment.

We may have difficulty securing video services content from third parties desirable to our customers on terms and conditions favorable to us.

We have secured licensing agreements with numerous content providers to allow our various video services businesses to offer a wide array of the most popular programming to our subscribers. Typically, we make long-term commitments relating to these rights in advance even though we cannot predict the popularity of the services or ratings the programming will generate. License fees may be negotiated for a number of years and may include provisions requiring us to pay part of the fees even if we choose not to distribute such programming.

The success of our video services operations depends on our ability to access an attractive selection of video programming from content providers on terms and pricing favorable to us. Our ability to provide movies, sports and other popular programming is a major factor that attracts subscribers to our services. Our inability to provide the content

desired by our subscribers on satisfactory terms or at all could result in reduced demand for, and lower revenue from, our cable operations that may not offset the typically large subscription fees that we pay for these services. In certain cases, we may not have satisfactory contracts in place with the owners of our distributed content, leading to such parties' desire for increased renewed contractual pricing or leading to disputes with such parties including claims for copyright or other intellectual property infringement.

The cost of obtaining programming associated with providing our video services is significant. The terms of many of our programming contracts are for multiple years and provide for future increases in the fees we must pay. In addition, local over-the-air television stations are increasingly seeking substantial fees for retransmission of their stations over our cable networks. Historically, we have absorbed increased programming costs in large part through increased prices to our customers. We cannot assure that competitive and other marketplace factors will permit us to continue to pass through these costs or that we are able to renew programming agreements on comparable or favorable terms. Also, programming in the Caribbean typically includes Latin American or Spanish programming, while our subscribers typically prefer content in English. To the extent that we are unable to reach acceptable agreements with programmers or obtain desired content, we may be forced to remove programming from our line-up, which could result in a loss of customers and materially adversely affect our results of operations and financial condition.

Our exclusive license to provide local exchange and international voice and data services in Guyana is subject to significant political and regulatory risk.

Since 1991, our subsidiary Guyana Telephone and Telegraph, Ltd. ("GTT") has operated in Guyana pursuant to a license from the Government of Guyana to be the exclusive provider of domestic fixed and international voice and data services pursuant to a license with an initial term ending in December 2010, which was renewable at our sole option for an additional 20 year term. In November 2009, we notified the Government of Guyana of our election to renew our exclusive license for an additional 20 year term expiring in 2030. On December 15, 2010, we received correspondence from the Government of Guyana indicating that our license had been renewed until such time that new legislation is in place with regard to the Government's intention to expand competition within the sector; however, we believe our exclusive license continues to be valid unless and until such time as we enter into an alternative agreement with the Government.

In 2016, the Government of Guyana passed new telecommunications legislation introducing material changes to many features of Guyana's existing telecommunications regulatory regime with the intention of introducing additional competition into Guyana's telecommunications sector. The legislation that passed, however, has not yet been implemented and does not have the effect of terminating our exclusive license. Instead the legislation as passed requires the Minister of Telecommunications to conduct further proceedings and issue implementing orders to put into effect the various provisions of the legislation. We have met with the Government of Guyana, including as recently as December 2016, to discuss modifications of the Company's exclusivity rights and other rights under its existing agreement and license. However, there can be no assurance that those discussions will be concluded before the Government issues new licenses as contemplated by the legislation or at all, or that they will satisfactorily address the Company's contractual exclusivity rights. Although we believe that we would be entitled to damages or other compensation for any involuntary termination of our contractual exclusivity rights, we cannot guarantee that we would prevail in a proceeding to enforce our rights or that our actions would effectively halt any unilateral action by the Government.

We are dependent on GTT for approximately 20% of our total consolidated revenues. A loss of exclusivity on international voice and data service would result in a reduction in the international call traffic and as a result, a loss in that portion of our wireline revenue. Any modification, early termination or other revocation of the exclusive domestic fixed and international voice and data license could adversely affect our revenues and profits and diminish the value of our investment in Guyana.

Risks Related to Our Renewable Energy Segment

Our Facilities have a limited operating history.

All of our Facilities have limited operating histories. Our expectations about the performance of these Facilities are based on assumptions and estimates made without the benefit of a lengthy operating history. There can be no assurance that our Facilities will perform as anticipated or projected and the failure of these Facilities to perform as we expect could have a material adverse effect on the financial condition, results of operations and cash flows of our Renewable Energy segment.

Our revenues are dependent on the performance and effectiveness of our PPAs.

The cash flow from the PPAs and performance based incentive payments (“PBIs”) is significantly affected by our ability to collect payments from offtakers under our PPAs. While we believe that all of our current customers are high-quality credit entities in their local market, if for any reason these customers are unable or unwilling to fulfill their related contractual obligations or if they refuse to accept delivery of power or otherwise terminate or breach such agreements, such non-payment could have a material adverse effect on our revenues. In addition, our inability to perform our obligations under the PPAs could also have a material adverse effect on our revenues. For instance, our inability to meet certain operating thresholds or performance measures under certain of our PPAs within specified time periods exposes us to the risk of covering the cost of any shortfall or early termination by such customer.

Certain of our PPAs provide for early termination for a variety of reasons, including in the event that (a) an offtaker is unable to appropriate funds from state and local governments, (b) there is a change of law that substantially reduces the value of utility credits, (c) termination for convenience, or (d) the Facility causes damage to the premises or roof and our customer fails to repair or causes the customer to be in violation of law, or the customer ceases to hold tenancy or fee interest in the premises. While we would be entitled to a termination fee (typically set at the terminal value of the PPA) in most cases, the termination fee might not be a sufficient substitute for the payments otherwise due under the PPAs. There can be no assurances that such appropriations will be made or timely made in any given year or that tax or other incentives will continue to be available for the purchase of solar energy. In the event a PPA for one or more of our projects is terminated or payments are not made (or not made in a timely manner) pursuant to such provisions, it could materially and adversely affect our results of operations and financial condition. We cannot provide any assurance that PPAs containing such provisions will not be terminated or, in the event of termination, we will be able to enter into a replacement PPA. Moreover, any replacement PPA may be on terms less favorable to us than the PPA that was terminated.

Our revenue in the United States may be exposed to SREC uncertainty, inflation-based price increases or other external factors.

In the United States, we also generate solar renewable energy credits, or SRECs, which are government emissions allowances obtained through power generation and compliance with various regulations from the government as our projects produce electricity. Revenue is recognized as SRECs are sold through long-term purchase agreements with a third party at the contractual rate specified in the agreement. In 2016, approximately 62% of our renewable energy revenue was earned from SREC contracts and PBIs and 38% was earned from PPAs and consulting revenues. SRECs may also be transferred directly to our lenders in lieu of payments due on loans. The revenue derived from our sale of SRECs is dependent on local governments in Massachusetts and New Jersey electing to maintain the programs that grant SRECs for power production in these states.

In addition, certain of our PPAs do not contain inflation based price increases, resulting in an average, weighted by MWp, escalator on our PPAs of 1.11%. To the extent that we experience high rates of inflation we may experience increased operation costs without concomitant increase in revenue. In addition, a portion of the revenues under certain of the PPAs for our solar energy projects are subject to price adjustments triggered by a decrease in the market price of electricity over time. This would also have a negative impact on our ability to attract new customers and increase our portfolio, as we believe that an offtaker’s decision to develop our solar projects is primarily driven by a desire to decrease their traditional energy costs. If we are unable to negotiate more favorable pricing, it could have a material

adverse impact on the financial condition, results of operations and cash flows of our Renewable Energy segment. We also believe the solar industry will continue to experience periods of structural imbalance between supply and demand (i.e., where production capacity exceeds global demand), and that such periods will put pressure on pricing, which could adversely affect our results of operations.

We are reliant on key vendors for operation, maintenance and interconnection of our Facilities.

In the U.S., pursuant to our O&M Agreements, our O&M vendor is required to operate and maintain our Facilities. In India, our own staff operates and maintains our Facilities. While our U.S. O&M vendor is obligated to indemnify us to the extent it fails to perform under our O&M Agreements, any such failure could cause a delay or reduction in payments under our PPAs. Additionally, we contract with utilities through an interconnection agreement to export excess energy generated by our Facilities to an offtaker and/or the utility electrical grid. Our O&M vendor is required to perform our obligations under the interconnection agreement. If our O&M vendor fails to so perform and interconnection is lost, our offtakers will not receive any energy or net metering credits from such Facility nor a bill credit for energy that would otherwise have been exported to the utility and we may be required to cover these amounts under our PPAs.

Additional Risks Related to our Renewables Business in India

India is undergoing rapid governmental and regulatory change, which may have both short and long term material adverse impacts on our operations and ability to execute our strategic growth plans.

The Government of Prime Minister Modi in India has expressed its intention to cut down on corruption and tax avoidance wherever possible and in parallel with these anti-corruption measures, the Government is also looking to encourage foreign investment in India. In the long term we consider that this change will be beneficial and increase foreign investor interest in the country; however, some changes have had a significant impact on our operations in India in the short-term. For instance, India is currently a predominately cash economy, with millions of people having no bank accounts and transacting solely in cash. On November 8, 2016, the Indian government removed the 500 (US\$7.60) and 1,000 rupee notes from circulation and replaced them with new 2,000 rupee notes. This step was taken to remove money from the black economy with a view to reducing corruption, increasing tax receipts, and moving India to a modern, non-cash economy. While we have very limited cash transactions in India (mostly in relation to the payment of employee travelling and subsistence expenses), much of the construction team employed by our sub-contractors is paid in cash, often on a daily basis. With the removal of all bank notes of a value of more than 100 rupees (US\$1.50), our sub-contractors have struggled to source the cash required to pay their labor, resulting in many of the workers responsible for our ongoing solar Facility construction failing to continue to show up to the worksite. To remedy the situation, our sub-contractors have been opening bank accounts on behalf of their workers to enable them to receive their compensation electronically, however, the construction of our solar farms in India has met with substantial delays as a result.

It is possible that the Government plans to take similar action in other areas to achieve this objective, however, we cannot predict what actions may be taken and what effects such actions may have on our business either directly or indirectly in the short or long term. Further, our business model in India is predicated on the availability of “open access” rules, which allow our customers to buy their electricity from us, rather than from traditional utility providers. Any major policy changes issued by the India government to current open access rules, or other major policy changes, particularly when implemented in such a short time frame or, could impair the development or operations of our solar projects and may adversely impact our ability to construct our power project portfolio or maintain operations, once constructed.

Our India operations are subject to extensive governmental regulation and regulatory, economic, social and political uncertainties in India. Any failure to obtain, renew or comply with the terms of required approvals, licenses and permits in a timely manner or at all may have a material adverse effect on our results of operations, cash flows and financial condition.

Any business in India is subject to a broad range of financial, administrative and other governmental regulations that may vary on a state-specific basis, and the renewables business in India is subject to additional environmental, safety and other laws and regulations. These laws and regulations require us to obtain and maintain a number of approvals, licenses, filings, registrations and permits for our ordinary course investment and operations activities, as well as developing and operating power projects. For example, in order to begin construction, we must first ensure that land is properly zoned, then obtain the various approvals during construction of our solar projects and prior to the commissioning certificate being issued, including capacity allocation and capacity transfer approvals, approvals from the local pollution control boards, evacuation and the grid connectivity approvals and approval from the chief electrical inspector for installation and energization of electrical installations at the solar project sites. Although some of the approvals required can be obtained prior to construction of a project commencing, some of the licenses required, particularly in relation to commencing the export of electricity, can only be obtained once a project is constructed and ready to commence operations. Obtaining and maintaining these approvals and permits can be time-consuming and burdensome. We have allotted a period of time to allow for such licenses to be obtained in our business model, but there is no assurance that we will receive these approvals from the relevant approving authority in a timely manner or at all.

In addition, we could be adversely affected by the adoption or implementation of new laws and regulations, new interpretations of existing laws, increased governmental enforcement of laws or other similar developments in the future. There can be no assurance that we will not be subject to any new requirements in the future, and that we will be able to obtain and maintain such consents or permits in a timely manner, or at all, or that we will not become subject to any regulatory action on account of not having obtained or renewed such permits or filings in any past periods. Further, we cannot assure that the approvals, licenses, registrations and permits issued to us will not be subject to suspension or revocation for non-compliance or alleged non-compliance with any terms or conditions thereof, or pursuant to any regulatory action. Any failure to apply for, renew and obtain the required approvals, licenses, registrations or permits, or any suspension or revocation of any of the approvals, licenses, registrations and permits that have been or may be issued to us, or any onerous conditions made applicable to us in terms of such approvals, licenses, registrations or permits may impede the successful construction and/or operation of our power projects, which could have a material adverse effect on the business, financial condition, results of operations, cash flows and prospects in our Renewable Energy segment.

In addition, our financial performance will be affected by changes in exchange rates and controls, interest rates, changes in government policies, including taxation policies, labor conditions, and other political, social and economic developments in or affecting India. The Indian government has exercised and continues to exercise significant influence over many aspects of the Indian economy. Currently, the Indian government has in place policies of economic liberalization; however, the role of the Indian central and state governments in the Indian economy is significant. The rate of economic liberalization could change, and specific laws and policies affecting solar power producers, investments owned by non-Indian companies, currency exchange rates and other matters affecting investments in India could change as well. Such changes could have a material adverse effect on the business, financial condition, results of operations, cash flows and prospects in our Renewable Energy segment.

Land title in India can be uncertain and difficult to procure.

There is no central title registry for real property in India and the documentation of land records in India has not been fully computerized. Property records in India are generally maintained at the state and district level and in local languages, and are updated manually through physical records. Therefore, property records may not be available online for inspection or updated in a timely manner, may be illegible, untraceable, incomplete or inaccurate in certain respects, or may have been kept in poor condition, which may impede title investigations or our ability to rely on such property records. Furthermore, title to land in India is often fragmented, and in many cases, land may have multiple owners. Title may also suffer from irregularities, such as non-execution or non-registration of conveyance deeds and inadequate stamping, and may be subjected to encumbrances that we are unaware of. As a result, potential disputes or claims over title to the land on which our power projects will be constructed may arise. We recognize the material nature of this risk

and have invested heavily in and prioritized our real estate due diligence work by retaining in-house legal real estate experts to review and advise on real estate diligence and land ownership. We are also looking to secure title insurance for land that we wish to purchase, although such title insurance is currently very uncommon in India. We believe that real estate issues are most likely to arise during the construction phase of a project, and note that in most cases the land we purchase for a project is likely to be bought from multiple land owners and so individual title issues may have a limited impact even where they materialize. Nonetheless, any real estate issues could impair the development or operations of our solar projects and any defects in, or irregularities of, title may result in a loss of development or operating rights over the land that may adversely impact our ability to construct our power project portfolio or maintain operations, once constructed.

We may not be able to timely and effectively construct our developed solar project portfolio.

The development and construction of solar projects involve numerous risks and uncertainties and require extensive research, planning and due diligence. We have already incurred, and may continue to incur, significant costs for land and interconnection rights, regulatory approvals, preliminary engineering, permits, and legal and other expenses before we can determine whether a solar project is economically, technologically or otherwise feasible. Our existing operations, personnel, systems and internal control may not be adequate to support our growth and expansion and may require us to make additional unanticipated investments in our infrastructure. If we are unable to manage our growth effectively, we may not be able to take advantage of market opportunities, execute our business strategies successfully or respond to competitive pressures. As a result, our business, prospects, financial condition, results of operations and cash flows could be materially and adversely affected.

Our ability to realize profits in our investment may depend greatly on our ability to achieve the following:

- accurately identify and prioritize geographic markets for entry, both in terms of market demand and viability of solar conditions and grid connection;
- manage local operations, capital investment or components sourcing in compliance with regulatory requirements;
- procure land at cost-effective prices and on terms favorable to us;
- procure equipment and negotiate favorable payment and other terms with suppliers;
- obtain grid interconnection rights;
- successfully complete construction by the expiration of any procured grid interconnection rights;
- secure reliable and enforceable EPC and O&M resources; and
- sign PPAs or other arrangements on a long-term basis and on terms that are favorable to us.

Construction of our solar projects may also be adversely affected by circumstances outside of our control, including inclement weather, adverse geological and environmental conditions, a failure to receive regulatory approvals on schedule or third-party delays in providing supplies and other materials. Changes in project plans or designs, or defective or late execution may increase our costs from our initial estimates and cause delays. Global supply and demand for key equipment, particularly solar panels, and foreign exchange movements may increase procurement costs as the majority of the equipment used by us is sourced from outside of India. Labor shortages, work stoppages, labor disputes, disputes with neighboring land owners and/or local villages could significantly delay a project or increase our costs. Any construction setbacks or delays could have a material adverse effect on our ability to obtain, maintain and perform under the PPAs we seek to procure and could result in financial penalties under these agreements and/or the termination of such agreements, which could have a material adverse impact on our prospects and results of operations in our Renewable Energy segment.

We are reliant on India's infrastructure to deliver power and any failure or technical challenges may lead to delays or other impediments that may have an adverse effect on our operations or financial condition.

India has a target of installing 175 GW of renewable energy capacity installed by March 2022, of which it is intended that 100 GWp will be solar power capacity. Due to the intermittent nature of most forms of renewable energy generation, significant renewable energy generation capacity on a limited area of grid infrastructure can cause technical challenges to keep the grid in balance. Such technical issues could result in a grid company looking to turn down the

export capacity of one of our solar projects for a limited or extended period, or the grid company incurring additional costs in order to manage their grid infrastructure, and looking to recharge such costs to renewable energy generators. Such actions by a grid operator could have a material adverse impact on our prospects and results of operations in our Renewable Energy segment.

The period between project origination and the commencement of commercial operations can be extended and may result in delays that materially and adversely impact our results of operations.

Solar projects typically generate revenue only after becoming commercially operational and starting to sell electricity to offtakers through the power grid. There may be long delays from the development process to projects becoming shovel-ready, due to the timing of land procurement, permitting and the grid connectivity process. There could be a significant delay between our upfront investments and actual generation of revenue, or any added delay in between due to unforeseen events. These delays could result in equipment costs rising (e.g. due to material foreign currency movements) and the price at which we are able to sell the power generated falling (as the PPA is only entered into at the point where the project is close to being operational). Such changes could materially and adversely affect our profitability, results of operations and cash flows prospects in our Renewable Energy segment.

Our ability to realize the benefits of our investment in India may be delayed and our growth prospects depend to a significant extent on the availability of additional funding options with acceptable terms.

We require a significant amount of cash to fund the installation and construction of our projects in India and other aspects of our operations, and have planned to incur debt or acquire additional equity funding in the future to complement our investment. We may also require additional cash due to changing business conditions or other future developments, including any investments or acquisitions we may decide to pursue in order to remain competitive. We intend to evaluate third-party financing options, including any bank loans, equity partners, financial leases and securitization. However, we cannot guarantee that we will be successful in locating additional suitable sources of financing on a timely basis or at all, or on terms or at costs that are acceptable to us, which may materially adversely affect our ability to continue construction and expand our operations in India. In addition, rising interest rates could adversely impact our ability to secure financing on favorable terms.

Our ability to obtain external financing is subject to a number of uncertainties, including:

- our future financial condition, results of operations and cash flows;
- the general condition of global equity and debt capital markets;
- decline of the Indian rupee compared to U.S. dollar; and
- the continued confidence of banks and other financial institutions in our company and the solar power industry, amongst other factors.

Any additional equity financing may be dilutive to us and our stockholders and any debt financing may contain restrictive covenants that limit our flexibility going forward and may adversely impact our ability to achieve our intended business objectives.

The failure to obtain third party financing may result in us failing to achieve the scale that we are currently expecting, and the failure to reach this scale would result in lower economies of scale, and as a result could materially and adversely affect our profitability, results of operations and cash flows in our Renewable Energy segment.

If demand for solar power is decreased or does not develop according to expected timelines, or we are unable to meet such demand, our business, financial condition, results of operations, cash flows and prospects could be materially and adversely affected.

Many factors may affect the demand for solar projects in India, including the following:

- changes in economic and market conditions that affect the viability of traditional power and other renewable energy sources;

- the cost and reliability of solar projects compared with traditional energy sources;
- the availability of grid capacity to dispatch power generated from solar projects;
- the reliability of grid infrastructure in India; and
- governmental policies governing the electric utility industry that may present technical, regulatory and economic barriers to the purchase and use of solar energy.

If market demand for solar projects fails to develop sufficiently or is delayed in its development, our business, financial condition, results of operations, cash flows and prospects could be materially and adversely affected.

We face significant competition from traditional and renewable energy companies.

We face significant competition in the markets in which we operate. Our competitors may have greater operational, financial, technical, management expertise or other resources than we do and may be able to achieve better economies of scale and lower cost of capital, allowing them to sell electricity at more competitive rates. Our local competitors are likely to be funded from Indian sources of capital, and so will not have to factor foreign currency movements into their target returns, which may also enable them to sell electricity at more competitive rates. Our competitors may also have a more effective or established localized business presence or a greater appetite for risk (e.g. in relation to equipment warranties) and greater willingness or ability to operate with little or no operating margins for sustained periods of time. Our market position depends on our financing, development and operation capabilities, reputation and track record. Any increase in competition or reduction in our competitive capabilities could have a significant adverse impact on the margins we generate from our solar projects. We cannot assure that we will be able to compete effectively, and our failure to do so could result in an adverse effect on our business, results of operations and cash flows in our Renewable Energy segment.

The growth of our solar business is dependent on our ability to identify and acquire additional solar projects on favorable terms.

Our business strategy for our Renewable Energy segment is to grow via acquisition and development of additional energy generation assets, with a current focus on solar distributed generation. In order to do so, we are reliant on management to effectively identify and consummate acquisition or new project opportunities on a timely basis and on favorable terms. The number of acquisition and development opportunities is limited, and we compete with some organizations with greater size, scale and resources. In addition, the design, construction and operation of solar energy projects are highly regulated, require various governmental approvals and permits, including environmental approvals and permits, and may be subject to the imposition of related conditions that vary by jurisdiction. We cannot predict whether all permits required for a given project will be granted or granted on terms that are favorable to our business plans. If we are unable to grow our Renewable Energy segment, we may not be able to succeed with our overall business growth strategy.

Other Risks Related to Our Business

Regulatory changes may impose restrictions that adversely affect us or cause us to incur significant unplanned costs in modifying our business plans or operations.

We are subject to U.S. federal, state and local regulations and foreign government regulations, all of which are subject to change. As new laws and regulations are issued or discontinued to implement an agenda to be set by the new U.S. administration, we may be required to modify our business plans or operations materially. We cannot be certain that we can do so in a cost-effective manner. For example, a portion of our revenues in our Renewable Energy segment from PPAs is dependent on the ongoing availability of tax credits for clean energy and changes to the FCC's universal service support could materially impact the amount of support that we expect to receive or the performance obligations attached thereto. Any effort by the new U.S. administration or other jurisdictions to overturn or modify laws, regulations or policies that are supportive of renewable energy projects or that remove costs or other limitations on other types of generation that compete with renewable energy projects could materially and adversely affect our business, financial condition, results of operations and cash flows. In addition, the failure to comply with applicable governmental

regulations could result in the loss of our licenses or authorizations to operate, inability to perform under our PPAs, the assessment of penalties or fines or otherwise may have a material adverse effect on the results of our operations.

Our operations in the United States are subject to the Communications Act. The interpretation and implementation of the provisions of the Communications Act and the FCC rules implementing the Communications Act continue to be heavily debated and may have a material adverse effect on our business. Also, although comprehensive legislation has not yet been introduced, there have been indications that Congress may substantially revise the 1996 Act and other regulation in the next few years. At this time, it is not clear how the agenda to be set by the new U.S. Administration will impact any new legislation. While we believe we are in compliance in all material respects with federal and state regulatory requirements, our interpretation of our obligations may differ from those of regulatory authorities. Both federal and state regulators require us to pay various fees and assessments, file periodic reports and comply with various rules regarding our consumer marketing practices and the contents of our bills, on an on-going basis. If we fail to comply with these requirements, we may be subject to fines or potentially be asked to show cause as to why our licenses to provide service should not be revoked.

The loss of certain licenses could adversely affect our ability to provide wireless and broadband services.

In the United States, wireless licenses generally are valid for ten years from the effective date of the license. Licensees may renew their licenses for additional ten-year periods by filing renewal applications with the FCC. Our wireless licenses in the U.S. expire between 2017 and 2022. While we intend to renew our licenses expiring this year, the renewal applications are subject to FCC review and are put out for public comment to ensure that the licensees meet their licensing requirements and comply with other applicable FCC mandates. Failure to file for renewal of these licenses or failure to meet any licensing requirements could lead to a denial of the renewal application and thus adversely affect our ability to continue to provide service in that license area. Furthermore, our compliance with regulatory requirements such as enhanced 911 and CALEA requirements may depend on the availability of necessary equipment or software.

In our international markets, telecommunications licenses are typically issued and regulated by the applicable telecommunications ministry. The application and renewal process for these licenses may be lengthy, require us to expend substantial renewal fees, and/or be subject to regulatory or legislative uncertainty, such as we are experiencing in Guyana, as described above. Failure to comply with these regulatory requirements may have an adverse effect on our licenses or operations and could result in sanctions, fines or other penalties.

Failure of network or information technology systems, including as a result of security breaches, could have an adverse effect on our business.

We are highly dependent on our information technology (“IT”) systems for the operation of our network, or Facilities delivery of services to our customers and compilation of our financial results. Failure of these IT systems, through cyberattacks, breaches of security, or otherwise, may cause disruptions to our operations. Our inability to operate our network, Facilities and back office systems as a result of such events, even for a limited period of time, may result in significant expenses and/ impact the timely and accurate delivery of our services or other information. Other risks that may also cause interruptions in service or reduced capacity for our customers include power loss, capacity limitations, software defects and breaches of security by computer viruses, break-ins or otherwise. Disruptions in our networks and the unavailability of our services or our inability to efficiently and effectively complete necessary technology or systems upgrades or conversions could lead to a loss of customers, damage to our reputation and violation of the terms of our licenses and contracts with customers. Additionally, breaches of security may lead to unauthorized access to our customer or employee information processed and stored in, and transmitted through, our computer systems and networks. We may be required to expend significant additional resources to modify our protective measures or to investigate and remediate vulnerabilities or other exposures arising from operational and security risks, and we may be subject to litigation, regulatory penalties and financial losses. These failures could also lead to significant negative publicity, regulatory problems and litigation.

Rapid and significant technological changes in the telecommunications industry may adversely affect us.

Our industry faces rapid and significant changes in technology that directly impact our business, including the following:

- evolving industry standards;
- requirements resulting from changing regulatory regimes;
- the allocation of radio frequency spectrum in which to license and operate wireless services;
- ongoing improvements in the capacity and quality of digital technology;
- changes in end-user requirements and preferences;
- convergence between video and data services;
- development of data and broadband capabilities and rapidly expanding demand for those capabilities;
- migration to new-generation services such as “5G” network technology; and
- introduction of new telecom delivery platforms such as next generation satellite services.

For us to keep up with these technological changes and remain competitive, at a minimum we will be required to continue to make significant capital expenditures to add to our networks’ capacity, coverage and technical capability. For example, we have spent considerable amounts adding higher speed, higher capacity mobile data services to many of our networks in recent years and we think it likely that more such expenditures, including adding LTE mobile data technologies, will be needed over the next few years.

We cannot predict the effect of technological changes on our business. Alternative or new technologies may be developed that provide communications services superior to those available from us, which may adversely affect our business. For example, to accommodate the demand by our wireless customers for next-generation advanced wireless products such as high-speed data and streaming video, we may be required to purchase additional spectrum, however, we have had difficulty finding spectrum for sale or on terms that are acceptable to us. In addition, usage of wireless voice or broadband services in excess of our expectations could strain our capacity, causing service disruptions and result in higher operating costs and capital expenditures. In each of our markets, providing more and higher speed data services through our wireless or wireline networks may require us to make substantial investments in additional telecommunications transport capacity connecting our networks to the Internet, and in some cases such capacity may not be available to us on attractive terms or at all. Failure to provide these services or to upgrade to new technologies on a timely basis and at an acceptable cost could have a material adverse effect on our ability to compete with carriers in our markets.

We rely on a limited number of key suppliers and vendors for timely supply of handsets, accessories, equipment and services relating to our network or Facility infrastructure. If these suppliers or vendors experience problems or favor our competitors, we could fail to obtain sufficient quantities of the products and services we require to operate our businesses successfully.

We depend on a limited number of suppliers and vendors for equipment and services relating to our handset lineup, network infrastructure, solar equipment and our back-office IT systems infrastructure. If these suppliers experience interruptions or other problems delivering these network components on a timely basis, our subscriber or revenue growth and operating results could suffer significantly.

We source wireless devices for our retail wireless businesses from a small number of handset resellers and to a lesser extent, equipment manufacturers and depend on access to compelling devices at reasonable prices on primary and secondary markets for these devices, as well as timely delivery of devices to meet market demands. The inability to provide a competitive device lineup could materially impact our ability to attract new customers and retain existing customers. We are also reliant upon a limited number of network equipment manufacturers, including Ericsson, Motorola, Alcatel-Lucent and Nokia and a limited number of solar equipment manufacturers, including Yingli and Inventec for photovoltaic modules and SMA and Satcon for inverters.

We are also dependent on the ability of our solar equipment manufacturers to fulfill the warranties on our solar equipment, which typically range from 5 to 25 years in length, in the event of equipment malfunction. If these suppliers cease operations or for some reason default on their warranties, we would have to bear the expense of repairing or replacing any faulty equipment. Our business, financial condition, results of operations and cash flows could be materially adversely affected if we cannot make claims under warranties covering our Facilities. If it becomes necessary to seek alternative suppliers and vendors, we may be unable to obtain satisfactory replacement suppliers or vendors on economically attractive terms on a timely basis.

We are actively evaluating investment, acquisition and other strategic opportunities, which may affect our long-term growth prospects.

We are actively evaluating acquisition, investment and other strategic opportunities, both domestic and international, in telecommunications, energy-related and other industries, including in areas that may not be seen by the broader market as timely today. We may focus on opportunities that we believe have potential for long-term organic and strategic growth or that may otherwise satisfy our return and other investment criteria. Any acquisition or investment that we might make outside of the telecommunications or solar industries would pose the risk inherent in us entering into a new, unrelated business, including the ability of our holding company management team to effectively oversee the management team of such operations. There can be no assurance as to whether, when or on what terms we will be able to invest in, acquire or divest any businesses or assets or that we will be able to successfully integrate the business or realize the perceived benefits of any acquisition. Any such transactions may be accomplished through the payment of cash, issuance of shares of our capital stock or incurrence of additional debt, or a combination thereof. As of December 31, 2016, we had approximately \$295.8 million in cash, cash equivalents, restricted cash, and short term investments approximately \$156.8 million of long-term debt. How and when we deploy our balance sheet capacity will figure prominently in our longer-term growth prospects and stockholder returns.

Increased competition may adversely affect growth, require increased capital expenditures, result in the loss of existing customers and decrease our revenues.

We face competition in the markets in which we operate. For example:

- In the United States, our greatest competitive risk to our wholesale wireless business is the possibility that our current roaming customers may elect to build or enhance their own networks within the rural market in which we currently provide service, which is commonly known as “over-building.” If our roaming customers, who generally have greater financial resources and access to capital than we do, determine to over-build our network, their need for our roaming services will be significantly reduced or eliminated.
- In Bermuda and the Caribbean, we compete primarily against Digicel and other larger providers such as Liberty Global.
- In our solar power business, we face competition from traditional utilities and renewable energy companies. Many of our competitors are larger with greater resources and are less dependent on third parties for the sourcing of equipment or operation and maintenance of their solar facilities.

Over the last decade, an increase in competition in many areas of the telecommunications industry has contributed to a decline in prices for communication services, including mobile wireless services, local and long-distance telephone service, and data services. Increased competition in the industry may decrease prices further. In addition,

increased competition in the telecommunications and renewable energy industries could reduce our customer base, require us to invest in new facilities and capabilities and reduce revenues, margins and returns.

Our International Telecom segment operates mainly in island locations, where a limited number of providers in these small markets maintain strong competition. In several of our markets, we hold a dominant position as the local incumbent carrier and in others may have a competitive advantage in our ability to bundle some combination of voice, data, video and wireless services. Increased competition, whether by new entrants or increased capital investment in our competitors' existing networks, will make it more difficult for us to attract and retain customers in our small markets, which could result in lower revenue and cash flow from operating activities.

General economic factors, domestically and internationally, may adversely affect our business, financial condition and results of operations.

General economic factors could adversely affect demand for our products and services, require a change in the services we sell or have a significant impact in our operating costs. Energy costs are historically volatile and are subject to fluctuations arising from changes in domestic and international supply and demand, labor costs, competition, market speculation, government regulations, or weather conditions. Rapid and significant changes in these and other commodity prices may affect our sales and profit margins. General economic conditions can also be affected by the outbreak of war, acts of terrorism, or other significant national or international events.

In addition, an economic downturn in our markets or the global market may lead to slower economic activity, increased unemployment, concerns about inflation, decreased consumer confidence and other adverse business conditions that could have an impact on our businesses. For example, among other things:

- A decrease in tourism could negatively affect revenues and growth opportunities from operations in the islands and in a number of areas covered by U.S. rural and wholesale wireless operations that serve tourist destinations.
- An increase in "bad debt", or the amounts that we have to write off of our accounts receivable could result from our inability to collect subscription fees from our subscribers.
- We rely on the population of Guyanese living abroad who initiate calls to Guyana or are responsible for remittances to relatives living in Guyana. A prolonged economic downturn in the U.S. or Canadian economies could affect inbound calling and, therefore, our revenue in Guyana.

The impact, if any, that these events might have on us and our business, is uncertain.

Our operations are subject to economic, political, currency and other risks that could adversely affect our revenues or financial position.

Our operations may face adverse financial consequences and operational problems due to political or economic changes, such as changes in national or regional political or economic conditions, laws and regulations that restrict repatriation of earnings or other funds, or changes in foreign currency exchange rates. As new laws and regulations are issued or discontinued to implement an agenda to be set by the new U.S. administration, we may be required to materially modify our business plans or operations. Any of these changes could adversely affect our revenues or financial position.

In India in particular, our exposure to the fluctuation in the value of the rupee will have a direct impact on our ability to meet expected returns projected in U.S. dollars or make payment on any debt denominated in dollars. Any further currency fluctuation could have a material adverse impact in our ability to realize the returns we anticipated in making such investments.

Our ability to recruit and retain experienced management and technical personnel could adversely affect our results of operations and ability to maintain internal controls.

The success of our business is largely dependent on our executive officers and the officers of our operating units, as well as on our ability to attract and retain other highly qualified technical and management personnel. We believe that there is, and will continue to be, strong competition for qualified personnel in the communications and energy industries and in our markets, and we cannot be certain that we will be able to attract and retain the personnel necessary for the development of our business. We rely heavily on local management to run our operating units. Many of the markets we operate in are small and remote, making it difficult to attract and retain talented and qualified managers and staff in those markets. The loss of key personnel or the failure to attract or retain personnel with the sophistication to run complicated telecommunications or solar equipment, networks and systems could have a material adverse effect on our business, financial condition and results of operations. We do not currently maintain “key person” life insurance on any of our key employees and none of the executives at our parent company are under employment agreements.

In addition, cultural differences abroad and local practices of conducting business in our foreign operations may not be in line with the business practices, recordkeeping and ethics standards in the United States. In order to continue to ensure compliance with foreign and U.S. laws, accounting standards and our own corporate policies, we have implemented financial and operational controls, created an internal audit team responsible for monitoring and ensuring compliance with our internal accounting controls, and routinely train our employees, vendors and consultants. However, having substantial foreign operations also increases the complexity and difficulty of developing, implementing and monitoring these internal controls and procedures. If we are unable to manage these risks effectively, it could have a material adverse effect on our business, financial condition and results of operations.

Changes in meteorological conditions may materially disrupt our operations.

Many of the areas in which we operate have experienced severe weather conditions over the years including hurricanes, tornadoes, blizzards, damaging storms and floods. Some areas in which we operate may also be at risk of earthquakes. Such events may materially disrupt and adversely affect our business operations. Major hurricanes passed directly over Bermuda in 2003, 2014 and 2016 causing major damage to our network and to the island’s infrastructure. In 2008, a hurricane caused extensive damage on a small portion of the U.S. Virgin Islands. Guyana has suffered from severe rains and flooding in the past as well. Our solar production at our facilities in Massachusetts was negatively impacted in early 2015 by repeated heavy snowfall and prolonged cold weather. While these events have not had a significant negative impact on the operating results or financial condition of the affected businesses or our overall business, we cannot be sure that these types of events will not have such an impact in the future or that the insurance coverage we maintain for asset damage will adequately compensate us for all damage and economic losses resulting from natural catastrophes.

The electricity produced and revenues generated by a solar electric generation facility is highly dependent on suitable solar and associated weather conditions and our solar panels and inverters could be damaged by severe weather, such as hailstorms, blizzards or tornadoes. In addition, replacement and spare parts for key components may be difficult or costly to acquire or may be unavailable. Unfavorable weather and atmospheric conditions could reduce the output of our Facilities and lead to a loss of revenue from our offtakers.

Risks Related to Our Capital Structure

Our debt instruments include restrictive and financial covenants that limit our operating flexibility.

Our credit facility requires us to maintain a ratio of indebtedness to EBITDA and contains certain covenants that, among other things, restrict our ability to take specific actions, even if we believe such actions are in our best interest. These include restrictions on our ability to do the following:

- incur additional debt;
- create liens or negative pledges with respect to our assets;

- pay dividends or distributions on, or redeem or repurchase, our capital stock;
- make investments, loans or advances or other forms of payments;
- issue, sell or allow distributions on capital stock of specified subsidiaries;
- enter into transactions with affiliates; or
- merge, consolidate or sell our assets.

Any failure to comply with the restrictions of the credit facility or any subsequent financing agreements may result in an event of default. Such default may allow our creditors to accelerate the repayment of the related debt and may result in the acceleration of the repayment of any other debt to which a cross-acceleration or cross-default provision applies. In addition, these creditors may be able to terminate any commitments they had made to provide us with further funds.

Our Chairman is our largest stockholder and will continue to exert significant influence over us.

Cornelius B. Prior, Jr., our Chairman and the father of our Chief Executive Officer, beneficially owns, together with related entities, affiliates and family members (including our Chief Executive Officer), approximately 28% of our outstanding Common Stock. As a result, he is able to exert significant influence over all matters presented to our stockholders for approval, including election and removal of our directors and change of control transactions. In addition, as our Chairman, he has the ability to exert significant influence over other matters brought before our Board of Directors, such as proposed changes in our strategy or business plans and our major financing decisions. His interests may not always coincide with the interests of other holders of our Common Stock.

Low trading volume of our stock may limit our stockholders ability to sell shares and/or result in lower sale prices.

For the three months prior to February 1, 2017, the average daily trading volume of our Common Stock was approximately 57,000 shares. As a result, our stockholders may have difficulty selling a large number of shares of our Common Stock in the manner or at a price that might be attainable if our Common Stock were more actively traded. In addition, the market price of our Common Stock may not be reflective of its underlying value.

We may not pay dividends in the future.

Our stockholders may receive dividends out of legally available funds if, and when, they are declared by our Board of Directors. We have consistently paid quarterly dividends in the past, but may cease to do so at any time. Our credit facility sets certain limitations on our ability to pay dividends on, or repurchase, our capital stock. We may incur additional indebtedness in the future that may further restrict our ability to declare and pay dividends. We may also be restricted from paying dividends in the future due to restrictions imposed by applicable state laws, our financial condition and results of operations, capital requirements, covenants contained in our financing agreements, management's assessment of future capital needs and other factors considered by our Board of Directors.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We lease approximately 21,000 square feet of office space at 500 Cummings Center, Beverly, MA 01915 for our corporate headquarters. Worldwide, we utilize the following approximate square footage of space for our operations:

Type of space	U.S. Telecom	International Telecom	Renewable Energy
Office	47,787	400,405	21,509
Retail stores	7,650	26,616	—
Technical operations	31,803	2,216,238	—

All of the above locations are leased except for the office and technical space within our International Telecom segment, which we own. As of December 31, 2016, we operated ten retail stores in our U.S. Telecom segment and nineteen retail stores in our International Telecom segment.

Our offices and technical operations are in the following locations:

U.S. Telecom	International Telecom	Renewable Energy
Little Rock, AR	Georgetown, Guyana	San Francisco, CA
Castle Rock, CO	Bermuda	Hyderabad, India
Atlanta, GA	U.S. Virgin Islands	London, England
Bellows Falls, VT	British Virgin Islands	Singapore
Williston, VT	Cayman Islands	
Albany, NY	St. Maarten	

Within our telecommunications operations, we globally own 267 towers, lease an additional 447 towers and have five switch locations within rented locations. In addition, our renewable energy operations own 28 commercial solar projects at 59 sites. We consider our owned and leased properties to be suitable and adequate for our business operations.

ITEM 3. LEGAL PROCEEDINGS

Currently, our Guyana subsidiary, Guyana Telephone & Telegraph, Ltd. (“GTT”) holds an exclusive license to provide domestic fixed services and international voice and data services in Guyana. The license, whose initial term of twenty years expired at the end of 2010, allowed for GTT, at its sole option, to extend the term for an additional twenty years, until December 2030. GTT exercised its extension right, in accordance with the terms of its License and its agreement with the Government of Guyana, in November 2009.

In 2016, the Government of Guyana passed new telecommunications legislation introducing material changes to many features of Guyana’s existing telecommunications regulatory regime with the intention of introducing additional competition into Guyana’s telecommunications sector. The legislation that passed, however, has not yet been implemented and does not include a provision that permits other telecommunications carriers to receive licenses automatically upon signing of the legislation, nor does it have the effect of terminating the Company’s exclusive license. Instead the legislation as passed requires the Minister of Telecommunications to conduct further proceedings and issue implementing orders to enact the various provisions of the legislation. We have met with the Government of Guyana, including as recently as December 2016, to discuss modifications of the Company’s exclusivity rights and other rights under its existing agreement and license. However, there can be no assurance that those discussions will be concluded before the Government issues new licenses as contemplated by the legislation or at all, or that they will satisfactorily address our contractual exclusivity rights. Although the Company believes that it would be entitled to damages or other compensation for any involuntary termination of its contractual exclusivity rights, it cannot guarantee

that the Company would prevail in a proceeding to enforce its rights or that its actions would effectively halt any unilateral action by the Government.

In November 2007, Caribbean Telecommunications Limited (“CTL”) filed a complaint in the U.S. District Court for the District of New Jersey against GTT and ATN claiming breach of an interconnection agreement for domestic cellular services in Guyana and related claims. CTL asserted over \$200 million in damages. GTT and ATN moved to dismiss the complaint on procedural and jurisdictional grounds. On January 26, 2009, the court granted the motions to dismiss the complaint on the grounds asserted. On November 7, 2009 and again on April 4, 2013, CTL filed a similar claim against GTT and the PUC in the High Court of Guyana. The Company believes these claims are without merit and are duplicative of a previous claim filed by CTL in Guyana that was dismissed. There has been no action on these matters since the April 2013 filing.

On May 8, 2009, Digicel filed a lawsuit in Guyana challenging the legality of GTT’s exclusive license rights under Guyana’s constitution. Digicel initially filed this lawsuit against the Attorney General of Guyana in the High Court. On May 13, 2009, GTT petitioned to intervene in the suit in order to oppose Digicel’s claims and that petition was granted on May 18, 2009. GTT filed an answer to the charge on June 22, 2009, and the case is pending. We believe that any legal challenge to GTT’s exclusive license rights granted in 1990 is without merit, and we intend to vigorously defend against such a legal challenge.

GTT has filed several lawsuits in the High Court of Guyana asserting that Digicel is engaged in international bypass in violation of GTT’s exclusive license rights, the interconnection agreement between the parties, and the laws of Guyana. GTT is seeking, among other things, injunctive relief to stop the illegal bypass activity, actual damages in excess of US\$9 million and punitive damages of approximately US\$5 million. Digicel filed counterclaims alleging that GTT has violated the terms of the interconnection agreement and Guyana laws. These suits, filed in 2010 and 2012, have yet to proceed to trial and it remains uncertain as to when a trial date may be set. GTT intends to vigorously prosecute these matters.

GTT is also involved in several legal claims regarding its tax filings with the Guyana Revenue Authority dating back to 1991 regarding the deductibility of intercompany advisory fees as well as other tax assessments. Should GTT be held liable for any of the disputed tax assessments, totaling \$44.1 million, the Company believes that the Government of Guyana would then be obligated to reimburse GTT for any amounts necessary to ensure that GTT’s return on investment was no less than 15% per annum for the relevant periods.

ITEM 4. MINE SAFETY DISCLOSURE S

Not Applicable.

PART II**ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

Our Common Stock, \$.01 par value, is listed on the NASDAQ Global Select Market under the symbol "ATNI." The following table sets forth the high and low sales prices for our Common Stock as reported by the NASDAQ Global Select Market:

	<u>High</u>	<u>Low</u>
2015		
Quarter ended March 31	\$ 71.68	\$ 60.64
Quarter ended June 30	\$ 74.03	\$ 64.15
Quarter ended September 30	\$ 76.00	\$ 66.05
Quarter ended December 31	\$ 83.80	\$ 71.40

	<u>High</u>	<u>Low</u>
2016		
Quarter ended March 31	\$ 82.59	\$ 70.22
Quarter ended June 30	\$ 79.61	\$ 69.71
Quarter ended September 30	\$ 83.27	\$ 62.70
Quarter ended December 31	\$ 84.29	\$ 64.63

The number of holders of record of Common Stock as of February 28, 2017 was 94.

Dividends

The following table sets forth the quarterly dividends per share declared by us over the past two fiscal years ended December 31, 2016:

	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>
2015	\$ 0.29	\$ 0.29	\$ 0.32	\$ 0.32
2016	\$ 0.32	\$ 0.32	\$ 0.34	\$ 0.34

The declaration and payment of dividends on our Common Stock is at the discretion of our Board of Directors and is subject to a number of factors. Our credit facility restricts our ability to declare or pay dividends on our Common Stock. Because we are a holding company, our ability to declare dividends is effectively limited to the amount of dividends, if any, our subsidiaries and other equity holdings may distribute to us. We have paid quarterly dividends on our Common Stock since January 1999, and have increased the amount of our dividend in each of the years since then. The present Board of Directors believes in returning a significant portion of profits, where possible, to stockholders and, subject to prudent resource management and strategic development needs, would expect to continue to increase the amount of our dividend if earnings continue to increase, although not necessarily proportionally. In 2015 and 2016 we declared a total annual dividend of \$1.22 and \$1.32 per share, respectively. The continuation or modification of our current dividend policy will be dependent upon strategic opportunities or developments, future results of operations, financial condition, capital requirements, contractual restrictions (such as those under our existing credit facility), regulatory actions, and other factors deemed relevant at that time by the Board of Directors.

Issuer Purchases of Equity Securities in the Fourth Quarter of 2016

In September 2004, our Board of Directors approved a \$5.0 million stock buyback plan (the “2004 Repurchase Plan”). Through September 19, 2016, we repurchased \$4.1 million of our Common Stock, including \$2.0 million during the third quarter of 2016, under the 2004 Repurchase Plan.

On September 19, 2016, our Board of Directors authorized the repurchase of up to \$50.0 million of our common stock from time to time on the open market or in privately negotiated transactions (the “2016 Repurchase Plan”). The 2016 Repurchase Plan replaces the 2004 Repurchase Plan. As of December 31, 2016, we have \$49.9 million of available to be repurchased under the 2016 Repurchase Plan.

The following table reflects the repurchases by the Company of its Common Stock during the quarter ended December 31, 2016 :

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number (or Approximate Dollar Value) of Shares that May be Purchased Under the Plans or Programs
October 1, 2016 — October 31, 2016	294 (1)	\$ 65.29 (1)	—	\$ 50,000,000
November 1, 2016 — November 30, 2016	1,500	\$ 64.99	1,500	\$ 49,902,511
December 1, 2016 — December 31, 2016	—	\$ —	—	\$ 49,902,511

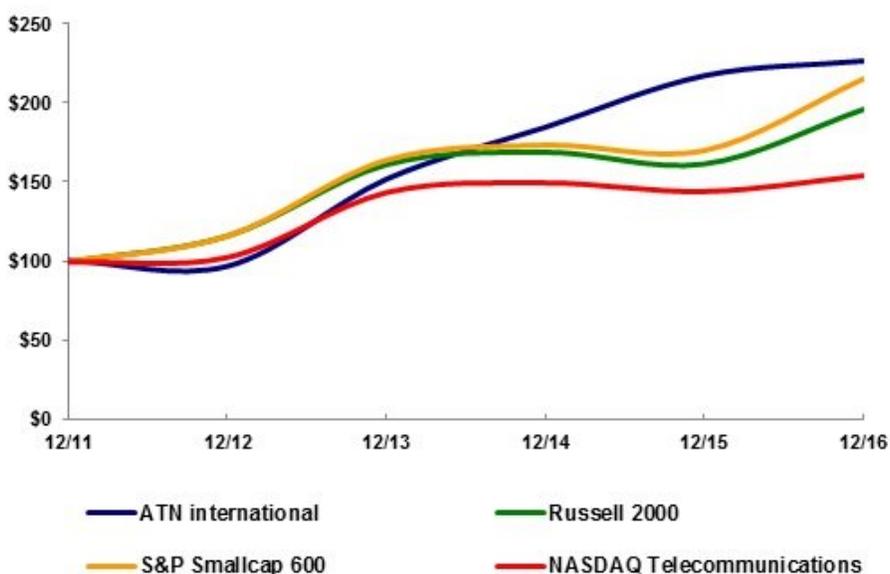
- (1) Consists of 294 shares purchased on October 6, 2016 from our executive officers and other employees who tendered these shares to the Company to satisfy their tax withholding obligations incurred in connection with the exercise of stock options and the vesting of restricted stock awards at such date. These shares were not purchased under the plan discussed above. The price paid per share was the closing price per share of our Common Stock on the Nasdaq Stock Market on the date those shares were purchased

Stock Performance Graph

The graph below matches the cumulative 5-year total stockholder return on our Common Stock with the cumulative total returns of the Russell 2000 index, the S&P Smallcap 600 index, and the NASDAQ Telecommunications index. The graph tracks the performance of a \$100 investment in our Common Stock and in each index (with the reinvestment of all dividends) from December 31, 2011 to December 31, 2016. The stock price performance in the graph below is not necessarily indicative of future price performance. This performance graph is furnished and shall not be deemed “filed” with the SEC or subject to Section 18 of the Exchange Act, nor shall it be deemed incorporated by reference in any of our filings under the Securities Act of 1933.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among ATN international, the Russell 2000 Index, the S&P Smallcap 600 Index and the NASDAQ Telecommunications Index



*\$100 invested on 12/31/11 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

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	12/11	12/12	12/13	12/14	12/15	12/16
ATN international	100.00	96.44	151.63	184.54	217.20	226.44
Russell 2000	100.00	116.35	161.52	169.43	161.95	196.45
S&P Smallcap 600	100.00	116.33	164.38	173.84	170.41	215.67
NASDAQ Telecommunications	100.00	102.78	143.40	149.42	144.02	153.88

ITEM 6. SELECTED FINANCIAL DATA

You should read the selected financial data in conjunction with our “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our Consolidated Financial Statements for the years ended December 31, 2016, 2015 and 2014 and the related Notes to those Consolidated Financial Statements included in this Report. The historical results set forth below are not necessarily indicative of the results of future operations. Period to period comparisons are also significantly affected by our significant acquisitions. See Notes 3 and 4 to the Consolidated Financial Statements included in this Report for a more detailed discussion of our recent acquisitions and discontinued operations.

The selected Consolidated Income Statement data for the years ended December 31, 2016, 2015 and 2014 and the selected Consolidated Balance Sheet data as of December 31, 2016 and 2015 are derived from our audited Consolidated Financial Statements beginning on page F-1 of this Annual Report on Form 10-K. Our Consolidated Financial Statements for the years ended December 31, 2016, 2015 and 2014 have been audited and reported upon by an independent registered public accounting firm in each period. The selected Consolidated Income Statement data for the years ended December 31, 2013 and 2012 and the selected Consolidated Balance Sheet data as of December 31, 2014,

2013 and 2012 are derived from our Consolidated Financial Statements not included in this Annual Report on Form 10-K.

	Year ended December 31,				
	2016	2015	2014	2013	2012
	(In thousands, except per share data)				
Income Statement Data					
Revenue	\$ 457,003	\$ 355,369	\$ 336,347	\$ 292,835	\$ 277,796
Operating expenses(1)	407,206	276,774	250,771	228,750	221,158
Income from operations	49,797	78,595	85,576	64,085	56,638
Other income (expense):					
Interest income	1,239	588	788	852	272
Interest expense	(5,362)	(3,180)	(1,208)	(12,785)	(13,981)
Other, net(2)	(300)	(19,802)	1,012	(5,679)	1,867
Other income (expense), net	(4,423)	(22,394)	592	(17,612)	(11,842)
Income from continuing operations before income taxes	45,374	56,201	86,168	46,473	44,796
Income taxes	21,160	24,137	28,148	9,536	20,831
Income from continuing operations	24,215	32,064	58,020	36,937	23,965
Income from discontinued operations, net of tax	—	1,092	1,102	5,166	29,202
Gain on sale of discontinued operations, net of tax(3)	—	—	—	307,102	—
Net income	24,214	33,156	59,122	349,205	53,167
Net income attributable to non - controlling interests, net of tax	(12,113)	(16,216)	(10,970)	(37,489)	(4,235)
Net income attributable to ATN International, Inc. Stockholders	\$ 12,101	\$ 16,940	\$ 48,152	\$ 311,716	\$ 48,932
Net income per weighted average basic share attributable to ATN International, Inc. Stockholders:					
Continuing operations	\$ 0.75	\$ 0.99	\$ 2.96	\$ 1.84	\$ 1.34
Discontinued operations	—	0.07	0.07	18.01	1.81
Total	\$ 0.75	\$ 1.06	\$ 3.03	\$ 19.85	\$ 3.15
Net income per weighted average diluted share attributable to ATN International, Inc. Stockholders:					
Continuing operations	\$ 0.75	\$ 0.98	\$ 2.94	\$ 1.83	\$ 1.33
Discontinued operations	—	0.07	0.07	17.88	1.80
Total	\$ 0.75	\$ 1.05	\$ 3.01	\$ 19.71	\$ 3.13
Dividends per share applicable to common stock	\$ 1.32	\$ 1.22	\$ 1.12	\$ 1.04	\$ 0.96

	2016	2015	2014	2013	2012
(In thousands)					
Balance Sheet Data (as of December 31,):					
Cash, restricted cash, and short term investments	\$ 297,595	\$ 398,346	\$ 371,394	\$ 434,607	\$ 136,647
Assets of discontinued operations(3)	—	—	175	4,748	380,765
Working capital	217,264	384,137	347,305	350,930	407,981
Fixed assets, net	647,712	373,503	369,582	254,632	238,324
Total assets	1,198,218	945,004	925,030	859,719	910,875
Short - term debt (including current portion of long - term debt)	12,440	6,284	6,083	—	15,680
Liabilities of discontinued operations(3)	—	—	1,247	11,187	73,910
Long - term debt, net	144,383	26,575	32,794	—	250,900
ATN International, Inc. stockholders' equity	677,055	680,299	677,222	643,330	334,146
Statement of Cash Flow Data					
(for the years ended December 31,):					
Net cash provided by (used in):					
Operating activities:					
Continuing operations (4)	\$ 111,656	\$ 139,079	\$ 82,699	\$ (131,396)	\$ 114,884
Discontinued operations	—	158	(4,719)	19,394	72,587
Investing activities:					
Continuing operations	(308,688)	(31,971)	(74,467)	(67,816)	(26,991)
Discontinued operations	—	—	—	710,934	(35,267)
Financing activities:					
Continuing operations	75,334	(41,438)	(33,904)	(308,796)	(36,370)
Discontinued operations	—	—	—	(1,678)	(931)
Capital expenditures	(124,282)	(64,753)	(58,300)	(69,316)	(42,154)

- (1) The Company recognized an impairment charge on its telecommunications licenses during the years ended December 31, 2012 and December 31, 2016.
- (2) During the year ended December 31, 2015, the Company recognized a loss on the deconsolidation of a subsidiary. See Note 3 to the Consolidated Financial Statements included in this Report for additional information
- (3) During the year ended December 31, 2013, the Company recognized a gain on the sale of our U.S. retail wireless business operated under the Alltel name to AT&T Mobility LLC completed in September 2013. See Note 4 to the Consolidated Financial Statements included in this Report for additional information.
- (4) During the year ended December 31, 2016, the Company paid \$22.5 million to fund certain pension obligations acquired in the Innovative Acquisition. Refer to Note 3 of the Consolidated Financial Statements included in this Report for additional information.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

We are a holding company that, through our operating subsidiaries, (i) provides wireless and wireline telecommunications services in North America, Bermuda and the Caribbean, (ii) develops, owns and operates commercial distributed generation solar power systems in the United States and India, and (iii) owns and operates terrestrial and submarine fiber optic transport systems in the United States and the Caribbean. We were incorporated in Delaware in 1987 and began trading publicly in 1991. Since that time, we have engaged in strategic acquisitions and investments to grow our operations. We continue to actively evaluate additional domestic and international acquisition, divestiture, and investment opportunities and other strategic transactions in the telecommunications, energy-related and other industries that meet our return-on-investment and other acquisition criteria. For a discussion of our investment strategy and risks involved, see “*Risk Factors—We are actively evaluating investment, acquisition and other strategic opportunities, which may affect our long-term growth prospects.*”

We offer the following principal services:

- **Wireless.** In the United States, we offer wholesale wireless voice and data roaming services to national, regional, local and selected international wireless carriers in rural markets located principally in the Southwest and Midwest United States. We also offer wireless voice and data services to retail customers in Bermuda, Guyana, and in other smaller markets in the Caribbean and the United States
- **Wireline.** Our wireline services include local telephone and data services in Bermuda, Guyana, the U.S. Virgin Islands, and in other smaller markets in the Caribbean and the United States. Our wireline services also include video services in Bermuda and the U.S. Virgin Islands. As of December 31, 2016, we also offered facilities-based integrated voice and data communications services and wholesale transport services to enterprise and residential customers in New England, primarily Vermont, and in New York State. In addition, we offer wholesale long-distance voice services to telecommunications carriers.
- **Renewable Energy.** In the United States, we provide distributed generation solar power to corporate, utility and municipal customers. Beginning in April 2016, we began developing projects in India to provide distributed generation solar power to corporate and utility customers.

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The following chart summarizes the operating activities of our principal subsidiaries, the segments in which we report our revenue and the markets we served as of December 31, 2016:

Segment	Services	Markets	Tradenames
U.S. Telecom	Wireless	United States (rural markets)	Commnet, Choice, Choice NTUA, Wireless
	Wireline	United States (New England and New York State)	Sovernet, ION, Essexel
International Telecom	Wireline	Guyana, Bermuda, U.S. Virgin Islands	GTT+, One, Innovative, Logic
	Wireless	Bermuda, Guyana, U.S. Virgin Islands	One, GTT+, Innovative, Choice
	Video Services	Bermuda, U.S. Virgin Islands, Cayman Islands, British Virgin Islands, St. Maarten	One, Innovative, Logic, BVI Cable TV
Renewable Energy	Solar	United States and India	Ahana Renewables, Vibrant Energy

We provide management, technical, financial, regulatory, and marketing services to our subsidiaries and typically receive a management fee equal to a percentage of their respective revenue. Management fees from our subsidiaries are eliminated in consolidation.

To be consistent with how management allocates resources and assesses the performance of our business operations, in 2016 we updated our reportable and operating segments to consist of the following: i) U.S. Telecom, consisting of our former U.S. Wireless and U.S. Wireline segments, ii) International Telecom, consisting of our former Island Wireless and International Integrated Telephony segments and the results of our One Communications and Innovative Acquisitions as discussed below, and iii) Renewable Energy, consisting of our former Renewable Energy segment and the results of our Vibrant Energy Acquisition, as discussed below. The prior period segment information has been recast to conform to the current year’s segment presentation.

Acquisitions

During the year ended December 31, 2016, we completed acquisitions within our International Telecom, Renewable Energy and U.S. Telecom segments (the “2016 Acquisitions”).

International Telecom

During the year ended December 31, 2016, we completed our acquisitions of a controlling interest in One Communications Ltd. , formerly KeyTech Limited, (the “One Communications Acquisition”), as well as all of the membership interests of Caribbean Asset Holdings LLC, the holding company for the Innovative group of companies (the “Innovative Acquisition”).

One Communications (formerly KeyTech Limited)

On May 3, 2016, we completed our acquisition of a controlling interest in KeyTech Limited (“KeyTech”), a publicly held Bermuda company listed on the Bermuda Stock Exchange (“BSX”) that provides broadband and cable television services and other telecommunications services to residential and enterprise customers under the “Logic” name in Bermuda and the Cayman Islands. Subsequent to the completion of our acquisition of KeyTech, KeyTech changed its name, and the “Logic” name, to One Communications Ltd. One Communications also owned a minority interest of approximately 43% in the Company’s consolidated subsidiary, Bermuda Digital Communications Ltd. (“BDC”), which provides wireless services in Bermuda under the “CellOne” name. As part of the transaction, the Company contributed its ownership interest of approximately 43% in BDC and approximately \$42.0 million in cash in

exchange for a 51% ownership interest in One Communications. As part of the transaction, BDC was merged with and into a company within the One Communications group and the approximate 15% interest in BDC held, in the aggregate, by BDC's minority shareholders was converted into the right to receive common shares in One Communications. Following the transaction, BDC became wholly owned by One Communications, and One Communications continues to be listed on the BSX. A portion of the cash proceeds that One Communications received upon closing was used to fund a one-time special dividend to One Communications' existing shareholders and to retire One Communications subordinated debt. On May 3, 2016, we began consolidating the results of One Communications within our financial statements in our International Telecom segment.

The One Communications Acquisition was accounted for as a business combination of a controlling interest in One Communications in accordance with ASC 805, *Business Combinations*, and the acquisition of an incremental ownership interest in BDC in accordance with ASC 810, *Consolidation*. The total purchase consideration of \$41.6 million of cash was allocated to the assets acquired and liabilities assumed at their estimated fair values as of the date of the acquisition.

Innovative

On July 1, 2016, we completed its our acquisition of all of the membership interests of Caribbean Asset Holdings LLC ("CAH"), the holding company for the Innovative group of companies operating video services, Internet, wireless and landline services in the U.S. Virgin Islands, British Virgin Islands and St. Maarten ("Innovative"), from the National Rural Utilities Cooperative Finance Corporation ("CFC"). We acquired the Innovative operations for a contractual purchase price of \$145.0 million, reduced by purchase price adjustments of \$5.3 million (the "Innovative Transaction"). In connection with the transaction, we financed \$60.0 million of the purchase price with a loan from an affiliate of CFC, the Rural Telephone Finance Cooperative ("RTFC") on the terms and conditions of a Loan Agreement by and among RTFC, CAH and ATN VI Holdings, LLC, the parent entity of CAH and a wholly-owned subsidiary of the Company. We funded \$51.9 million of the purchase price in cash, subsequently paid \$22.5 million to fund Innovative's pension in the fourth quarter of 2016, and recorded \$5.3 million as restricted cash to satisfy Innovative's other postretirement benefit plans. Following the purchase, our current operations in the U.S. Virgin Islands under the "Choice" name will be combined with Innovative to deliver residential and business subscribers a full range of telecommunications and media services. On July 1, 2016, the Company began consolidating the results of Innovative within its financial statements in its International Telecom segment.

The Innovative Transaction was accounted as a business combination in accordance with ASC 805. The consideration transferred of \$111.9 million, and used for the purchase price allocation differed from the contractual purchase price of \$145.0 million, due to certain GAAP purchase price adjustments including a reduction of \$5.3 million related to working capital adjustments and our agreeing to subsequently settle assumed pension and other postretirement benefit liabilities of \$27.8 million. As of December 31, 2016, we transferred consideration of \$111.9 million which was allocated to the assets acquired and liabilities assumed at their estimated fair values as of the date of the acquisition. The final purchase price represents a reduction of \$0.4 million from the preliminary purchase price. The decrease was due to settlement of working capital adjustments.

Renewable Energy

Vibrant Energy

April 7, 2016, we completed our acquisition of a solar power development portfolio in India from Armstrong Energy Global Limited ("Armstrong"), a well-known developer, builder, and owner of solar farms (the "Vibrant Energy Acquisition"). The business operates under the name Vibrant Energy. We also retained several Armstrong employees in the United Kingdom and India who are employed by us to oversee the development, construction and operation of the India solar projects. The projects to be developed initially are located in the states of Andhra Pradesh and Telangana and are based on a commercial and industrial business model, similar to our existing renewable energy operations in the United States. As of April 7, 2016, we began consolidating the results of Vibrant Energy in our financial statements within its Renewable Energy segment.

The Vibrant Energy Acquisition was accounted for as a business combination in accordance with ASC 805, *Business Combinations*. The total purchase consideration of \$6.2 million cash was allocated to the assets acquired and liabilities assumed at their estimated fair values as of the date of the acquisition.

U.S. Telecom

In July 2016, we acquired certain telecommunications fixed assets and the associated operations in the western United States. The acquisition qualified as a business combination for accounting purposes. We transferred \$9.1 million of cash consideration in the acquisition. The consideration transferred was allocated to \$10.2 million of acquired fixed assets, \$3.5 million of deferred tax liability, and \$0.7 million to other net liabilities, resulting in goodwill of \$3.1 million. Results of operations for the business are included in the U.S. Telecom segment and are not material to our historical results of operations.

Dispositions

Pending- U.S. Wireline Business

On August 8, 2016, we announced that we entered into an agreement to sell our U.S. Wireline business in the Northeast, including our integrated voice and data operations in New England and our wholesale transport operations in New York. Following the completion of the sale, we will retain our wholesale long-distance business in our U.S. Telecom segment. The transaction is expected to close in the first quarter 2017, following the satisfaction of customary closing conditions.

Completed- Turks and Caicos Operations

During March 2015, we sold certain assets and liabilities of our Turks and Caicos business in our International Telecom segment. As a result, we recorded a net loss of approximately \$19.9 million, which is included in other income (expense) on our statement of operations, arising from the deconsolidation of non-controlling interests of \$20.0 million partially offset by a gain of \$0.1 million arising from an excess of the sales proceeds over the carrying value of net assets disposed of. Since the disposition does not relate to a strategic shift in our operations, the subsidiary's historical results and financial position are presented within continuing operations.

Deconsolidation of Subsidiary

On December 15, 2016, we transferred our control of our subsidiary in Aruba to another stockholder in a nonreciprocal transfer. Subsequent to that date, we no longer consolidated the results of the operations of the Aruba business which generated approximately \$3 million in revenues during the year ended December 31, 2016. We did not recognize a gain or loss on the transaction.

Phase I Mobility Fund Grants

As part of the Federal Communications Commission's ("FCC") reform of its Universal Service Fund ("USF") program, which previously provided support to carriers seeking to offer telecommunications services in high-cost areas and to low-income households, the FCC created the Phase I Mobility Fund ("Phase I Mobility Fund"), a one-time award meant to support wireless coverage in underserved geographic areas in the United States. We have received \$19.7 million of Phase I Mobility Fund support to our wholesale wireless business (the "Mobility Funds") to expand voice and broadband networks in certain geographic areas in order to offer either 3G or 4G coverage. As part of the receipt of the Mobility Funds, we committed to comply with certain additional FCC construction and other requirements. A portion of these funds will be used to offset network capital costs and a portion is used to offset the costs of supporting the networks for a period of five years from the award date. In connection with our application for the Mobility Funds, we have issued approximately \$10.6 million in letters of credit to the Universal Service Administrative Company ("USAC") to secure these obligations. If we fail to comply with any of the terms and conditions upon which the Mobility Funds were granted, or if we lose eligibility for the Mobility Funds, USAC will be entitled to draw the entire amount of the letter of credit applicable to the affected project plus penalties.

The Mobility Funds projects and their results are included within the Company's U.S. Telecom segment. As of December 31 2016, the Company had received approximately \$ 19.7 million in Mobility Funds. Of these funds, \$ 5.8 million was recorded as an offset to the cost of the property, plant, and equipment associated with these projects and, consequentially, a reduction of future depreciation expense. The remaining \$13.9 million received offsets operating expenses, of which \$4.6 million has been recorded to date, \$ 3.4 million is recorded within long term liabilities, and the remaining \$5.8 million is recorded within current liabilities in the Company's consolidated balance sheet as of December 31, 2016. The balance sheet presentation is based on the timing of the expected usage of the funds which will reduce future operations expenses.

Reclassifications

Certain reclassifications have been made in the December 31, 2015 financial statements to conform our consolidated income statements to how we analyze our operations in the current period. These changes did not impact operating income. For the year ended December 31, 2015 the aggregate impact of the changes included a decrease to termination and access fees of \$4.1 million, an increase to engineering and operations expenses of \$2.3 million, an increase to sales and marketing expenses of \$2.4 million, a decrease to equipment expense and a decrease to general and administrative expenses of \$0.5 million.

Selected Segment Financial Information

The following represents selected segment information for the years ended December 31, 2016 and 2015:

For the Year Ended December 31, 2016					
	U.S. Telecom	International Telecom	Renewable Energy	Reconciling Items (1)	Consolidated
Revenue					
Wireless	\$ 148,053	\$ 80,745	\$ —	\$ —	\$ 228,798
Wireline	26,448	161,571	—	—	188,019
Equipment and Other	2,225	15,960	393	—	18,578
Renewable Energy	—	—	21,608	—	21,608
Total Revenue	176,727	258,275	22,001	—	457,003
Operating income (loss)	49,078	35,436	(246)	(34,471)	49,797

For the Year Ended December 31, 2015					
	U.S. Telecom	International Telecom	Renewable Energy	Reconciling Items (1)	Consolidated
Revenue					
Wireless	\$ 155,390	\$ 81,652	\$ —	\$ —	\$ 237,042
Wireline	25,241	61,244	—	—	86,485
Equipment and Other	2,355	8,447	—	—	10,802
Renewable Energy	—	—	21,040	—	21,040
Total Revenue	182,985	151,342	21,040	—	355,369
Operating income (loss)	74,459	28,200	6,720	(30,784)	78,595

(1) Reconciling items refer to corporate overhead costs and consolidating adjustments

A year over year summary of our segment results is as follows:

- *U.S. Telecom.* Revenues within our U.S. Telecom segment decreased by \$6.3 million, or 3.4%, to \$176.7 million from \$183.0 million for the years ended December 31, 2016 and 2015, respectively. Of this decrease, \$11.9 million was attributable to reduced wholesale roaming rates within our wireless operations which more than offset an increase in data traffic volumes. This decrease was partially offset by an increase of \$4.6 million in our retail wireless business as a result of increased subscribers and a \$1.2 million increase in our wireline operations due to an increase in traffic volumes.

Operating expenses within our U.S. Telecom segment increased \$19.2 million, or 17.7%, to \$127.7 million from \$108.5 million for the years ended December 31, 2016 and 2015, respectively. This increase was primarily related to the expansions and upgrades of our networks associated with the increase in traffic volumes.

As a result of the above, our U.S. Telecom segment's operating income decreased \$25.4 million, or 34.1%, to \$49.1 million from \$74.5 million for the years ended December 31, 2016 and 2015, respectively.

- *International Telecom.* Revenues within our International Telecom segment increased \$107.0 million, or 70.7%, to \$258.3 million from \$151.3 million for the years ended December 31, 2016 and 2015, respectively. This increase was related to our One Communications and Innovative Acquisitions which reported an aggregate of \$108.5 million of revenue during the year ended December 31, 2016.

Operating expenses within our International Telecom segment increased by \$99.7 million, or 81.0%, to \$222.8 million from \$123.1 million for the years ended December 31, 2016 and 2015, respectively. This increase was related to our One Communications and Innovative Acquisitions which incurred \$104.0 million of operating expenses during the year ended December 31, 2016. This increase was partially offset by a \$5.3 million decrease in our other International Telecom operations as a result of certain operating efficiencies.

As a result, our International Telecom segment's operating income increased \$7.2 million, or 26.0% to \$35.4 million from \$28.2 million for the years ended December 31, 2016 and 2015, respectively.

- *Renewable Energy.* Revenues within our Renewable Energy segment increased \$1.0 million, or 4.8%, to \$22.0 million from \$21.0 million for the years ended December 31, 2016 and 2015, respectively as a result of increased solar production and certain customer contract price escalations.

Operating expenses within our Renewable Energy segment increased \$7.9 million, or 55.2%, to \$22.2 million from \$14.3 million for the years ended December 31, 2016 and 2015, respectively. This increase in expenses was primarily related to acquisition-related expenses incurred as a part of our Vibrant Acquisition.

As a result, our Renewable Energy segment's operating income decreased to a loss of \$0.2 million from income.

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The following represents a year over year discussion and analysis of our results of operations for the years ended December 31, 2016 and 2015 (in thousands):

	Year Ended December 31,		Amount of Increase (Decrease)	Percent Increase (Decrease)
	2016	2015		
REVENUE:				
Wireless	\$ 228,798	\$ 237,042	\$ (8,244)	(3.5)%
Wireline	188,019	86,485	101,534	117.4
Renewable Energy	21,608	21,040	568	2.7
Equipment and Other	18,578	10,802	7,776	72.0
Total revenue	<u>\$ 457,003</u>	<u>\$ 355,369</u>	<u>\$ 101,634</u>	<u>28.6 %</u>
OPERATING EXPENSES (excluding depreciation and amortization unless otherwise indicated):				
Termination and access fees	116,427	77,806	38,621	49.6
Engineering and operations	52,902	39,582	13,320	33.7
Sales and marketing	31,050	23,898	7,152	29.9
Equipment expense	14,342	14,803	(461)	(3.1)
General and administrative	94,293	59,436	34,857	58.6
Transaction-related charges	16,279	7,182	9,097	126.7
Restructuring charges	1,785	—	1,785	100.0
Depreciation and amortization	75,980	56,890	19,090	33.6
Impairment of long-lived assets	11,425	—	11,425	100.0
Bargain purchase gain	(7,304)	—	(7,304)	(100.0)
(Gain) Loss on disposition of long-lived assets	27	(2,823)	2,850	(101.0)
Total operating expenses	<u>\$ 407,206</u>	<u>\$ 276,774</u>	<u>\$ 130,432</u>	<u>47.1 %</u>
Income from operations	<u>\$ 49,797</u>	<u>\$ 78,595</u>	<u>\$ (28,798)</u>	<u>(36.6)%</u>
OTHER INCOME (EXPENSE):				
Interest income	1,239	588	651	110.7
Interest expense	(5,362)	(3,180)	(2,182)	68.6
Loss on deconsolidation of subsidiary	—	(19,937)	19,937	(100.0)
Other income (expense), net	(300)	135	(435)	(322.2)
Other income (expense), net	<u>\$ (4,423)</u>	<u>\$ (22,394)</u>	<u>\$ 17,971</u>	<u>(80.2)%</u>
INCOME FROM CONTINUING OPERATIONS BEFORE				
INCOME TAXES				
Income tax expense	45,374	56,201	(10,827)	(19.3)
	<u>21,160</u>	<u>24,137</u>	<u>(2,527)</u>	<u>(10.5)</u>
INCOME FROM CONTINUING OPERATIONS				
	<u>24,215</u>	<u>32,065</u>	<u>(7,850)</u>	<u>(24.9)</u>
INCOME FROM DISCONTINUED OPERATIONS				
Income from discontinued operations	<u>\$ —</u>	<u>\$ 1,092</u>	<u>\$ (1,092)</u>	<u>(100.0)%</u>
NET INCOME				
	<u>24,215</u>	<u>33,156</u>	<u>(8,941)</u>	<u>(27.0)</u>
Net income attributable to non-controlling interests, net of tax:	<u>(12,113)</u>	<u>(16,216)</u>	<u>3,993</u>	<u>(24.6)</u>
NET INCOME ATTRIBUTABLE TO ATN				
INTERNATIONAL, INC. STOCKHOLDERS	<u>\$ 12,101</u>	<u>\$ 16,940</u>	<u>\$ (4,839)</u>	<u>(28.6)%</u>

Wireless revenue. Our wireless revenue consists of wholesale revenue generated within our U.S. Telecom segment and retail revenue generated within both our U.S. Telecom and International Telecom segments.

Wholesale revenue. Our U.S. Telecom segment generates wholesale revenue from providing mobile voice or data services to the customers of other wireless carriers, the provision of network switching services and certain transport services using our wireless networks. Wholesale wireless revenue is primarily driven by the number of sites

and base stations we operate, the amount of voice and data traffic from the subscribers of other carriers that each of these sites generates and the rates we are paid from our carrier customers for carrying that traffic.

The most significant competitive factor we face in our U.S. Telecom's wholesale wireless business is the extent to which our carrier customers choose to roam on our networks or elect to build or acquire their own infrastructure in a market, reducing or eliminating their need for our services in those markets. Occasionally, we have entered into buildout projects with existing carrier customers to help the customer accelerate the buildout of a given area. Pursuant to these arrangements, we agree to incur the cost of building and operating a network in a newly designated area meeting specified conditions. In exchange, the carrier agrees to lease us spectrum in that area and enter into a contract with specific pricing and terms. Historically, these arrangements typically have included a purchase right in favor of the carrier to purchase that portion of the network for a predetermined price, depending on when the option to purchase is exercised. We currently have one buildout arrangement of approximately 100 built cell sites, which provides the carrier with an option to purchase such sites exercisable beginning no earlier than 2018. At this time, we believe holder is likely to exercise the option and proceeds from the exercise to be minimal.

Retail revenue. Both our U.S. Telecom and International Telecom segments generate retail wireless revenues by providing mobile voice or data services to our subscribers. Retail wireless revenues also include roaming revenues generated by other carriers' customers roaming into our retail markets.

Wireless revenue decreased by \$8.2 million, or 3.5%, to \$228.8 million for the year ended December 31, 2016 from \$237.0 million for the year ended December 31, 2015. The decreases in wireless revenue, within our segments, consisted of the following:

- *U.S. Telecom.* Wireless revenue within our U.S. Telecom segment decreased by \$7.3 million, or 4.7%, to \$148.1 million from \$155.4 million, for the years ended December 31, 2016 and 2015, respectively. Wholesale wireless revenue decreased by \$11.9 million or 8.4%, to \$129.3 million from \$141.2 million for the years ended December 31, 2016 and 2015, respectively, as a result of a reduction in wholesale roaming rates partially offset by growth in data traffic volumes as a result of capacity and technology upgrades to our network and the increase in the number of base stations to 1,006 from 800 as of December 31, 2016 and 2015, respectively. Our U.S. Telecom's retail operations reported an increase in wireless revenues of \$4.6 million, or 32.4%, to \$18.8 million from \$14.2 million for the year ended December 31, 2016 and 2015, respectively, as a result of subscriber growth. We expect retail revenues to remain relatively consistent in future periods.
- *International Telecom.* Within our International Telecom segment, wireless revenue decreased by \$0.9 million, or 1.0%, to \$80.7 million from \$81.7 million, for the years ended December 31, 2016 and 2015, respectively. This decrease was primarily the result of the sale of our operations in Turks and Caicos during March 2015 and a decline in roaming revenues within our other international markets. Our International Telecom segment's retail subscribers increased to 311,000 as of December 31, 2016 from 282,000 as of December 31, 2015. This increase in subscribers was driven by our Innovative Acquisition.

We expect wholesale wireless revenues to decline and margins to contract within our U.S. Telecom segment as a result of the necessary steps we have taken to significantly reduce rates in exchange for longer-term contracts with carriers. While we expect that wholesale data volumes will continue to increase due to increased demand combined with our increased capacity, we expect that our reduced rates will more than offset any revenue increase resulting from increased data volumes. We believe that this new model has much lower risk in that the extended term and reduced pricing create a potential for a long-lived shared infrastructure solution with carriers.

We expect wireless revenues in our International Telecom segment to increase in 2017 and in subsequent periods as we invest in upgrading our networks and service offerings. Growth in revenue from anticipated subscriber growth in certain markets may be somewhat offset by a decline in roaming revenues due to lower negotiated roaming

rates received from our carrier customers. Roaming revenues in these markets are also subject to seasonality and can fluctuate between quarters.

Wireline revenue. Wireline revenue is generated by our U.S. Telecom and International Telecom segments. In our U.S. Telecom segment, revenue is generated by our integrated voice and data operations in New England, our wholesale transport operations in New York and our wholesale long-distance voice services to telecommunications carriers. Wireline revenue includes basic service fees, measured service revenue, and internet access fees, as well as installation charges for new lines, monthly line rental charges, long-distance or toll charges, and maintenance. Within our International Telecom segment, revenue is generated in Bermuda and the Caribbean (including the U.S. Virgin Islands) and includes internet, voice, and video service revenues.

Wireline revenue increased by \$101.5 million, or 117.3%, to \$188.0 million for the year ended December 31, 2016 from \$86.5 million for the year ended December 31, 2015. The increases in wireline revenue, within our segments, consisted of the following:

- *U.S. Telecom.* Wireline revenue increased within our U.S. Telecom segment by \$1.2 million, or 5.0%, to \$26.4 million from \$25.2 million, for the years ended December 31, 2016 and 2015, respectively, primarily as a result of an increase in traffic volumes within our wholesale long-distance voice operations.
- *International Telecom.* Within our International Telecom segment, wireline revenue increased by \$100.3 million, or 164.0%, to \$161.6 million from \$61.2 million, for the years ended December 31, 2016 and 2015, respectively. This increase was primarily the result of our One Communications and Innovative Acquisitions which generated an aggregate of \$100.3 million of wireline revenue during 2016. In addition, wireline revenue increased as a result of increased subscribers and related broadband data revenues.

On August 8, 2016, we announced that we had entered into an agreement to sell our U.S. Wireline business in the Northeast, including our integrated voice and data operations in New England and our wholesale transport operations in New York, which generated \$21.2 million in revenue for the year ended December 31, 2016. Following the completion of the sale, we will retain our wholesale long-distance business in our U.S. Telecom segment. The transaction is expected to close in the first quarter of 2017, following the satisfaction of customary closing conditions. We expect that wireline revenue within the U.S. Telecom segment will remain relatively unchanged until the close of the transaction and that after closing our remaining U.S. Telecom wireline revenue will be immaterial to the segment.

Within our International Telecom segment, we anticipate that wireline revenue from our international long-distance business in Guyana will continue to decrease, principally as a result of the loss of market share, should we cease to be the exclusive provider of domestic fixed and international long-distance service in Guyana, whether by reason of the Government of Guyana implementing recently-passed legislation or new regulations or lack of enforcement of our exclusive rights. While the loss of our exclusive rights will likely cause an immediate reduction in our wireline revenue, over the longer term such declines may be offset by increased revenue from data services to consumers and enterprises in Guyana, an increase in regulated local calling rates in Guyana, an increase in wholesale transport services and large enterprise and agency sales in the United States. We currently cannot predict when or if the Government of Guyana will take any action to implement such legislation or any other action that would otherwise affect our exclusive rights in Guyana. See Note 13 to the Unaudited Condensed Consolidated Financial Statements included in this Report.

We anticipate that wireline revenue within our USVI and Bermuda operations, which are primarily generated by our One Communications and Innovative Acquisitions, respectively, will increase in 2017 as a result of a full year of operations being reported and then remain fairly consistent afterwards.

Renewable energy revenue. Renewable energy revenue represents revenue from the sale of electricity through long-term (10 to 25 years) power purchase agreements (“PPAs”) as well as the sale of solar renewable energy credits and performance-based incentives (“SRECs”), which have a contract term of up to ten years.

Renewable energy revenue, recorded within our Renewable Energy segment, increased \$0.6 million, or 2.9%, to \$21.6 million from \$21.0 million for the year ended December 31, 2016 and 2015, respectively. This increase was primarily the result of increased production and certain customer contract price escalations partially offset by the expiration of certain incentive energy credits in California.

Our PPAs, which are typically priced at or below local retail electricity rates, allow our customers to secure electricity at predictable and stable prices over the duration of their long-term contract. As such, our PPAs provide us with high-quality contracted cash flows, which will continue over their average remaining life. For these reasons, we expect that Renewable Energy revenue from our current portfolio of commercial solar projects will remain fairly consistent in future periods before the expiration of the solar renewable energy credits.

With the closing of our Vibrant Energy Acquisition, we are currently developing projects in India to provide distributed generation solar power to corporate and utility customers and expect to begin generating revenue during the first quarter of 2017, with a target of development of at least 250 MWp in solar energy projects through the end of 2018 provided we can secure necessary financing, amongst other things. When fully developed, we expect that margins from this portfolio of projects will be in line with our current domestic solar operations.

Equipment and other revenue. Equipment and other revenue represents wireless equipment sales, primarily handsets and data modems, to retail telecommunications customers within both our U.S. Telecom and International Telecom segments. Equipment and other revenue also includes equipment, real estate and tower rental income within our International Telecom segment and consulting fees within our Renewable Energy segment.

Equipment and other revenue increased by \$7.8 million, or 72.2%, to \$18.6 million for the year ended December 31, 2016 from \$10.8 million for the year ended December 31, 2015. The net increases in equipment and other revenue, within our segments, consisted of the following:

- *U.S. Telecom.* Equipment and other revenue decreased within our U.S. Telecom segment by \$0.2 million, or 8.3%, to \$2.2 million from \$2.4 million, for the years ended December 31, 2016 and 2015, respectively, as a result of a decrease in handset sales within the retail operation of our wireless businesses.
- *International Telecom.* Within our International Telecom segment, equipment and other revenue increased by \$7.5 million, or 89.0 %, to \$16.0 million from \$8.4 million, for the years ended December 31, 2016 and 2015, respectively. This increase was primarily the result of our One Communications and Innovative Acquisitions which generated an aggregate of \$7.2 million of equipment and other revenue during 2016. In addition, equipment and other revenue increased as a result of increased handset and data modem sales. These increases were partially offset by a decrease in our other international markets as a result of a reduction in handset sales.
- *Renewable Energy.* Our Renewable Energy segment reported \$0.4 million in 2016 as a result of consulting fees recognized by our Vibrant Energy business which was acquired in April 2016.

We believe that equipment and other revenue could continue to increase, albeit at a slower pace, as a result of gross subscriber additions continued growth in smartphone penetration driven by customer incentives such as device subsidies.

Termination and access fee expenses. Termination and access fee expenses are charges that we pay for voice and data transport circuits (in particular, the circuits between our wireless sites and our switches), internet capacity, other access fees we pay to terminate our calls, telecommunication spectrum fees and direct costs associated with our Renewable Energy segment.

Termination and access fees increased by \$38.6 million, or 49.6%, to \$116.4 million for the year ended December 31, 2016 from \$77.8 million for the year ended December 31, 2015. Increases in termination and access fees, within our segments, consisted of the following:

- *U.S. Telecom.* Termination and access fees within our U.S. Telecom segment increased by \$2.5 million, or 5.3%, to \$49.9 million from \$47.4 million, for the years ended December 31, 2016 and 2015, respectively. Within our wholesale wireless operations, termination and access fees increased by \$1.5 million as the result of our increased data traffic volumes, costs related to additional technologies and the expansion and upgrade of our network. Our wholesale long-distance voice operations incurred an increase in termination and access fees of \$1.2 million as a result of increased traffic volumes. These increases were partially offset by a decrease in termination and access fees of \$0.2 million within our other wireline operations.
- *International Telecom.* Within our International Telecom segment, termination and access fees increased by \$36.0 million, or 123.7%, to \$65.1 million from \$29.1 million, for the years ended December 31, 2016 and 2015, respectively. This increase was primarily the result of our One Communications and Innovative Acquisitions which incurred an aggregate of \$39.0 million of termination and access fees during 2016. This increase was partially offset by some of our other markets which experienced operating efficiencies and reported a reduction in termination and access fees of \$2.1 million.
- *Renewable Energy.* Termination and access fees within our Renewable Energy segment increased by \$0.1 million, or 7.7%, to \$1.4 million from \$1.3 million for the years ended December 31, 2016 and 2015, respectively, as a result of expenses incurred for the development of our Vibrant Energy operations.

We expect that these termination and expenses will increase upon the completion of the Vibrant Energy construction projects but will remain fairly consistent as a percentage of revenues in future periods.

Engineering and operations expenses. Engineering and operations expenses include the expenses associated with developing, operating and supporting our expanding telecommunications networks and renewable energy operations, including the salaries and benefits paid to employees directly involved in the development and operation of our networks and renewable energy operations.

Engineering and operations expenses increased by \$13.3 million, or 33.6%, to \$52.9 million from \$39.6 million for the year ended December 31, 2016 and 2015, respectively. The net increase in engineering and operations, within our segments, consisted of the following:

- *U.S. Telecom.* Engineering and operations expenses decreased within our U.S. Telecom segment by \$1.5 million, or 8.0%, to \$17.2 million from \$18.7 million, for the years ended December 31, 2016 and 2015, respectively, primarily as a result of operating efficiencies within our wireless businesses.
- *International Telecom.* Within our International Telecom segment, engineering and operations expenses increased by \$14.6 million, or 73.7%, to \$34.4 million from \$19.8 million, for the years ended December 31, 2016 and 2015, respectively. This increase was primarily the result of our One Communications and Innovative Acquisitions which incurred an aggregate of \$15.5 million of engineering and operations expenses during 2016. This increase was partially offset by some of our other markets which experienced operating efficiencies and reported a reduction in engineering and operations.
- *Renewable Energy.* Engineering and operations expenses within our Renewable Energy segment increased to \$0.5 million as a result of expenses incurred for the development of our Vibrant Energy projects.

We expect to incur additional engineering and operations expenses necessary to continue the development of our Vibrant Energy projects and to complete technology upgrades within our newly acquired businesses within our International Telecom segment. However, upon completion of the construction and those upgrades, we expect that engineering and operations will remain fairly consistent as a percentage of revenues.

Sales and marketing expenses. Sales and marketing expenses include salaries and benefits we pay to sales personnel, customer service expenses, sales commissions and the costs associated with the development and implementation of our promotion and marketing campaigns.

Sales and marketing expenses increased by \$7.1 million, or 29.7%, to \$31.0 million from \$23.9 million for the year ended December 31, 2016 and 2015, respectively. The net increase in sales and marketing expenses, within our segments, consisted of the following:

- *U.S. Telecom.* Sales and marketing expenses decreased within our U.S. Telecom segment by \$0.4 million, or 7.0%, to \$5.3 million from \$5.7 million, for the years ended December 31, 2016 and 2015, respectively, primarily as a result of operating efficiencies within our wireline businesses.
- *International Telecom.* Within our International Telecom segment, our sales and marketing expenses increased by \$7.6 million, or 41.8%, to \$25.8 million from \$18.2 million, for the years ended December 31, 2016 and 2015, respectively. This increase was primarily attributable to our One Communications and Innovative Acquisitions which incurred an aggregate \$7.0 million of sales and marketing expenses during 2016.

We expect that sales, marketing and customer service expenses remain fairly consistent as a percentage of revenues in future periods.

Equipment expenses. Equipment expenses include the costs of our handset and customer resale equipment in our retail businesses.

Equipment expenses decreased by \$0.5 million, or 3.4%, to \$14.3 million for the year ended December 31, 2016 from \$14.8 million for the year ended December 31, 2015. The decreases in equipment expenses, within our segments, consisted of the following:

- *U.S. Telecom.* Equipment expenses decreased within our U.S. Telecom segment by \$0.3 million, or 7.0%, to \$4.0 million from \$4.3 million, for the years ended December 31, 2016 and 2015, respectively. Of this decrease, \$0.2 million was related to a decrease in handset sales within the retail operation of our wireless businesses while the remaining \$0.1 million decrease was attributable to our wireline operations.
- *International Telecom.* Equipment expenses decreased within our International Telecom segment by \$0.1 million, or 1.0%, to \$10.4 million from \$10.5 million, for the years ended December 31, 2016 and 2015, respectively, primarily related to the March 2015 sale of our operations in Turks and Caicos.

We believe that equipment expenses could increase as a result of customer incentive device subsidies for smartphones and modems.

General and administrative expenses. General and administrative expenses include salaries, benefits and related costs for general corporate functions including executive management, finance and administration, legal and regulatory, facilities, information technology and human resources. General and administrative expenses also include internal costs associated with our performance of due-diligence in connection with acquisition activities.

General and administrative expenses increased by \$34.9 million, or 58.8%, to \$94.3 million for the year ended December 31, 2016 from \$59.4 million for the year ended December 31, 2015. Increases in general and administrative expenses, within our segments, consisted of the following:

- *U.S. Telecom*. General and administrative expenses increased within our U.S. Telecom segment by \$2.7 million, or 20.8%, to \$15.7 million from \$13.0 million, for the years ended December 31, 2016 and 2015, respectively, in order to support our expanding wireless network.
- *International Telecom*. General and administrative expenses increased within our International Telecom segment by \$27.6 million, or 134.0%, to \$48.2 million from \$20.6 million, for the years ended December 31, 2016 and 2015, respectively, as a result of the One Communications and Innovative Acquisitions which incurred an aggregate of \$27.4 million of general and administrative expenses during 2016.
- *Renewable Energy*. General and administrative expenses within our Renewable Energy segment increased by \$1.1 million, or 26.2%, to \$5.3 million from \$4.2 million for the years ended December 31, 2016 and 2015, respectively, as a result of expenses incurred for the development of our Vibrant Energy projects which are expected to be operational in the first quarter of 2017.
- *Corporate Overhead*. General and administrative expenses increased within our corporate overhead by \$3.5 million, or 16.2%, to \$25.1 million from \$21.6 million, for the years ended December 31, 2016 and 2015, respectively, in order to support our expanding operations.

We expect that these general and administrative expenses will remain fairly consistent as a percentage of revenues in future periods. However, we also expect to incur additional general and administrative expenses necessary to continue the development of our Vibrant Energy projects that will disproportionately affect our Renewable Energy results until such projects start to become operational.

Transaction-related charges. Transaction-related charges include the external costs, such as legal, tax, accounting and consulting fees directly associated with acquisition and disposition-related activities, which are expensed as incurred. Transaction-related charges do not include internal costs, such as employee salary and travel-related expenses, incurred in connection with acquisitions or dispositions or any integration-related costs.

We incurred \$16.3 million and \$7.2 million of transaction-related charges during the year ended December 31, 2016 and 2015, respectively. Substantially all of the 2016 expenses was related to the Vibrant Energy, One Communications and Innovative Acquisitions.

Restructuring charges. During the year ended December 31, 2016, we incurred \$1.8 million of certain restructuring costs in connection with the One Communications Acquisition which is included within our International Telecom segment.

Depreciation and amortization expenses. Depreciation and amortization expenses represent the depreciation and amortization charges we record on our property and equipment and on certain intangible assets.

Depreciation and amortization expenses increased by \$19.4 million, or 34.1%, to \$76.3 million for the year ended December 31, 2016 from \$56.9 million for the year ended December 31, 2015. Increases in depreciation and amortization expenses, within our segments, consisted primarily of the following:

- *U.S. Telecom*. Depreciation and amortization expenses increased within our U.S. Telecom segment by \$2.3 million, or 10.3%, to \$24.5 million from \$22.2 million, for the years ended December 31, 2016 and 2015, respectively, as a result of certain wireless network expansions and upgrades.
- *International Telecom*. Depreciation and amortization expenses increased within our International Telecom segment by \$15.9 million, or 63.9%, to \$40.8 million from \$24.9 million, for the years ended

December 31, 2016 and 2015, respectively, as a result of the One Communications and Innovative Acquisitions which incurred an aggregate of \$14.9 million of depreciation and amortization expenses during 2016.

- *Renewable Energy*. Depreciation and amortization expenses within our Renewable Energy segment increased by \$0.2 million, or 4.2%, to \$5.0 million from \$4.8 million as a result of capital expenditures during 2016 primarily as a result of our Vibrant Acquisition.
- *Corporate Overhead*. Depreciation and amortization expenses increased within our corporate overhead by \$1.1 million, or 22.4%, to \$6.0 million from \$4.9 million, for the years ended December 31, 2016 and 2015, respectively, to support our expanding operations.

We expect depreciation expense to increase as we acquire more tangible assets to expand or upgrade our telecommunications networks, build or acquire solar power generating facilities and amortize intangible assets recorded in connection with acquisitions.

Impairment of long-lived assets and goodwill. During June 2016, as a result of recent industry consolidation activities and a review of strategic alternatives for our U.S. Wireline business in the Northeast, the Company identified factors indicating the carrying amount of certain assets may not be recoverable. More specifically, the factors included the competitive environment, recent industry consolidation, and the Company's view of future opportunities in the market which began to evolve in the second quarter of 2016 as discussed in Note 7 to the Consolidated Financial Statements included in this report.

As a result of this transaction and the recent developments in the market, we determined it was appropriate to assess the reporting unit's assets for impairment. The reporting unit holds three types of assets for purposes of impairment testing: i) other assets such as accounts receivable and inventory, ii) long lived assets such as property plant and equipment, and iii) goodwill. We first assessed the other assets for impairment and determined no impairment was appropriate. Second, the property, plant and equipment was assessed for impairment. The impairment test compared the undiscounted cash flows from the use and eventual disposition of the asset group to its carrying amount and determined the carrying amount was not recoverable. The impairment loss of \$3.6 million was equal to the amount by which the carrying amount exceeded the fair value. Third management assessed goodwill for impairment following the two step impairment test. The carrying amount of the reporting unit exceeded its fair value after considering the \$3.6 million asset impairment. The second step of the goodwill impairment test compares the implied fair value of the reporting unit's goodwill with the carrying amount of goodwill to measure the amount of impairment loss. The impairment loss equaled \$7.5 million. We utilized the income approach, with Level 3 valuation inputs, which considered both the purchase agreement and cash flows discounted at a rate of 14% in its fair value calculations. In total, we recorded an impairment charge of \$11.1 million. The impairment charge is included in income from operations for the year ended December 31, 2016.

We also assessed the value of a tradename used within our International Telecom segment. As a result of that assessment, we concluded that the book value of such tradename exceeded its fair value and as a result, we recorded a non-cash impairment charge of \$0.3 million during the year ended December 31, 2016.

Bargain purchase gain. In connection with the One Communications Acquisition, we recorded a bargain purchase gain of \$7.3 million during the year ended December 31, 2016. The purchase price and resulting bargain purchase gain are the result of the market conditions and competitive environment in which One Communications operates along with our strategic position and resources in those same markets. Both companies realized that their combined resources would accelerate the transformation of both companies to better serve customers in these markets. The bargain purchase gain is included in operating income in the accompanying income statement for the year ended December 31, 2016.

Gain on disposition of long-lived assets. During the year ended December 31, 2015, we sold certain network assets and telecommunications licenses in our U.S. Telecom segment and recognized a gain on such disposition of \$2.8 million.

Interest income. Interest income represents interest earned on our cash, cash equivalents, restricted cash and short term investment balances.

Interest income increased to \$1.2 million from \$0.6 million for the year ended December 31, 2016 and 2015, respectively, as a result of increased interest rates on our cash, cash equivalents and short-term investments.

Interest expense. We incur interest expense on the financed portion of the Innovative Acquisition purchase price, the term loans assumed in the One Communications Acquisition, the Ahana Debt which, was refinanced on December 19, 2016, commitment fees, letter of credit fees, amortization of debt issuance costs and interest incurred on our outstanding credit facilities.

Interest expense increased by \$2.2 million to \$5.4 million from \$3.2 million for the year ended December 31, 2016 and 2015, respectively. The increase predominantly reflects the interest on the debt assumed with the One Communications Acquisition and interest incurred on debt used to finance a portion of the Innovative Acquisition.

Other income (expense), net. Other income (expense), net represents miscellaneous non-operational income we earned or expenses we incurred. Other income (expense), net was an expense of \$0.3 million and income of \$0.1 million for the year ended December 31, 2016 and 2015, respectively. The majority of other income (expense), net for the year ended December 31, 2016 is the result of a \$0.8 million expense on the loss on an unconsolidated affiliate partially offset by a \$0.5 million gain on a foreign currency transaction.

Income taxes. Our effective tax rates for the years ended December 31, 2016 and 2015 were 46.6% and 43.0%, respectively. The effective tax rate for the year ended December 31, 2016 was impacted by the following items (i) \$3.1 million provision related to certain transactional charges incurred in connection with our recent acquisitions that had no tax benefit, (ii) \$2.6 million provision related to an impairment charge to write down the value of assets related to our wireline business, (iii) \$2.5 million provision related to the write-off of an unrecoverable tax receivable and (iv) the mix of income generated among the jurisdictions in which we operate. The effective tax rate for the year ended December 31, 2015 was impacted by the following items: (i) \$7.0 million provision related to the \$19.9 million loss on deconsolidation within its International Telecom business that had no tax benefit and (ii) the mix of income generated among the jurisdictions in which we operate. Our effective tax rate is based upon estimated income before provision for income taxes for the year, composition of the income in different countries, and adjustments, if any, in the applicable quarterly periods for potential tax consequences, benefits and/or resolutions of tax contingencies. Our consolidated tax rate will continue to be impacted by the mix of income generated among the jurisdictions in which we operate.

Net income attributable to non-controlling interests. Net income attributable to non-controlling interests reflected an allocation of \$12.1 million and \$16.2 million of income generated by our less than wholly-owned subsidiaries for the year ended December 31, 2016 and 2015, respectively. Changes in net income attributable to non-controlling interests, within our segments, consisted of the following:

- *U.S. Telecom*. Net income attributable to non-controlling interests increased by \$0.2 million, or 3.6%, to \$5.8 million from \$5.6 million for the years ended December 31, 2016 and 2015, respectively, as a result of increased profitability at certain less than wholly owned subsidiaries of our wireless operations.
- *International Telecom*. Net income attributable to non-controlling interests decreased by \$4.5 million, or 50.6% to \$4.4 million from \$8.9 million, primarily as a result of an increase in our ownership in our Bermuda operations as a result of our One Communications Acquisition and a decrease in the consolidated profitability of those operations in 2016 as compared to 2015. The \$5.3 million decrease relating to our operations in Bermuda was offset by \$0.9 million as a result of our March 2015 sale of our operations in Turks and Caicos.
- *Renewable Energy*. Net income attributable to non-controlling interests increased by \$0.2 million, or 11.8%, to \$1.9 million from \$1.7 million, as a result of increased profitability within our domestic

solar operations.

Net income attributable to ATN International, Inc. stockholders. Net income attributable to ATN International, Inc. stockholders decreased \$4.8 million, or 28.4%, to \$12.1 million from \$16.9 million for the year ended December 31, 2016 and 2015, respectively.

On a per share basis, net income decreased to \$0.77 per diluted share from \$1.05 per diluted share for the year ended December 31, 2016 and 2015, respectively.

Selected Segment Financial Information

The following represents selected segment information for the years ended December 31, 2015 and 2014 (in thousands):

For the Year Ended December 31, 2015					
	U.S. Telecom	International Telecom	Renewable Energy	Reconciling Items (1)	Consolidated
Revenue					
Wireless	\$ 155,390	\$ 81,652	\$ —	\$ —	\$ 237,042
Wireline	25,241	61,244	—	—	86,485
Equipment and Other	2,355	8,447	—	—	10,802
Renewable Energy	—	—	21,040	—	21,040
Total Revenue	182,985	151,342	21,040	—	355,369
Operating income (loss)	74,459	28,200	6,720	(30,784)	78,595

For the Year Ended December 31, 2014					
	U.S. Telecom	International Telecom	Renewable Energy	Reconciling Items (1)	Consolidated
Revenue					
Wireless	\$ 153,040	\$ 88,650	\$ —	\$ —	\$ 241,690
Wireline	26,155	59,129	—	—	85,284
Equipment and Other	1,196	7,728	449	—	9,373
Total Revenue	180,391	155,506	449	—	336,347
Operating income (loss)	85,519	28,674	(2,218)	(26,399)	85,576

(1) Reconciling items refer to corporate overhead costs and consolidating adjustments

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The following represents a year over year discussion and analysis of our results of operations for the years ended December 31, 2015 and 2014 (in thousands):

	<u>Year ended December 31,</u>		<u>Amount of</u>	<u>Percent</u>
	<u>2015</u>	<u>2014</u>	<u>Increase</u>	<u>Increase</u>
			<u>(Decrease)</u>	<u>(Decrease)</u>
REVENUE:				
Wireless	\$ 237,042	\$ 241,690	\$ (4,648)	(1.9)%
Wireline	86,485	85,284	1,201	1.4
Renewable Energy	21,040	—	21,040	100.0
Equipment and Other	10,802	9,373	1,429	15.2
Total revenue	<u>\$ 355,369</u>	<u>\$ 336,347</u>	<u>\$ 19,022</u>	<u>5.7 %</u>
OPERATING EXPENSES (excluding depreciation and amortization unless otherwise indicated):				
Termination and access fees	77,806	77,888	(82)	(0.1)
Engineering and operations	39,582	30,954	8,628	27.9
Sales and marketing	23,898	21,664	2,234	10.3
Equipment expense	14,803	13,338	1,465	11.0
General and administrative	59,436	52,734	6,702	12.7
Transaction-related charges	7,182	2,959	4,223	142.7
Depreciation and amortization	56,890	51,234	5,656	11.0
Gain on disposition of long-lived asset	(2,823)	—	(2,823)	(100.0)
Total operating expenses	<u>\$ 276,774</u>	<u>\$ 250,771</u>	<u>\$ 26,003</u>	<u>10.4 %</u>
Income from operations	<u>\$ 78,595</u>	<u>\$ 85,576</u>	<u>\$ (6,981)</u>	<u>(8.2)%</u>
OTHER INCOME (EXPENSE):				
Interest income	588	788	(200)	(25.4)
Interest expense	(3,180)	(1,208)	(1,972)	163.2
Loss on deconsolidation of subsidiary	(19,937)	—	(19,937)	(100.0)
Other income (expense), net	135	1,012	(877)	(86.7)
Other income (expense), net	<u>\$ (22,394)</u>	<u>\$ 592</u>	<u>\$ (22,986)</u>	<u>(3,882.8)%</u>
INCOME FROM CONTINUING OPERATIONS BEFORE INCOME TAXES				
Income tax expense	56,201	86,168	(29,967)	(34.8)
Income tax expense	<u>24,137</u>	<u>28,148</u>	<u>(4,011)</u>	<u>(14.3)</u>
INCOME FROM CONTINUING OPERATIONS				
INCOME FROM DISCONTINUED OPERATIONS:				
Income from discontinued operations	\$ 1,092	\$ 1,102	\$ (10)	(0.9)%
NET INCOME	<u>33,156</u>	<u>59,122</u>	<u>(25,966)</u>	<u>(43.9)</u>
Net income attributable to non - controlling interests, net of tax:	<u>(16,216)</u>	<u>(10,970)</u>	<u>(5,246)</u>	<u>47.8</u>
	<u>\$ (16,216)</u>	<u>\$ (10,970)</u>	<u>\$ (5,246)</u>	<u>47.8 %</u>
NET INCOME ATTRIBUTABLE TO ATN INTERNATIONAL, INC. STOCKHOLDERS				
	<u>\$ 16,940</u>	<u>\$ 48,152</u>	<u>\$ (31,212)</u>	<u>(64.8)%</u>

Wireless revenue. Wireless revenue decreased by \$4.7 million, or 1.9%, to \$237.0 million for the year ended December 31, 2015 from \$241.7 million for the year ended December 31, 2014. The net decreases in wireless revenue, within our segments, consisted of the following:

- *U.S. Telecom.* Wireless revenue increased within our U.S. Telecom segment by \$2.4 million, or 2.0%, to \$155.4 million from \$153.0 million, for the years ended December 31, 2015 and 2014, respectively.

Wholesale wireless revenue decreased \$3.6 million, or 2.5%, to \$141.2 million from \$144.8 million for the years ended December, 31, 2015 and 2014, respectively, as a result of a reduction in wholesale roaming rates partially offset by growth in data traffic volumes as a result of capacity and technology upgrades to

our network and the increase in the number of base stations to 800 from 760 as of December 31, 2015 and 2014, respectively.

Our U.S. Telecom's retail operations reported an increase in wireless revenues of \$5.9 million, or 91.1%, to \$14.2 million from \$8.3 million for the year ended December 31, 2015 and 2014, respectively, as a result of subscriber growth.

- *International Telecom.* Within our International Telecom segment, wireless revenue decreased by \$7.0 million, or 8.0%, to \$81.7 million from \$88.7 million, for the years ended December 31, 2015 and 2014, respectively. This decrease was primarily the result of a decrease in roaming revenues due to rate declines throughout all of our international markets and a \$2.7 million reduction in revenue from our operations in Turks and Caicos which was sold in March of 2015.

Wireline revenue. Wireline revenue increased by \$1.2 million, or 1.0%, to \$86.5 million for the year ended December 31, 2015 from \$85.3 million for the year ended December 31, 2014. The increases in wireline revenue, within our segments, consisted of the following:

- *U.S. Telecom.* Wireline revenue decreased within our U.S. Telecom segment by \$1.0 million, or 3.8%, to \$25.2 million from \$26.2 million, for the years ended December 31, 2015 and 2014, respectively, primarily as a result of a decrease in our wholesale long-distance voice services operations.
- *International Telecom.* Within our International Telecom segment, wireline revenue increased by \$2.1 million, or 4.0%, to \$61.2 million from \$59.1 million, for the years ended December 31, 2015 and 2014, respectively. This increase was primarily the result of increased subscribers and related broadband data revenues.

Renewable Energy revenue. Renewable energy revenue was \$21.0 million for the year ended December 31, 2015 and is attributable to our Ahana Acquisition in December 2014.

Equipment and other revenue. Equipment and other revenue increased by \$1.4 million, or 15.0%, to \$10.8 million for the year ended December 31, 2015 from \$9.4 million for the year ended December 31, 2014. The net increases in equipment and other revenue, within our segments, consisted of the following:

- *U.S. Telecom.* Equipment and other revenue increased within our U.S. Telecom segment by \$1.2 million, or 97.0%, to \$2.4 million from \$1.2 million, for the years ended December 31, 2015 and 2014, respectively, as a result of increased subscribers and demand for handsets in our retail wireless operations.
- *International Telecom.* Within our International Telecom segment, equipment and other revenue increased by \$0.7 million, or 9.0%, to \$8.4 million from \$7.7 million, for the years ended December 31, 2015 and 2014, respectively. This increase was primarily a result of \$1.0 million increase in equipment and other revenue within our Guyana market due to increased subscriber additions and demand for handsets. This increase, however, was offset by a \$0.4 million reduction in our Turks and Caicos operations as a result of the sale of that business in March 2015 and a decrease in subscribers within our other international markets.

Termination and access fee expenses. Termination and access fees decreased by \$0.1 million, or 0.1%, to \$77.8 million for the year ended December 31, 2015 from \$77.9 million for the year ended December 31, 2014. Net decreases in termination and access fees, within our segments, consisted of the following:

- *U.S. Telecom.* Termination and access fees within our U.S. Telecom segment increased by \$5.4 million, or 12.0%, to \$50.5 million from \$45.1 million, for the years ended December 31, 2015 and 2014, respectively. This increase was primarily incurred within our wholesale wireless operations as the result of our increased data traffic volumes, costs related to additional technologies and the expansion and upgrade of our network.
- *International Telecom.* Within our International Telecom segment, termination and access fees decreased by \$2.1 million, or 6.7%, to \$29.1 million from \$31.2 million, for the years ended December 31, 2015 and 2014, respectively. This decrease was primarily related to non-recurring reductions in bandwidth costs and a \$1.5 million decrease within our Turks and Caicos operations which was sold in March 2015.
- *Renewable Energy.* Our Renewable Energy segment incurred \$1.3 million of termination and access fees during the year ended December 31, 2015 which were attributable to direct costs associated with our Ahana Acquisition in December 2014.

Engineering and operations expenses. Engineering and operations expenses increased by \$8.6 million, or 27.7%, to \$39.6 million from \$31.0 million for the year ended December 31, 2015 and 2014, respectively. The increase in engineering and operations, within our segments, consisted of the following:

- *U.S. Telecom.* Engineering and operations expenses increased within our U.S. Telecom segment by \$4.0 million, or 27.2%, to \$18.7 million from \$14.7 million, for the years ended December 31, 2015 and 2014, respectively, primarily to support an expanding and upgraded network and additional technologies and as a result of the conclusion of a transition services agreement entered into to provide support services following the sale of our Alltel business which was accounted for as an offset to the expenses in previous periods.
- *International Telecom.* Within our International Telecom segment, engineering and operations expenses increased by \$0.8 million, or 4.2%, to \$19.8 million from \$19.0 million, for the years ended December 31, 2015 and 2014, respectively. This increase was the result of additional network and billing system support, maintenance, and consulting in our Guyana market partially offset by the March 2015 sale of our operations in Turks and Caicos.
- *Corporate Overhead.* Engineering and operations expenses within our Corporate Overhead increased by \$0.8 million to \$1.1 million from \$0.3 million for the years ended December 31, 2015 and 2014, respectively, in order to support our expanding operations.

Sales and marketing expenses . Sales and marketing expenses increased by \$2.2 million, or 10.1%, to \$23.9 million from \$21.7 million for the years ended December 31, 2015 and 2014, respectively. Within our segments, sales and marketing consisted of the following:

- *U.S. Telecom.* Sales and marketing expenses increased within our U.S. Telecom segment by \$0.4 million, or 7.5%, to \$5.7 million from \$5.3 million for the years ended December 31, 2015 and 2014, respectively. This increase was primarily within our wireless retail operations in order to support its increased revenues and subscriber base.
- *International Telecom.* Within our International Telecom segment, sales and marketing expenses decreased by \$0.2 million, or 1.1%, to \$18.2 million from \$18.4 million, for the years ended December 31, 2015 and 2014, respectively. Our operations in our Guyana market had sales and marketing expenses increase by \$1.9 million as a result of additional retail stores and increased promotions and product re-branding expenses. This increase, however, was offset by a decrease in our other markets within our International Telecom segment as a result of cost reduction measures and the sale of our operations in Turks and Caicos in March 2015.

Equipment expenses . Equipment expenses increased by \$1.5 million, or 11.3%, to \$14.8 million from \$13.3 million for the years ended December 31, 2015 and 2014, respectively. Increases in equipment expenses, within our segments, include the following:

- *U.S. Telecom.* Equipment expenses increased within our U.S. Telecom segment by \$1.6 million, or 59.3%,

to \$4.3 million from \$2.7 million for the years ended December 31, 2015 and 2014, respectively as a result of increased equipment sales in our wireless retail operations.

- *International Telecom.* Within our International Telecom segment, equipment expenses decreased by \$0.2 million, or 1.9%, to \$10.5 million from \$10.7 million, for the years ended December 31, 2015 and 2014, respectively. Equipment expenses within our Guyana market increased by \$1.6 million as a result of increased equipment sales. This increase, however, was offset by an aggregate decrease in our other markets including the sale of our operations in Turks and Caicos in March 2015 which resulted in a year-over-year decrease in equipment expenses of \$0.9 million.

General and administrative expenses. General and administrative expenses increased by \$6.7 million, or 12.7%, to \$59.4 million for the year ended December 31, 2015 from \$52.7 million for the year ended December 31, 2014. The increases in general and administrative expenses, within our segments, included the following:

- *U.S. Telecom.* General and administrative expenses within our U.S. Telecom segment increased by \$2.1 million, or 19.3%, to \$13.0 million from \$10.9 million, for the years ended December 31, 2015 and 2014, respectively, primarily as a result of the conclusion of a transition services agreement entered into to provide support services following the sale of our Alltel business, which was accounted for as an offset to expense in previous periods
- *International Telecom.* Within our International Telecom segment, general and administrative expenses increased by \$0.7 million, or 3.5%, to \$20.6 million from \$19.9 million, for the years ended December 31, 2015 and 2014, respectively. This increase was primarily the result of non-recurring legal and consulting costs in our Guyana market which incurred a year-over-year increase in general and administrative expenses of \$1.5 million. This increase was offset by reductions in our other international markets which resulted in a year-over-year decrease in general and administrative expenses of \$0.8 million.
- *Renewable Energy.* Our Renewable Energy segment incurred \$4.2 million general and administrative expenses during the year ended December 31, 2015 which were attributable to our Ahana Acquisition in December 2014.

Transaction-related charges. We incurred \$7.2 million and \$3.0 million of transaction-related charges during the years ended December 31, 2015 and 2014, respectively. The increase was primarily related to our Innovative and One Communications Acquisitions and our evaluation of renewable energy investment opportunities.

Depreciation and amortization expenses. Depreciation and amortization expenses increased by \$5.7 million, or 11.1%, to \$56.9 million for the year ended December 31, 2015 from \$51.2 million for the year ended December 31, 2014.

- *U.S. Telecom.* Depreciation and amortization expenses increased within our U.S. Telecom segment by \$3.1 million, or 16.2%, to \$22.2 million from \$19.1, for the years ended December 31, 2015 and 2014, respectively, as a result of certain network expansions and upgrades.
- *International Telecom.* Depreciation and amortization expenses decreased within our International Telecom segment by \$3.3 million, or 11.7%, to \$24.9 million from \$28.2 million, for the years ended December 31, 2015 and 2014, respectively. These decreases were the result of certain equipment becoming fully depreciated and the sale of our operations in Turks and Caicos in March 2015 which accounted for \$1.3 million of the decrease.
- *Renewable Energy.* Depreciation and amortization expenses within our Renewable Energy segment increased by \$4.7 million to \$4.8 million from \$0.1 million as a result of our Ahana Acquisition in December 2014.

- *Corporate Overhead* . Depreciation and amortization expenses increased within our corporate overhead by \$0.9 million, to \$4.9 million from \$4.0 million, for the years ended December 31, 2015 and 2014, respectively, to support our expanding operations.

Gain on disposition of long-lived assets. During the year ended December 31, 2015, we sold certain network assets and telecommunications licenses in our U.S. Telecom segment and recognized a gain on such disposition of \$2.8 million.

Interest income. Interest income decreased \$0.2 million to \$0.6 million from \$0.8 million for the years ended December 31, 2015 and 2014, respectively.

Interest expense. Interest expense increased \$2.0 million to \$3.2 million from \$1.2 million for the years ended December 31, 2015 and 2014, respectively. This increase was primarily the result of the interest incurred on debt we assumed in connection with the Ahana Acquisition in December 2014.

Loss on deconsolidation of subsidiary . During March 2015, we completed the sale of certain assets and liabilities operated in Turks and Caicos and recorded a loss on the disposition and related deconsolidation of this subsidiary of approximately \$19.9 million primarily as a result of the expensing of our minority holders' non-controlling interests in our Turks and Caicos operations.

Other income (expense), net . Other income (expense), net represents miscellaneous non-operational income we earned or expenses we incurred. For the year ended December 31, 2014, other income (expense), net included a \$1.1 million foreign exchange gain.

Income taxes. Our effective tax rates for the years ended December 31, 2015 and 2014 were 43.0% and 32.7%, respectively. Our effective tax rate increased in 2015 primarily due to the loss on the deconsolidation of our Turks and Caicos business. This loss was generated in a non-tax foreign jurisdiction for which we receive no tax benefit. Our consolidated tax rate will continue to be impacted by the mix of income generated among the jurisdictions in which we operate.

Gain on sale of discontinued operations, net of tax. Gain on disposal of discontinued operations, net of tax of \$1.1 million for the years ended December 31, 2015 and 2014, relates to the gain on the sale of our Alltel business which was sold on September 20, 2013.

Net income attributable to non-controlling interests. Net income attributable to non-controlling interests increased \$5.2 million, or 47.2%, to \$16.2 million from \$11.0 million for the year ended December 31, 2015 and 2014, respectively. Within our segments, net income attributable to non-controlling interests included the following:

- *U.S. Telecom* . Net income attributable to non-controlling interests increased by \$1.9 million, or 51.4%, to \$5.6 million from \$3.7 million for the years ended December 31, 2015 and 2014, respectively, as a result of increased profitability at certain less than wholly owned subsidiaries of our wireless operations.
- *International Telecom* . Net income attributable to non-controlling interests increased by \$1.8 million, or 25.4% to \$8.9 million from \$7.1 million. Of this increase, \$2.5 million was the result of the sale of our operations in Turks and Caicos in March 2015. This increase was offset by a decrease in year-over-year profitability within our other less than wholly owned subsidiaries.
- *Renewable Energy*. Net income attributable to non-controlling interests increased by \$1.5 million to \$1.7 million from \$0.2 million, as a result of our Ahana Acquisition which was completed in December 2014.

Net income attributable to ATN International, Inc. stockholders. Net income attributable to ATN International, Inc. stockholders decreased to \$16.9 million for the year ended December 31, 2015 from \$48.2 million for the year ended December 31, 2014.

On a per share basis, net income decreased to \$1.05 per diluted share from \$3.01 per diluted share for the years ended December 31, 2015 and 2014, respectively. The years ended December 31, 2015 and 2014 each included net income per diluted share of \$0.07 relating to the gain, net of tax, on the sale of our discontinued operations.

Regulatory and Tax Issues

We are involved in a number of regulatory and tax proceedings. A material and adverse outcome in one or more of these proceedings could have a material adverse impact on our financial condition and future operations. For discussion of ongoing proceedings, see Note 13 to the Consolidated Financial Statements in this Report.

Liquidity and Capital Resources

Historically, we have met our operational liquidity needs through a combination of cash on hand and internally generated funds and have funded capital expenditures and acquisitions with a combination of internally generated funds, cash on hand, proceeds from dispositions, borrowings under our credit facilities and seller financing. We believe our current cash, cash equivalents, short term investments, and availability under our current credit facility will be sufficient to meet our cash needs for at least the next twelve months for working capital needs and capital expenditures.

Uses of Cash

Acquisitions and Investments. Historically, we have funded our acquisitions with a combination of cash on hand, borrowings under our credit facilities and seller financing. During the year ended December 31, 2016, we funded our 2016 Acquisitions with \$168.9 million of cash, net of cash acquired. In addition, we financed \$60.0 million of the Innovative Acquisition purchase price with a loan from an affiliate of the seller, the Rural Telephone Finance Cooperative.

We continue to explore opportunities to expand our telecommunications and renewable energy businesses or acquire new businesses and licenses in the United States, the Caribbean and elsewhere. Such acquisitions, including acquisitions of renewable energy assets, may require external financing. While there can be no assurance as to whether, when or on what terms we will be able to acquire any such businesses or licenses or make such investments, such acquisitions may be accomplished through the issuance of shares of our capital stock, payment of cash or incurrence of additional debt. From time to time, we may raise capital ahead of any definitive use of proceeds to allow us to move more quickly and opportunistically if an attractive investment materializes.

As of December 31, 2016, we had approximately \$295.8 million in cash, cash equivalents, restricted cash and short term investments. Of this amount, \$116.8 million was held by our foreign subsidiaries and is permanently invested outside the United States. In addition, we had approximately \$156.8 million of debt, net of unamortized deferred financing cost, as of December 31, 2016. How and when we deploy our balance sheet capacity will figure prominently in our longer-term growth prospects and stockholder returns.

Capital Expenditures. Historically, a significant use of our cash has been for capital expenditures to expand and upgrade our telecommunications networks as well as for acquisitions.

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For the years ended December 31, 2016 and 2015, we spent approximately \$124.3 million and \$64.8 million, respectively, on capital expenditures. The following notes our capital expenditures, by operating segment, for these periods (in thousands):

<u>Year ended December 31,</u>	<u>Capital Expenditures</u>				
	<u>U.S. Telecom</u>	<u>International Telecom</u>	<u>Renewable Energy</u>	<u>Reconciling Items (1)</u>	<u>Consolidated</u>
2016	\$ 31,983	\$ 62,808	\$ 22,615	\$ 6,876	\$ 124,282
2015	37,588	22,804	38	4,323	64,753

(2) Reconciling items refer to corporate overhead costs and consolidating adjustments

We are continuing to invest in upgrading and expanding our telecommunications networks in many of our markets, along with upgrading our operating and business support systems. We currently anticipate that telecom capital expenditures for the year ending December 31, 2017 will be between \$95 million and \$115 million. Due to concurrent network expansions and upgrades in multiple markets including extensive fiber builds and upgrades as well as market-wide mobile data network upgrades. Once complete, we expect aggregate capital expenditures in existing telecom markets to decline significantly in 2018. Within our Renewable Energy segment, we anticipate that capital expenditures for the year ended December 31, 2017 will be between \$40 million and \$60 million.

We expect to fund our current capital expenditures primarily from our current cash balances and cash generated from our operations.

Income taxes. We have historically used cash-on-hand to make payments for income taxes. The Company's policy is to indefinitely reinvest the undistributed earnings of its foreign subsidiaries, and accordingly, no provision for federal income taxes has been made on accumulated earnings of foreign subsidiaries. Determination of the amount of unrecognized deferred U.S. income tax liability is not practicable because of the complexities associated with its hypothetical calculation as such liability, if any, is dependent on circumstances existing if and when such remittance occurs.

Dividends. We use cash-on-hand to make dividend payments to our stockholders when declared by our Board of Directors. For the year ended December 31, 2016, our Board declared dividends to our stockholders, which includes a \$0.34 per share dividend declared on December 12, 2016 and paid on January 9, 2017, of \$5.5 million. We have declared quarterly dividends for the last 73 fiscal quarters.

Stock repurchase plan. In September 2004, our Board of Directors approved a \$5.0 million stock buyback plan (the "2004 Repurchase Plan"). Through September 19, 2016, we repurchased \$4.1 million of our Common Stock under the 2004 Repurchase Plan.

On September 19, 2016, our Board of Directors authorized the repurchase of up to \$50.0 million of our Common Stock from time to time on the open market or in privately negotiated transactions (the "2016 Repurchase Plan"). The 2016 Repurchase Plan replaces the 2004 Repurchase Plan. As of December 31, 2016, we had available to repurchase \$49.9 million of our Common Stock under the 2016 Repurchase Plan.

Facility”) that includes (i) up to \$10 million under the Credit Facility for standby or trade letters of credit, (ii) up to \$25.0 million under the Credit Facility for letters of credit that are necessary or desirable to qualify for disbursements from the Phase I Mobility Fund and (iii) up to \$10.0 million under a swingline sub-facility.

Amounts we may borrow under the Credit Facility bear interest at a rate equal to, at our option, either (i) the London Interbank Offered Rate (LIBOR) plus an applicable margin ranging between 1.50% to 1.75% or (ii) a base rate plus an applicable margin ranging from 0.50% to 0.75%. Swingline loans will bear interest at the base rate plus the applicable margin for base rate loans. The base rate is equal to the higher of (i) 1.00% plus the higher of (x) the one-week LIBOR and (y) the one-month LIBOR; (ii) the federal funds effective rate (as defined in the Credit Facility) plus 0.50% per annum; and (iii) the prime rate (as defined in the Credit Facility). The applicable margin is determined based on the ratio (as further defined in the Credit Agreement) of our indebtedness to EBITDA. Under the terms of the Credit Facility, we must also pay a fee ranging from 0.175% to 0.250% of the average daily unused portion of the Credit Facility over each calendar quarter.

The Credit Facility contains customary representations, warranties and covenants, including a financial covenant that imposes a maximum ratio of indebtedness to EBITDA as well as covenants by us limiting additional indebtedness, liens, guaranties, mergers and consolidations, substantial asset sales, investments and loans, sale and leasebacks, transactions with affiliates and fundamental changes. In addition, the Credit Facility contains a financial covenant by us that imposes a maximum ratio of indebtedness to EBITDA. As of December 31, 2016, we were in compliance with all of the financial covenants of the Credit Facility.

On January 11, 2016, we amended the Credit Facility to provide for lender consent to, among other actions, (i) the contribution by the Company of all of its equity interests in ATN Bermuda Holdings, Ltd. to ATN Overseas Holdings, Ltd. in connection with the One Communications Acquisition, a one-time, non-pro rata cash distribution by One Communications of \$12.7 million to certain of One Communications’ shareholders; and (ii) the incurrence by certain subsidiaries of the Company of secured debt in an aggregate principal amount not to exceed \$60.0 million in connection with our option to finance a portion of the Innovative Transaction. The Amendment increases the amount the Company is permitted to invest in “unrestricted” subsidiaries of the Company, which are not subject to the covenants of the Credit Facility, from \$275.0 million to \$400.0 million (as such increased amount shall be reduced from time to time by the aggregate amount of certain dividend payments to the Company’s stockholders). The Amendment also provides for the incurrence by the Company of incremental term loan facilities, when combined with increases to revolving loan commitments under the Credit Facility, in an aggregate amount not to exceed \$200.0 million, which facilities shall be subject to certain conditions, including pro forma compliance with the total net leverage ratio financial covenant under the Credit Facility.

As of December 31, 2016, we had no borrowings under the Credit Facility and approximately \$10.6 million of outstanding letters of credit.

Ahana Debt

On December 24, 2014, in connection with the Ahana Acquisition, we assumed \$38.9 million in long-term debt (the “Original Ahana Debt”). The Original Ahana Debt included multiple loan agreements with banks that bore interest at rates between 4.5% and 6.0%, matured at various times between 2018 and 2023 and were secured by certain solar facilities. Repayment of the Original Ahana Debt was being made in cash on a monthly basis until maturity.

The Original Ahana Debt also included a loan from Public Service Electric & Gas (the “PSE&G Loan”). The PSE&G Loan bears interest at 11.3%, matures in 2027, and is secured by certain solar facilities. Repayment of the Original Ahana Debt with PSE&G can be made in either cash or solar renewable energy credits (“SRECs”), at the Company’s discretion, with the value of the SRECs being fixed at the time of the loan’s closing. Historically, the Company has made all repayments of the PSE&G Loan using SRECs.

On December 19, 2016, Ahana’s wholly owned subsidiary, Ahana Operations, issued \$20.6 million in aggregate principal amount of 4.427% senior notes due 2029 (the “Series A Notes”) and \$45.2 million in aggregate principal amount of 5.327% senior notes due 2031 (the “Series B Notes”). Interest and principal are payable semi-

annually beginning on March 31, 2017, until the respective maturity dates of March 31, 2029 (for the Series A Notes) and September 30, 2031 (for the Series B Notes). Cash flows generated by the solar projects that secure the Series A Notes and Series B Notes are only available for payment of such debt and are not available to pay other obligations or the claims of the creditors of Ahana or its subsidiaries. However, subject to certain restrictions, Ahana Operations holds the right to the excess cash flows not needed to pay the Series A Notes and Series B Notes and other obligations arising out of the securitizations. The Series A and Series B Notes are secured by certain assets of Ahana and are guaranteed by certain of its subsidiaries.

A portion of the proceeds from the issuances of the Series A Notes and Series B Notes were used to repay the Original Ahana Debt in full except for the PSE&G Loan which remained outstanding after the refinancing.

As of December 31, 2016, \$2.1 million of the Original Ahana Debt and \$65.8 million of the Series A Notes and Series B Notes remained outstanding.

One Communications Debt

In connection with the One Communications Transaction on May 3, 2016, we assumed \$35.4 million in debt (the “One Communications Debt”) in the form of a loan from HSBC Bank Bermuda Limited. The One Communications Debt matures in 2021, bears interest of the three-month LIBOR plus a margin of 3.25%, and repayment is made quarterly until maturity. The debt is secured by the property and assets of certain One Communications subsidiaries.

As of December 31, 2016, \$32.1 million of the One Communications Debt remained outstanding.

Innovative Debt

We funded the Innovative Acquisition with \$51.0 million in cash and financed the remaining \$60.0 million of the purchase price with a loan from an affiliate of the seller, the Rural Telephone Finance Cooperative. The Company paid a fee of \$0.9 million to lock the interest rate at 4% per annum over the term of the debt. The fee was recorded as a reduction to the debt carrying amount and will be amortized over the life of the loan. Interest is paid quarterly and principal repayment is not required until maturity on July 1, 2026.

As of December 31, 2016, \$60.0 million of the Innovative Debt remained outstanding and \$0.8 million of the rate lock fee were unamortized.

Factors Affecting Sources of Liquidity

Internally generated funds. The key factors affecting our internally generated funds are demand for our services, competition, regulatory developments, economic conditions in the markets where we operate our businesses and industry trends within the telecommunications and renewable energy industries.

Restrictions under Credit Facility. Our Credit Facility contains customary representations, warranties and covenants, including covenants limiting additional indebtedness, liens, guaranties, mergers and consolidations, substantial asset sales, investments and loans, sale and leasebacks, transactions with affiliates and fundamental changes.

In addition, the Credit Facility contains a financial covenant that imposes a maximum ratio of indebtedness to EBITDA. As of December 31, 2016, we were in compliance with all of the financial covenants of the Credit Facility.

Capital markets. Our ability to raise funds in the capital markets depends on, among other things, general economic conditions, the conditions of the telecommunications and renewable energy industries, our financial performance, the state of the capital markets and our compliance with Securities and Exchange Commission (“SEC”) requirements for the offering of securities. On June 6, 2014, the SEC declared effective our “universal” shelf registration statement. This filing registered potential future offering of our securities. We currently expect to renew our “universal” shelf registration upon its expiration in June 2017.

Completed Acquisitions. As discussed above, we funded our 2016 Acquisitions with \$175.9 million of cash, net of cash acquired. In addition, we financed \$60.0 million of the Innovative Acquisition purchase price with a loan from an affiliate of the seller, the Rural Telephone Finance Cooperative.

Inflation

We do not believe that inflation has had a significant impact on our consolidated operations in any of the periods presented in the Report.

We have based our discussion and analysis of our financial condition and results of operations on our Consolidated Financial Statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America (or GAAP). We base our estimates on our operating experience and on various conditions existing in the market and we believe them to be reasonable under the circumstances. Our estimates form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ materially from these estimates under different assumptions or conditions.

Critical Accounting Estimates

We have identified the critical accounting estimates that we believe require significant judgment in the preparation of our Consolidated Financial Statements. We consider these accounting estimates to be critical because changes in the assumptions or estimates we have selected have the potential of materially impacting our financial statements.

Revenue Recognition. In determining the appropriate amount of revenue to recognize for a particular transaction, we apply the criteria established by the authoritative guidance for revenue recognition and defer those items that do not meet the recognition criteria. As a result of the cutoff times of our billing cycles, we are often required to estimate the amount of revenues earned but not billed from the end of each billing cycle to the end of each reporting period. These estimates are based primarily on rate plans in effect and historical evidence with each customer or carrier. Adjustments affecting revenue can and occasionally do occur in periods subsequent to the period when the services were provided, billed and recorded as revenue, however historically these adjustments have not been material.

We apply judgment when assessing the ultimate realization of receivables, including assessing the probability of collection and the current credit-worthiness of customers. We establish an allowance for doubtful accounts sufficient to cover probable and reasonably estimable losses. Our estimate of the allowance for doubtful accounts considers collection experience, aging of the accounts receivable, the credit quality of customer and, where necessary, other macro-economic factors.

Goodwill and Long-Lived Intangible Assets. In accordance with the authoritative guidance regarding the accounting for impairments or disposals of long-lived assets and the authoritative guidance for the accounting for goodwill and other intangible assets, we evaluate the carrying value of our long-lived assets, including property and equipment, whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. An impairment loss exists when estimated *undiscounted* cash flows attributable to non-current assets subject to depreciation and amortization and *discounted* cash flows for intangible assets not subject to amortization are less than their carrying amount. If an asset is deemed to be impaired, the amount of the impairment loss recognized represents the excess of the asset's carrying value as compared to its estimated fair value, based on management's assumptions and projections.

Our estimates of the future cash flows attributable to our long-lived assets and the fair value of our businesses involve significant uncertainty. Those estimates are based on management's assumptions of future results, growth trends and industry conditions. If those estimates are not met, we could have additional impairment charges in the future, and the amounts may be material.

We also assess the carrying value of goodwill and indefinite-lived intangible assets on an annual basis or more frequently if events or changes in circumstances indicate that the carrying value of goodwill may not be recoverable. The carrying value of each reporting unit, including goodwill assigned to that reporting unit, is compared to its fair value. If the fair value of the reporting unit does not exceed the carrying value of the reporting unit, including goodwill, an analysis is performed to determine if an impairment charge should be recorded.

In the second quarter of 2016, the Company recorded a goodwill impairment of \$7.5 million in its US Telecom Segment. Refer to Note 7. We performed our annual impairment assessment of our goodwill as of December 31, 2016 and it was determined that no additional goodwill impairment existed during the year ended December 31, 2016.

We assess the recoverability of the value of our telecommunications licenses using a market approach. We believe that our telecommunications licenses generally have an indefinite life based on historical ability to renew such licenses, that such renewals may be obtained indefinitely and at little cost, and that the related technology used is not expected to be replaced in the foreseeable future. If the value of these assets was impaired by some factor, such as an adverse change in the subsidiary's operating market, we may be required to record an impairment charge. We test the impairment of our telecommunications licenses annually or more frequently if events or changes in circumstances indicate that such assets might be impaired. The impairment test consists of a comparison of the fair value of telecommunications licenses with their carrying amount on a license by license basis.

In the third quarter of 2016, the Company recorded an impairment of \$0.3 million to a tradename in its International Telecom Segment. Refer to Note 7. We performed our annual impairment assessment of our telecommunications licenses and other intangibles as of December 31, 2016 and it was determined that no additional impairments of any intangible assets existed during the year ended December 31, 2016.

Contingencies. We are subject to proceedings, lawsuits, tax audits and other claims related to lawsuits and other legal and regulatory proceedings that arise in the ordinary course of business as further described in Note 13 to the Consolidated Financial Statements included in this Report. We are required to assess the likelihood of any adverse judgments or outcomes to these matters as well as potential ranges of probable losses. A determination of the amount of loss accruals required, if any, for these contingencies are made after careful analysis of each individual issue. We consult with legal counsel and other experts where necessary in connection with our assessment of any contingencies. The required accrual for any such contingency may change materially in the future due to new developments or changes in each matter. We estimate these contingencies amount to approximately \$44.1 million at December 31, 2016. We believe that some adverse outcome is probable and have accordingly accrued \$5.0 million as of December 31, 2016 for these matters.

Recent Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers", which provides a single, comprehensive revenue recognition model for all contracts with customers. The revenue standard is based on the principle that revenue should be recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of initial application. On July 9, 2015, the FASB approved the deferral of the new standard's effective date by one year. The new standard is now effective for annual reporting periods beginning after December 15, 2017. The FASB will permit companies to adopt the new standard early, but not before the original effective date of annual reporting periods beginning after December 15, 2016. In March 2016, the FASB issued ASU 2016-08, "*Principal Versus Agent Considerations (Reporting Revenue Gross Versus Net)*." In April 2016, the FASB issued ASU 2016-10, "*Identifying Performance Obligations and Licensing*." In May 2016, the FASB issued ASU 2016-12, "*Narrow-Scope Improvements and Practical Expedients*." In December 2016, the FASB issued Accounting Standards Update 2016-20, "*Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*." These updates provide additional adoption guidance and clarification to ASU 2014-09. The amendments must be adopted concurrently. We are currently evaluating the overall impact and the method of adoption of ASU 2014-09, including the latest developments from the Transition Resources Group. Areas most likely impacted may include, but not be limited to, the following: the timing of revenue recognition and the allocation of revenue between equipment and

services, In addition, the new standard may require certain amounts be recorded in accounts receivable and deferred revenues on the balance sheet and enhanced disclosures around performance obligations. Our final determination of the adoption methodology will depend on a number of factors, such as the significance of the impact of the new standard on the financial results, data and information available at recently acquired businesses, system readiness and the ability to accumulate and analyze the information necessary to assess the impact on prior period financial statements and new disclosure requirements. We do not currently know or cannot reasonably estimate quantitative information related to the impact of the new standard on our Consolidated Financial Statements. We will adopt the standard on January 1, 2018.

In August 2014, the FASB issued ASU 2014-15, “Presentation of Financial Statements - Going Concern (Subtopic 205-40),” which requires management to assess a company’s ability to continue as a going concern and to provide related footnote disclosures in certain circumstances. ASU 2014-15 is effective for annual reporting periods ending after December 15, 2016. Early application is permitted. We adopted this guidance for the fourth quarter ended December 31, 2016. The adoption of this guidance did not impact our Consolidated Financial Statements.

In April 2015, the FASB issued ASU 2015-03, “Simplifying the Presentation of Debt Issuance Costs”, which amends the presentation of debt issuance costs on the consolidated balance sheet. Under the new guidance, debt issuance costs are presented as a direct deduction from the carrying amount of the debt liability rather than as an asset. We retrospectively adopted ASU 2015-03 on January 1, 2016 and determined that its adoption had no material impact on our Consolidated Financial Statements and related disclosures. This is a change in accounting principle

In April 2015, the FASB issued ASU 2015-05, “Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement”, which provides guidance about whether a cloud computing arrangement includes software and how to account for that software license. The new guidance does not change the accounting for a customer’s accounting for service contracts. The standard is effective beginning January 1, 2017, with early adoption permitted, and may be applied prospectively or retrospectively. We do not expect ASU 2015-05 to have a material impact on our consolidated financial position, results of operations or cash flows.

In September 2015, the FASB issued ASU 2015-16, “Simplifying the Accounting for Measurement-Period Adjustments”, which provides updated guidance related to simplifying the accounting for measurement period adjustments related to business combinations. The amended guidance eliminates the requirement to retrospectively account for adjustments made during the measurement period. The standard was adopted January 1, 2016, and did not have a material impact on our consolidated financial position, results of operations or cash flows.

In February 2016, the FASB issued ASU 2016-02, “Leases (Topic 842)”, which provides comprehensive lease accounting guidance. The standard requires entities to recognize lease assets and liabilities on the balance sheet as well as disclosure of key information about leasing arrangements. ASU 2016-02 will become effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, with early adoption permitted. We are currently evaluating the impact of the new guidance on our Consolidated Financial Statements.

In March 2016, the FASB issued ASU 2016-09, “Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting”. The standard is intended to simplify several areas of accounting for share-based compensation arrangements, including the income tax impact, classification on the statement of cash flows and forfeitures. ASU 2016-09 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2016, and early adoption is permitted. We are currently evaluating the impact that the standard will have on our Consolidated Financial Statements.

In August 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-15, “Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments,” which provides further clarification on eight cash flow classification issues. The standard further clarifies the classification of the following: (i) debt prepayment or debt extinguishment costs; (ii) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; (iii) contingent consideration payments made after a business combination; (iv) proceeds from the settlement of insurance claims; (v) proceeds from the settlement of corporate-owned life insurance policies, including

bank-owned life insurance policies; (vi) distributions received from equity method investees; (vii) beneficial interests in securitization transactions; and (viii) separately identifiable cash flows and application of the predominance principle. ASU 2016-15 will become effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017, with early adoption permitted. ASU 2016-15 should be applied using a retrospective transition method for each period presented. We are currently evaluating the impact of the new standard on our Consolidated Financial Statements.

In October 2016 the FASB issued ASU 2016-16, *Accounting for Income Taxes: Intra-Entity Asset Transfers of Assets Other than Inventory*. The new standard eliminates for all intra-entity sales of assets other than inventory, the exception under current standards that permits the tax effects of intra-entity asset transfers to be deferred until the transferred asset is sold to a third party or otherwise recovered through use. As a result, a reporting entity would recognize the tax expense from the sale of the asset in the seller's tax jurisdiction when the transfer occurs. Any deferred tax asset that arises in the buyer's jurisdiction would also be recognized at the time of the transfer. The new standard will be effective for the Company on January 1, 2018. We are currently evaluating the potential impact that this standard may have on our results of operations.

In November 2016, the FASB issued Accounting Standards Update 2016-18, "*Statement of Cash Flows (Topic 230): Restricted Cash*," or ASU 2016-18. The amendments in ASU 2016-18 are intended to reduce diversity in practice related to the classification and presentation of changes in restricted or restricted cash equivalents on the statement of cash flows. The amendments in ASU 2016-18 require that amounts generally described as restricted cash and restricted cash equivalents be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-18 is effective for annual reporting periods, including interim periods within those periods, beginning after December 15, 2017, with early adoption permitted. We are currently evaluation the potential impact that this standard may have on our Consolidated Financial Statements.

In January 2017, the FASB issued Accounting Standards Update 2017-01, "*Business Combinations (Topic 805): Clarifying the Definition of a Business*," or ASU 2017-01. The amendments in ASU 2017-01 provide a screen to assist entities with evaluating whether transactions should be accounted for as acquisitions or disposals of assets or businesses. Under ASU 2017-01, an entity first determines whether substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets. If this threshold is met, the set is not a business. If it's not met, the entity then evaluates whether the set meets the requirement that a business include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs. ASU 2017-01 also narrows the definition of outputs by more closely aligning it with how outputs are described in ASC 606. ASU 2017-01 is effective for annual reporting periods, including interim periods within those periods, beginning after December 15, 2017, with early adoption permitted. We prospectively adopted ASU 2017-01 in the fourth quarter of 2016. The standard will result in our accounting for more transactions as asset acquisitions as opposed to business combination.

In January 2017, the FASB issued Accounting Standards Update 2017-04, "*Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*," or ASU 2017-04. The amendments in ASU 2017-04 simplify 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. Instead, under the amendments in ASU 2017-04, an entity performs its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and recognizes an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value, but not more than the total amount of goodwill allocated to the reporting unit. ASU 2017-04 is effective for annual reporting periods, including interim periods within those periods, beginning after December 15, 2019, with early adoption permitted. We are currently evaluation the potential impact that this standard may have on our Consolidated Financial Statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RIS K

Translation and Remeasurement. We translate the assets and liabilities of our foreign subsidiaries from their respective functional currencies, primarily the Indian Rupee and the Guyana Dollar, to U.S. dollars at the appropriate spot rates as of the balance sheet date. Changes in the carrying value of these assets and liabilities attributable to fluctuations in spot rates are recognized in foreign currency translation adjustment, a component of AOCI. Income statement accounts are translated using the monthly average exchange rates during the year. During February 2017, we noted an increase in the Guyana Dollar exchange rate which could have a negative impact on our financial results. We will continue to assess the impact of its exposure to the Guyana dollar in future periods.

Monetary assets and liabilities denominated in a currency that is different from a reporting entity's functional currency must first be remeasured from the applicable currency to the legal entity's functional currency. The effect of this remeasurement process is reported in other income on the income statement.

Employee Benefit Plan. The company sponsors pension and other postretirement benefit plans for employees of certain subsidiaries. Net periodic pension expense is recognized in the Company's income statement. The Company recognizes a pension or other postretirement plan's funded status as either an asset or liability in its consolidated balance sheet. Actuarial gains and losses are reported as a component of other comprehensive income and amortized through net periodic pension expense in subsequent periods.

Interest Rate Sensitivity. As of December 31, 2016, we had \$28.5 million of variable rate debt outstanding, which we assumed as a part of the One Communications Acquisition and is subject to fluctuations in interest rates. Our interest expense may be affected by changes in interest rates. We believe that a 10% increase in the interest rates on our variable rate debt would have an immaterial impact on our Financial Statements. We may have additional exposure to fluctuations in interest rates if we again borrow amounts under our revolver loan within our Credit Facility.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The response to this item is submitted as a separate section to this Report. See "Item 15. Exhibits, Financial Statement Schedules."

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURE S

Evaluation of Disclosure Controls and Procedure s

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2016. Disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), means controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by the issuer in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's ("SEC") rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is

accumulated and communicated to the issuer's management, including its principal executive and principal financial officers, or persons performing similar functions as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2016, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act, as a process designed by, or under the supervision of, our Chief Executive Officer and Chief Financial Officer or persons performing similar functions, and effected by our Board of Directors, management and other personnel, 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 and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2016. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control—Integrated Framework* (2013). Our evaluation of, and conclusion on, the effectiveness of internal control over financial reporting did not include the internal controls of KeyTech Limited ("Keytech") and Caribbean Asset Holdings LLC ("Innovative"), because they were acquired by the Company in purchase business combinations during 2016. KeyTech represents approximately 11% and 12% of our total assets and revenues, respectively, as of and for the year ended December 31, 2016. Innovative represents approximately 12% and 12% of our total assets and revenues, respectively, as of and for the year ended December 31, 2016. Based on its assessment, management concluded that, as of December 31, 2016, our internal control over financial reporting was effective based on those criteria.

Our internal control over financial reporting as of December 31, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears on page F-2.

Changes in Internal Control Over Financial Reporting .

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Effective February 27, 2017, our Board of Directors approved amendments to our Amended and Restated By-Laws to implement majority voting in director elections. Under the newly-adopted bylaw provisions, each director will be elected by the vote of the majority of the votes cast with respect to that director's election, except that in a contested election as defined in the By-Laws, directors will be elected by plurality vote. For purposes of these provisions, a majority of votes

cast shall mean that the number of votes cast “for” a director’s election exceeds the number of votes cast “against” that director’s election, with “abstentions” and “broker non-votes” not counted as a vote cast either “for” or “against” that director’s election.

If, in an election that is not a contested election, an incumbent director does not receive a majority of the votes cast, the newly-adopted bylaw provisions require that such director submit an irrevocable resignation to the Nominating and Corporate Governance Committee of the Board. The committee will make a recommendation to the Board as to whether to accept or reject the resignation of such incumbent director, or whether other action should be taken. The Board will act on the resignation, taking into account the committee’s recommendation, and publicly disclose (by filing an appropriate disclosure with the Securities and Exchange Commission) its decision regarding the resignation within 90 days following certification of the election results. The committee in making its recommendation and the Board of Directors in making its decision each may consider any factors and other information that they consider appropriate and relevant.

If the Board accepts a director’s resignation pursuant to the newly-adopted bylaw provisions, or if a nominee for director is not elected and the nominee is not an incumbent director, the Board may fill the resulting vacancy pursuant to Article III, Section 11 of the By-Laws.

Prior to these amendments, director elections were conducted by plurality vote in all cases.

The amendments also include certain minor clarifying and updating changes. This summary of the amendments to our Amended and Restated By-Laws is qualified in its entirety by reference to the full text of the Amended and Restated By-Laws, which is filed as Exhibit 3.4 to this Report and is incorporated into this Item 9B by reference.

PART II

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following table sets forth information regarding our executive officers and directors as of March 1, 2017:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Michael T. Prior	52	President, Chief Executive Officer and Director
Justin D. Benincasa	54	Chief Financial Officer
Barry C. Fougere	52	Executive Vice President, Business Operations
William F. Kreisher	54	Senior Vice President, Corporate Development
Leonard Q. Slap	57	Senior Vice President, General Counsel and Secretary
Cornelius B. Prior, Jr.	83	Chairman
Bernard Bulkin	74	Director
Martin L. Budd	76	Director
Michael T. Flynn	68	Director
Liane J. Pelletier	59	Director
Charles J. Roesslein	68	Director

Executive Officers

Michael T. Prior has been our President and Chief Executive Officer since December 2005 and an officer of the Company since June 2003. He was elected to the Board in May 2008. Previous to joining the Company, Mr. Prior was a partner with Q Advisors LLC, a Denver based investment banking and financial advisory firm focused on the technology and telecommunications sectors. Mr. Prior began his career as a corporate attorney with Cleary Gottlieb Steen & Hamilton LP in London and New York. He received a B.A. degree from Vassar College and a J.D. degree summa cum laude from Brooklyn Law School. Mr. Prior currently serves on the Board of Directors of the Competitive Carriers Association. In 2008, Mr. Prior was named Entrepreneur of the Year for the New England Region by Ernst & Young LLP and One of America’s Best CEOs by DeMarche Associates, Inc.

Justin D. Benincasa is our Chief Financial Officer. Prior to joining us in May 2006, Mr. Benincasa was a Principal at Windover Development, LLC since 2004. From 1998 to 2004, he was Executive Vice President of Finance and Administration at American Tower Corporation, a leading wireless and broadcast communications infrastructure company, where he managed finance and accounting, treasury, IT, tax, lease administration and property management. Prior to that, he was Vice President and Corporate Controller at American Radio Systems Corporation and held accounting and finance positions at American Cablesystems Corporation. Mr. Benincasa holds an M.B.A. degree from Bentley University and a B.A. degree from the University of Massachusetts.

Barry C. Fougere is our Executive Vice President, Business Operations. Prior to joining us in 2014, Mr. Fougere served as a Partner in multiple advisory services firms (A.T.Kearney, Heidrick & Struggles, Cambridge Strategic Management Group and Sunapee Advisors,) where he focused on telecommunications, high tech, and other technology-enabled client companies. Mr. Fougere has also served as Chief Executive Officer of several smaller information- and technology-intensive companies (Colubris Networks, BigBelly Solar and BroadStar Energy Solutions). Mr. Fougere serves on the boards of a number of industry and nonprofit organizations, including the Massachusetts Technology Leadership Council. He holds an M.B.A. degree from the Kellogg School and an M.E.M. degree from the McCormick School of Northwestern University, an M.S. degree in mechanical engineering from Rensselaer Polytechnic Institute and a B.S. degree in mechanical engineering from Worcester Polytechnic Institute.

William F. Kreisher is our Senior Vice President, Corporate Development. Prior to joining us in 2007, Mr. Kreisher was Vice President—Corporate Development at Cingular Wireless (now AT&T Mobility) since 2004. He was part of the corporate development team at Cingular since its formation and spent five years at Bell South before that as a Director of Finance, the acting Chief Financial Officer at its broadband and video division, and as a senior manager in its mergers and acquisitions group. Mr. Kreisher is a more than twenty-five year veteran of the telecommunications industry, having also worked with MCI Telecommunications and Equant. Mr. Kreisher holds a Masters in Business Administration from Fordham University and a Bachelor of Arts degree from the Catholic University of America.

Leonard Q. Slap is our Senior Vice President and General Counsel. Prior to joining us in May 2010, Mr. Slap was a partner at the law firm of Edwards Angell Palmer & Dodge LLP, where for twenty-five years he represented investors and companies in a variety of U.S. and international business transactions, including venture capital and private equity investments, mergers and acquisitions, debt financings and workouts. Mr. Slap focused on transactions involving U.S. and international communications businesses, including broadcast, wireline, wireless broadband telecommunications, information technology and other media. Mr. Slap received a B.S. degree, *magna cum laude*, from Boston College and a J.D. degree, with honors, from George Washington University School of Law.

Non-Employee Directors

Cornelius B. Prior, Jr. is the Chairman of our Board of Directors. He served as our Chief Executive Officer and Chairman of the Board from 1998 through December 2005, at which time he retired as Chief Executive Officer. Mr. Prior has served as the Chairman of CANTO (the Caribbean Association of National Telecommunication Organizations) and presently is the Chairman of CCAA (Caribbean and Central American Action). He was a managing director and stockholder of Kidder, Peabody & Co. Incorporated, where he directed the Telecommunications Finance Group. A former Naval Officer and Fulbright Scholar, Mr. Prior started his career as an attorney with Sullivan & Cromwell in New York. He is a Trustee of Holy Cross College and former member of the Visiting Committee to Harvard Law School. He resides in St. Thomas, US Virgin Islands, where he is Chairman of the Forum, a not-for-profit arts organization, and Honorary Trustee of the Antilles School. He is also a Director of the Kneissel Music School in Blue Hill, Maine and a director of the University of North Carolina Medical School Ophthalmology Research Institute. He is the father of Michael T. Prior, our President and Chief Executive Officer. Mr. Prior earned his legal degree from the Harvard Law School.

Martin L. Budd has been a director of ours since May 2007, and is the Chair of our Compensation Committee and a member of our Audit Committee. He retired as a partner of the law firm of Day, Berry and Howard LLP (now Day Pitney LLP) effective December 31, 2006. Mr. Budd chaired that firm's Business Law Department and its Business Section and had particular expertise in federal securities laws, merger and acquisition transactions and strategic joint ventures. Mr. Budd is Chairman of the Connecticut Appleseed Center for Law and Justice and has served on the Legal

Advisory Board of the National Association of Securities Dealers. He is a member of the National Executive Committee of the Anti-Defamation League and is the former chairman, and currently serves as a member of, the Board of Trustees of the Hartford Seminary. Mr. Budd also serves on the Board of the "I Have a Dream" Foundation. Mr. Budd earned his legal degree from the Harvard Law School.

Bernard Bulkin has been a director of ours since March 2016 and is a member of our Nominating and Corporate Governance Committee. Dr. Bulkin brings particular expertise in the field of renewable energy. He held several senior management roles in his throughout his approximately twenty- year career at British Petroleum, including Director of the refining business, Vice President Environmental Affairs, and Chief Scientist and left BP in 2003. He is currently a Director of Ludgate Investments Limited, K3Solar Ltd., IDSolar Power Ltd, and Sustainable Power Ltd, and is a member of the FTSE Environmental Markets Advisory Committee. Dr. Bulkin has served on the boards of Severn Trent plc, HMN Colmworth Ltd., Chemrec AB and REAC Fuel AB, each a Swedish biofuel technology developer, and Ze-gen Corporation, a renewable energy company, and chaired the boards of two UK public companies: AEA Technology plc (from 2005 until 2009) and Pursuit Dynamics Plc (from 2011 until 2013). Dr. Bulkin served as Chair of the UK Office of Renewable Energy from 2010 until 2013, and has held several other UK government roles in sustainable energy and transport. He earned a B.S. in Chemistry from the Polytechnic Institute of Brooklyn and a Ph.D. in Physical Chemistry from Purdue University. Dr. Bulkin is a Professorial Fellow at the University of Cambridge and is the author of *Crash Course*, published in March 2015. He was awarded the Honour of Officer of the Order of the British Empire (OBE) in the 2017 New Year Honours List.

Michael T. Flynn has been a director of ours since June 2010 and is a member of our Audit and Compensation Committees. He is currently a director of Airspan Networks, Inc., a provider of wireless broadband equipment and CALIX, Inc., a manufacturer of broadband equipment. Mr. Flynn has forty years of experience in the telecommunications wireline and wireless businesses, and spent ten years as an officer at Alltel Corporation prior to his retirement in 2004. He also previously served as an officer of Southwestern Bell Telephone Co. and its parent SBC Communications from 1987 to 1994. Mr. Flynn has previously served on the board of directors of WebEx Communications, Inc., a provider of internet collaboration services, Equity Media Holding Corporation, an owner and operator of television stations throughout the United States, iLinc Communications, Inc., a provider of SaS web collaboration and GENBAND, a worldwide leader of next generation network systems. Mr. Flynn received a Bachelor of Science degree in Industrial Engineering from Texas A&M University and attended the Dartmouth Institute and the Harvard Graduate School of Business' Advanced Management Program.

Liane J. Pelletier has been a director of ours since June 2012, and is the Chair of our Nominating and Corporate Governance Committee and a member of our Compensation Committee. Ms. Pelletier has over twenty-five years of experience in the telecommunications industry. From October 2003 through April 2011, she served as the Chief Executive Officer and Chairman of Alaska Communications Systems and prior to that time, served as the former Senior Vice President of Corporate Strategy and Business Development for Sprint Corporation. Ms. Pelletier earned her M.S. in Management at the Sloan School of Business at the Massachusetts Institute of Technology and a B.A. in Economics, magna cum laude, from Wellesley College. Ms. Pelletier currently serves on the Board of Directors of Expeditors International and as President of the National Association of Corporate Directors ("NACD"), Northwest Chapter. Ms. Pelletier is a NACD Board Leadership Fellow.

Charles J. Roesslein has been a director of ours since April 2002 and is the Chair of our Audit Committee and a member of our Compensation and Nominating and Corporate Governance Committees. He has been a director of National Instruments Corporation since July 2000 and is the Co-Founder of Austin Tele-Services Partners, LP, a telecommunications provider, for whom he served as Chief Executive Officer from 2004 to January 2016. He is a retired officer of SBC Communications. Mr. Roesslein previously served as Chairman of the Board of Directors, President and Chief Executive Officer of Prodigy Communications Corporation from June of 2000 until December of 2000. He served as President and Chief Executive Officer of SBC-CATV from October 1999 until May 2000, and as President and Chief Executive Officer of SBC Technology Resources from August 1997 to October 1999.

Additional information required by this Item 10 regarding our directors and executive officers will be set forth in our Definitive Proxy Statement for the 2017 Annual Meeting of Stockholders (or "2017 Proxy Statement") under

“Election of Directors” and “Section 16(a) Beneficial Ownership Reporting Compliance” and is incorporated herein by reference. Required information regarding our audit committee financial experts and identification of the audit committee of our Board of Directors will be set forth in our 2017 Proxy Statement under “Corporate Governance” and is incorporated herein by reference.

Information regarding our Code of Ethics applicable to our principal executive officer, our principal financial officer, our controller and other senior financial officers appears in Item 1 of this Report under the caption “Business—Available Information.”

ITEM 11. EXECUTIVE COMPENSATION

Information required by this Item 11 regarding executive and director compensation will be set forth in our 2017 Proxy Statement under “Executive Officer Compensation” and “Director Compensation” and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information required by this Item 12 regarding security ownership of certain beneficial owners, directors and executive officers will be set forth in our 2017 Proxy Statement under “Security Ownership of Certain Beneficial Owners and Management” and is incorporated herein by reference.

Information required by this Item 12 regarding our equity compensation plans will be set forth in our 2017 Proxy Statement under “Executive Officer Compensation—Securities Authorized for Issuance Under Equity Compensation Plans” and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information required by this Item 13 regarding certain relationships and related transactions will be set forth in our 2017 Proxy Statement under “Related Person Transactions” and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information required by this Item 14 regarding auditor fees and services will be set forth in our 2017 Proxy Statement under “Independent Auditor” and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBIT S, FINANCIAL STATEMENT SCHEDULES

- (a) The following documents are filed as part of this Report:
- (1) *Financial Statements*. See Index to Consolidated Financial Statements, which appears on page F-1 hereof. The financial statements listed in the accompanying Index to Consolidated Financial Statements are filed herewith in response to this Item 15.
 - (2) *Schedule II*. Valuation and Qualifying Accounts.
 - (3) *Exhibits*. See Index to Exhibits. The exhibits listed in the Index to Exhibits immediately preceding the exhibits are filed herewith in response to this Item 15.

ITEM 16. FORM 10-K SUMMARY

None

SIGNATURE S

Pursuant to the requirements of Section 13 or 15(d) of the Securities and Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in Beverly, Massachusetts on the 1st day of March, 2017.

ATN International, Inc.

By: /s/ Michael T. Prior

Michael T. Prior
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934 this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on the 1st day of March, 2017.

<u>Signature</u>	<u>Title</u>
/s/ Michael T. Prior Michael T. Prior	President, Chief Executive Officer and Director (Principal Executive Officer)
/s/ Justin D. Benincasa Justin D. Benincasa	Chief Financial Officer (Principal Financial and Accounting Officer)
/s/ Cornelius B. Prior, Jr. Cornelius B. Prior, Jr.	Chairman
/s/ Martin L. Budd Martin L. Budd	Director
/s/ Bernard J. Bulkin Bernard J. Bulkin	Director
/s/ Michael T. Flynn Michael T. Flynn	Director
/s/ Liane J. Pelletier Liane J. Pelletier	Director
/s/ Charles J. Roesslein Charles J. Roesslein	Director

ATN INTERNATIONAL, INC. AND SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULE
December 31, 2016, 2015 and 2014

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Report of Independent Registered Public Accounting Firm

To Board of Directors and Stockholders of
ATN International, Inc.:

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of ATN International, Inc. and its subsidiaries at December 31, 2016 and December 31, 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting 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 these financial statements and financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on these financial statements, on the financial statement schedule, and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

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As described in Management's Report on Internal Control over Financial Reporting, management has excluded the KeyTech Limited ("KeyTech") and Caribbean Asset Holdings LLC ("Innovative") entities from its assessment of internal control over financial reporting as of December 31, 2016 because both entities were acquired by the Company in purchase business combinations during 2016. We have also excluded KeyTech and Innovative from our audit of internal control over financial reporting. KeyTech is a subsidiary whose total assets and total revenues represent 11% and 12%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2016. Innovative is a wholly-owned subsidiary whose total assets and total revenues represent 12% and 12%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2016.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
March 1, 2017

ATN INTERNATIONAL, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 2016 and 2015

(In Thousands, Except Share Data)

	December 31, 2016	December 31, 2015
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 269,721	\$ 392,045
Restricted cash	524	824
Short-term investments	9,237	—
Accounts receivable, net of allowances of \$13.1 million and \$9.3 million, respectively	45,419	39,020
Materials and supplies	14,365	8,220
Prepayments and other current assets	28,103	28,383
Total current assets	<u>367,369</u>	<u>468,492</u>
Fixed Assets:		
Property, plant and equipment	1,138,362	807,247
Less accumulated depreciation	(490,650)	(433,744)
Net fixed assets	<u>647,712</u>	<u>373,503</u>
Telecommunication licenses, net	48,291	43,468
Goodwill	62,873	45,077
Customer relationships, net	15,029	1,081
Restricted cash	18,113	5,477
Other assets	38,831	7,906
Total assets	<u>\$ 1,198,218</u>	<u>\$ 945,004</u>
LIABILITIES AND EQUITY		
Current Liabilities:		
Current portion of long-term debt	\$ 12,440	\$ 6,284
Accounts payable and accrued liabilities	92,708	54,289
Dividends payable	5,487	5,142
Accrued taxes	13,531	9,181
Advance payments and deposits	25,529	9,459
Other current liabilities	410	—
Total current liabilities	<u>150,105</u>	<u>84,355</u>
Deferred income taxes	46,622	45,406
Other liabilities	47,939	26,944
Long-term debt, excluding current portion	<u>144,383</u>	<u>26,575</u>
Total liabilities	<u>389,049</u>	<u>183,280</u>
Commitments and contingencies (Note 13)		
ATN International, Inc. Stockholders' Equity:		
Preferred stock, \$0.01 par value per share; 10,000,000 shares authorized, none issued and outstanding	—	—
Common stock, \$0.01 par value per share; 50,000,000 shares authorized; 16,971,634 and 16,828,576 shares issued, respectively, and 16,138,983 and 16,067,736 shares outstanding respectively	169	168
Treasury stock, at cost; 832,652 and 760,840 shares, respectively	(23,127)	(18,254)
Additional paid-in capital	160,176	154,768
Retained earnings	538,109	547,321
Accumulated other comprehensive income / (loss)	1,728	(3,704)
Total ATN International, Inc. stockholders' equity	<u>677,055</u>	<u>680,299</u>
Non-controlling interests	132,114	81,425
Total equity	<u>809,169</u>	<u>761,724</u>
Total liabilities and equity	<u>\$ 1,198,218</u>	<u>\$ 945,004</u>

The accompanying notes are an integral part of these consolidated financial statements.

ATN INTERNATIONAL, INC. AND SUBSIDIARIES
CONSOLIDATED INCOME STATEMENT S
For the Years Ended December 31, 2016, 2015 and 2014
(In Thousands, Except Per Share Data)

	December 31,		
	2016	2015	2014
REVENUE:			
Wireless	\$ 228,798	\$ 237,042	\$ 241,690
Wireline	188,019	86,485	85,284
Renewable energy	21,608	21,040	—
Equipment and other	18,578	10,802	9,373
Total revenue	<u>457,003</u>	<u>355,369</u>	<u>336,347</u>
OPERATING EXPENSES (excluding depreciation and amortization unless otherwise indicated) :			
Termination and access fees	116,427	77,806	77,888
Engineering and operations	52,902	39,582	30,954
Sales and marketing	31,050	23,898	21,664
Equipment expense	14,342	14,803	13,338
General and administrative	94,293	59,436	52,734
Transaction-related charges	16,279	7,182	2,959
Restructuring charges	1,785	—	—
Depreciation and amortization	75,980	56,890	51,234
Impairment of goodwill and long-lived assets	11,425	—	—
Bargain purchase gain	(7,304)	—	—
Gain on disposition of long-lived assets	27	(2,823)	—
Total operating expenses	<u>407,206</u>	<u>276,774</u>	<u>250,771</u>
Income from operations	<u>49,797</u>	<u>78,595</u>	<u>85,576</u>
OTHER INCOME (EXPENSE)			
Interest income	1,239	588	788
Interest expense	(5,362)	(3,180)	(1,208)
Loss on deconsolidation of subsidiary	—	(19,937)	—
Other income, net	(300)	135	1,012
Other expense, net	(4,423)	(22,394)	592
INCOME FROM CONTINUING OPERATIONS BEFORE INCOME TAXES	<u>45,374</u>	<u>56,201</u>	<u>86,168</u>
Income taxes	21,160	24,137	28,148
INCOME FROM CONTINUING OPERATIONS	<u>24,214</u>	<u>32,064</u>	<u>58,020</u>
INCOME FROM DISCONTINUED OPERATIONS:			
Income from discontinued operations, net of tax	—	1,092	1,102
NET INCOME	<u>24,214</u>	<u>33,156</u>	<u>59,122</u>
Net income attributable to non-controlling interests, net of tax expense of \$1.3 million, \$1.6 million, and \$1.6 million, respectively.	(12,113)	(16,216)	(10,970)
NET INCOME ATTRIBUTABLE TO ATN INTERNATIONAL, INC. STOCKHOLDERS	<u>\$ 12,101</u>	<u>\$ 16,940</u>	<u>\$ 48,152</u>
NET INCOME PER WEIGHTED AVERAGE BASIC SHARE ATTRIBUTABLE TO ATN INTERNATIONAL, INC. STOCKHOLDERS:			
Continuing operations	\$ 0.75	\$ 0.99	\$ 2.96
Discontinued operations	—	0.07	0.07
Total	<u>\$ 0.75</u>	<u>\$ 1.06</u>	<u>\$ 3.03</u>
NET INCOME PER WEIGHTED AVERAGE DILUTED SHARE ATTRIBUTABLE TO ATN INTERNATIONAL, INC. STOCKHOLDERS:			
Continuing operations	\$ 0.75	\$ 0.98	\$ 2.94
Discontinued operations	—	0.07	0.07
Total	<u>\$ 0.75</u>	<u>\$ 1.05</u>	<u>\$ 3.01</u>
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING:			
Basic	16,131	16,022	15,898
Diluted	<u>16,227</u>	<u>16,142</u>	<u>16,013</u>
DIVIDENDS PER SHARE APPLICABLE TO COMMON STOCK	<u>\$ 1.32</u>	<u>\$ 1.22</u>	<u>\$ 1.12</u>

The accompanying notes are an integral part of these consolidated financial statements.

ATN INTERNATIONAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

For the Years Ended December 31, 2016, 2015, and 2014

(in thousands)

	Year ended December 31,		
	2016	2015	2014
Net income	\$ 24,214	\$ 33,156	\$ 59,122
Other comprehensive income:			
Foreign currency translation adjustment	(687)	26	4
Unrealized gain on marketable securities	868	—	—
Projected pension benefit obligation, net of tax expense of \$0.7 million, \$0.7 million and \$0.6 million	5,251	(809)	(724)
Other comprehensive income, net of tax	5,432	(783)	(720)
Comprehensive income	29,646	32,373	58,402
Less: Comprehensive income attributable to non-controlling interests	(12,113)	(16,216)	(10,970)
Comprehensive income attributable to ATN International, Inc.	<u>\$ 17,533</u>	<u>\$ 16,157</u>	<u>\$ 47,432</u>

The accompanying notes are an integral part of these consolidated financial statements.

ATN INTERNATIONAL, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF EQUITY

For the Years Ended December 31, 2014, 2015, and 2016

(In Thousands, Except Share Data)

	Common Stock	Treasury Stock, at cost	Additional Paid In Capital	Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total ATNI Stockholders' Equity	Non- Controlling Interests	Total Equity
Balance, December 31, 2013	164	(13,389)	139,106	519,651	(2,202)	643,330	56,525	699,855
Issuance of 109,318 restricted shares of common stock	—	—	—	—	—	—	—	—
Issuance of 43,034 shares of common stock upon exercise of stock options	2	—	1,621	—	—	1,623	—	1,623
Purchase of 34,293 shares of common stock	—	(2,160)	—	—	—	(2,160)	—	(2,160)
Stock-based compensation	—	—	4,324	—	—	4,324	—	4,324
Dividends declared on common stock	—	—	—	(17,840)	—	(17,840)	(16,331)	(34,171)
Excess tax benefits from share-based compensation	—	—	512	—	—	513	—	513
Investments made by minority shareholders	—	—	—	—	—	—	9,796	9,796
<i>Comprehensive income:</i>								
Net income	—	—	—	48,152	—	48,152	10,970	59,122
Other comprehensive loss, net of tax of \$641	—	—	—	—	(719)	(720)	—	(720)
Total comprehensive income	—	—	—	—	—	47,432	10,970	58,402
Balance, December 31, 2014	166	(15,549)	145,563	549,963	(2,921)	677,222	60,960	738,182
Issuance of 93,864 restricted shares of common stock	1	—	—	—	—	1	—	1
Issuance of 87,378 shares of common stock upon exercise of stock options	1	—	2,808	—	—	2,809	—	2,809
Purchase of 37,567 shares of common stock	—	(2,705)	—	—	—	(2,705)	—	(2,705)
Stock-based compensation	—	—	4,974	—	—	4,974	—	4,974
Dividends declared on common stock	—	—	—	(19,582)	—	(19,582)	(16,715)	(36,297)
Excess tax benefits from share-based compensation	—	—	1,423	—	—	1,423	—	1,423
Investments made by minority shareholders	—	—	—	—	—	—	951	951
Deconsolidation of subsidiary	—	—	—	—	—	—	20,013	20,013
<i>Comprehensive income:</i>								
Net income	—	—	—	16,940	—	16,940	16,216	33,156
Other comprehensive loss, net of tax of \$717	—	—	—	—	(783)	(783)	—	(783)
Total comprehensive income	—	—	—	—	—	16,157	16,216	32,373
Balance, December 31, 2015	168	(18,254)	154,768	547,321	(3,704)	680,299	81,425	761,724
Issuance of 100,005 restricted shares of common stock	—	—	(1)	—	—	(1)	—	(1)
Issuance of 43,053 shares of common stock upon exercise of stock options	1	—	1,408	—	—	1,409	—	1,409
Purchase of 70,686 shares of common stock	—	(4,873)	—	—	—	(4,873)	—	(4,873)
Stock-based compensation	—	—	6,440	—	—	6,440	—	6,440
Dividends declared on common stock	—	—	—	(21,313)	—	(21,313)	(8,848)	(30,161)
Excess tax benefits from share-based compensation	—	—	592	—	—	592	—	592
Non-controlling interest in equity acquired	—	—	(4,106)	—	—	(4,106)	29,998	25,892
Investments made by minority shareholders	—	—	—	—	—	—	22,409	22,409
Deconsolidation of subsidiary	—	—	—	—	—	—	(310)	(310)
Repurchase of non-controlling interests	—	—	1,075	—	—	1,075	(4,673)	(3,598)
<i>Comprehensive income:</i>								
Net income	—	—	—	12,101	—	12,101	12,113	24,214
Other comprehensive loss, net of tax of \$677	—	—	—	—	5,432	5,432	—	5,432
Total comprehensive income	—	—	—	—	—	17,533	12,113	29,646
Balance, December 31, 2016	\$ 169	\$ (23,127)	\$ 160,176	\$ 538,109	\$ 1,728	\$ 677,055	\$ 132,114	\$ 809,169

The accompanying notes are an integral part of these consolidated financial statements.

ATN INTERNATIONAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
For the Years Ended December 31, 2016, 2015 and 2014

(In Thousands)

	2016	December 31, 2015	2014
Cash flows from operating activities:			
Net income	\$ 24,214	\$ 33,156	\$ 59,122
Adjustments to reconcile net income to net cash flows provided by operating activities:			
Depreciation and amortization	75,980	56,890	51,234
Provision for doubtful accounts	2,454	1,199	1,676
Amortization and write off of debt discount and debt issuance costs	505	458	114
Stock-based compensation	6,410	4,975	4,323
Deferred income taxes	(5,636)	17,869	(113)
Income from discontinued operations, net of tax	—	—	—
Bargain purchase gain	(7,304)	—	—
(Gain) Loss on disposition of long-lived assets	27	(2,823)	—
Gain on sale of discontinued operations	—	(1,092)	(1,102)
Impairment of long-lived assets	11,425	—	—
Pension funding required by Innovative acquisition	(22,494)	—	—
Other non-cash activity	566	—	—
Loss on deconsolidation of subsidiary	—	19,937	—
Changes in operating assets and liabilities, excluding the effects of acquisitions:			
Accounts receivable	2,601	11,744	(15,264)
Materials and supplies, prepayments, and other current assets	(8,410)	(1,094)	(4,817)
Income tax receivable	—	—	(2,620)
Accounts payable and accrued liabilities, advance payments and deposits and other current liabilities	6,522	(2,385)	7,629
Accrued taxes	21,547	9,740	(15,650)
Other assets	(12,122)	(134)	(1,833)
Other liabilities	15,371	(9,360)	—
Net cash provided by operating activities of continuing operations	111,656	139,080	82,699
Net cash provided by operating activities of discontinued operations	—	158	(4,719)
Net cash provided by operating activities	111,656	139,238	77,980
Cash flows from investing activities:			
Capital expenditures	(124,282)	(64,753)	(58,300)
Purchase of marketable securities	(2,000)	—	—
Acquisition of businesses, net of acquired cash of \$12.6 million, \$0.0 million, and \$6.6 million	(146,395)	(11,968)	(50,361)
Restricted cash acquired from acquisition of business	—	—	(5,884)
Purchases of spectrum licenses and other intangible assets, including deposits	(10,860)	—	—
Acquisition of non-controlling interest in subsidiary	(7,045)	—	—
Purchase of short-term investments	(7,422)	—	—
Change in restricted cash	(12,108)	38,877	38,707
Proceeds from disposition of long-lived assets	1,424	5,873	1,371
Net cash used in investing activities of continuing operations	(308,688)	(31,971)	(74,467)
Cash flows from financing activities:			
Dividends paid on common stock	(20,965)	(19,070)	(17,488)
Proceeds from the issuance of debt	125,800	—	—
Distribution to non-controlling stockholders	(8,632)	(16,514)	(16,331)
Payment of debt issuance costs	(2,763)	(892)	(1,945)
Proceeds from stock option exercises	649	1,998	1,129
Principal repayments of term loan	(33,564)	(6,017)	—
Purchase of common stock	(4,114)	(1,893)	(1,665)
Repurchases of non-controlling interests	(3,485)	—	(104)
Investments made by minority shareholders in consolidated affiliates	22,408	950	2,500
Net cash provided by (used in) financing activities	75,334	(41,438)	(33,904)
Effect of foreign currency exchange rates on cash and cash equivalents	(626)	—	—
Net change in cash and cash equivalents	(122,324)	65,829	(30,391)
Cash and cash equivalents, beginning of period	392,045	326,216	356,607
Cash and cash equivalents, end of period	\$ 269,721	\$ 392,045	\$ 326,216
Supplemental cash flow information:			
Interest paid	\$ 4,451	\$ 2,724	\$ 2,930
Taxes paid	\$ 8,237	\$ 9,636	\$ 48,349
Dividends declared, not paid	\$ 5,487	\$ 5,141	\$ 4,618
Noncash investing activity:			
Purchases of property and equipment included in accounts payable and accrued expenses	\$ 16,847	\$ 7,705	\$ 5,136

The accompanying notes are an integral part of these consolidated financial statements.

ATN INTERNATIONAL, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. ORGANIZATION AND BUSINESS OPERATIONS

The Company is a holding company that, through its operating subsidiaries, (i) provides wireless and wireline telecommunications services in North America, Bermuda and the Caribbean, (ii) develops, owns and operates commercial distributed generation solar power systems in the United States and India, and (iii) owns and operates terrestrial and submarine fiber optic transport systems in the United States and the Caribbean.

The Company offers the following principal services:

- **Wireless.** In the United States, the Company offers wholesale wireless voice and data roaming services to national, regional, local and selected international wireless carriers in rural markets located principally in the Southwest and Midwest United States. The Company also offer wireless voice and data services to retail customers in Bermuda, Guyana, the U.S. Virgin Islands and in other smaller markets in the Caribbean and the United States.
- **Wireline.** The Company's wireline services include local telephone and data services in Bermuda, Guyana, the U.S. Virgin Islands, and in other smaller markets in the Caribbean and the United States. Our wireline services also include video services in Bermuda and the U.S. Virgin Islands. As of December 31, 2016, the Company also offered facilities-based integrated voice and data communications services and wholesale transport services to enterprise and residential customers in New England, primarily Vermont, and in New York State. In addition, the Company offers wholesale long-distance voice services to telecommunications carriers.
- **Renewable Energy.** In the United States, the Company provides distributed generation solar power to corporate, utility and municipal customers in Massachusetts, California and New Jersey. Beginning in April 2016, the Company began developing projects in India to provide distributed generation solar power to corporate and utility customers

The following chart summarizes the operating activities of the Company's principal subsidiaries, the segments in which it reports its revenue and the markets it served as of December 31, 2016:

Segment	Services	Markets	Tradenames
U.S. Telecom	Wireless	United States (rural markets)	Commnet, Choice, Choice NTUA, Wireless
	Wireline	United States (New England and New York State)	Sovernet, ION, Essexel
International Telecom	Wireline	Guyana, Bermuda, U.S. Virgin Islands	GTT+, One, Innovative, Logic
	Wireless	Bermuda, Guyana, U.S. Virgin Islands	One, GTT+, Innovative, Choice
Renewable Energy	Video Services	Bermuda, U.S. Virgin Islands, Cayman Islands, British Virgin Islands, St. Maarten	One, Innovative, Logic, BVI Cable TV
	Solar	United States and India	Ahana Renewables, Vibrant Energy

The Company actively evaluates potential acquisitions, investment opportunities and other strategic transactions, both domestic and international, that meet its return on investment and other criteria. The Company provides management, technical, financial, regulatory, and marketing services to its subsidiaries and typically receives a

ATN INTERNATIONAL, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

management fee equal to a percentage of their respective revenue. Management fees from subsidiaries are eliminated in consolidation.

To be consistent with how management allocates resources and assesses the performance of its business operations in 2016, the Company updated its reportable operating segments in the first quarter of the year to consist of the following: i) U.S. Telecom, consisting of the Company's former U.S. Wireless and U.S. Wireline segments, ii) International Telecom, consisting of the Company's former Island Wireless and International Integrated Telephony segments and the results of its One Communications and Innovative Acquisitions as discussed below, and iii) Renewable Energy, consisting of the Company's former Renewable Energy segment and the results of its Vibrant Energy Acquisition. The prior year segment information has been recast to conform to the current year's segment presentation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The consolidated financial statements include the accounts of the Company, its majority-owned subsidiaries and certain entities, which are consolidated in accordance with the provisions of the Financial Accounting Standards Board's ("FASB") authoritative guidance on the consolidation of variable interest entities since it is determined that the Company is the primary beneficiary of these entities.

Certain reclassifications have been made in the December 31, 2015 financial statements to conform to the Company's consolidated income statements to how it analyzes its operations in the current period. These changes did not impact operating income. For the year ended December 31, 2015 the aggregate impact of the changes included an increase to termination and access fees of \$4.1 million, a decrease to engineering and operations expenses of \$2.3 million, a decrease to sales and marketing expenses of \$2.4 million and an increase to general and administrative expenses of \$0.5 million.

During the year ended December 31, 2016, the Company's other assets increased primarily due to a deposit to purchase spectrum licenses, a \$2.0 million purchase of securities in an unaffiliated entity, \$2.1 million of assets acquired in the One Communications Acquisition, and \$7.6 million of assets acquired in the Innovative Transaction, and \$6.3 million related to operations in the Renewable Energy segment.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenue and expenses during the reporting periods. The most significant estimates relate to the allowance for doubtful accounts, useful lives of the Company's fixed and finite-lived intangible assets, allocation of purchase price to assets acquired and liabilities assumed in business combinations, fair value of indefinite-lived intangible assets, goodwill and income taxes. Actual results could differ significantly from those estimates.

Cash and Cash Equivalents

The Company considers all investments with an original maturity of three months or less at date of purchase to be cash equivalents. The Company places its cash and temporary investments with banks and other institutions that it believes have a high credit quality. At December 31, 2016, the Company had deposits with banks in excess of FDIC insured limits and \$24.3 million of its cash is on deposit with non-insured institutions such as corporate money market issuers and cash held in foreign banks. The Company's cash and cash equivalents are not subject to any restrictions (see Note 8). As of December 31, 2016 and 2015, the Company held \$7.5 million and \$3.8 million, respectively, of its cash in Guyana dollars. While there are risks associated with the conversion of Guyana dollars to U.S. dollars due to limited liquidity in the Guyana foreign currency markets, to date it has not prevented the Company from converting Guyana dollars into U.S. dollars within a given three month period or from converting at a price that reasonably approximates the reported exchange rate.

Short Term Investments

The Company's short-term investments consist of corporate bonds, which have remaining maturities of more than three months at the date of purchase, and equity securities classified as available for sale, which are stated at fair value. Unrealized gains and losses, net of related income taxes, for available for sale securities are reported as net increases and decreases to accumulated other comprehensive income (loss) until realized. The estimated fair values of investments are based on quoted market prices as of the end of the reporting period. The corporate bonds as of December 31, 2016 have contractual maturities of less than one year.

Restricted Cash

The majority of the Company's restricted cash balance is held in the Company's Ahana Renewables subsidiary as described in Note 3. The restricted cash is held in escrow and serves as collateral for Ahana Renewables' debt in order to meet future debt service obligations and other operating obligations of the solar facilities.

Allowance for Doubtful Accounts

The Company maintains an allowance for doubtful accounts for the estimated probable losses on uncollectible accounts receivable. The allowance is based upon a number of factors including the credit worthiness of customers, the Company's historical experience with customers, the age of the receivable and current market and economic conditions. Such factors are reviewed and updated by the Company on a quarterly basis. Uncollectible amounts are charged against the allowance account.

Materials and Supplies

Materials and supplies primarily include handsets, customer premise equipment, cables and poles and are recorded at the lower of cost or market cost being determined on the basis of specific identification and market determined using replacement cost.

Fixed Assets

The Company's fixed assets are recorded at cost and depreciated using the straight-line method generally between 3 and 39 years. Expenditures for major renewals and betterments that extend the useful lives of fixed assets are capitalized. Repairs and replacements of minor items of property are charged to maintenance expense as incurred. The cost of fixed assets in service and under construction includes an allocation of indirect costs applicable to construction. Grants received for the construction of assets are recognized as a reduction of the cost of fixed assets, a reduction of depreciation expense over the useful lives of the assets and as a reduction of capital expenditures in the statements of cash flows.

The fair value of a liability for an asset retirement obligation is recorded in the period in which it is incurred if a reasonable estimate of fair value can be made. In periods subsequent to initial measurement, period-to-period changes in the liability for an asset retirement obligation resulting from the passage of time and revisions to either the timing or the amount of the original estimate of undiscounted cash flows are recognized. The increase in the carrying value of the associated long-lived asset is depreciated over the corresponding estimated economic life. The consolidated balance sheets include accruals of \$3.2 million and \$3.0 million as of December 31, 2016 and 2015, respectively, for estimated costs associated with asset retirement obligations.

In accordance with the authoritative guidance for the accounting for the impairment or disposal of long-lived assets, the Company evaluates the carrying value of long-lived assets, including property and equipment, in relation to the operating performance and future undiscounted cash flows of the underlying business whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. An impairment loss exists when estimated undiscounted cash flows attributable to an asset are less than its carrying amount. If an asset is deemed to be impaired, the amount of the impairment loss recognized represents the excess of the asset's carrying value as compared to its estimated fair value, based on management's assumptions and projections.

Management's estimate of the future cash flows attributable to its long-lived assets and the fair value of its businesses involve significant uncertainty. Those estimates are based on management's assumptions of future results, growth trends and industry conditions. If those estimates are not met, the Company could have additional impairment charges in the future, and the amounts may be material.

See Note 3, *Pending Disposition- U.S. Telecom*, regarding the Company's impairment of certain fixed assets.

Goodwill and Indefinite-Lived Intangible Assets

Goodwill is the amount by which the cost of acquired net assets exceeded the fair value of those net assets on the date of acquisition. The Company allocates goodwill to reporting units at the time of acquisition and bases that allocation on which reporting units will benefit from the acquired assets and liabilities. Reporting units are defined as operating segments or one level below an operating segment, referred to as a component. The Company has determined that its reporting units are components of its multiple operating segments. The Company assesses goodwill for impairment on an annual basis in the fourth quarter or more frequently when events and circumstances occur indicating that the recorded goodwill may be impaired. If the book value of a reporting unit exceeds its fair value, the implied fair value of goodwill is compared with the carrying amount of goodwill. If the carrying amount of goodwill exceeds the implied fair value, an impairment loss is recorded equal to that excess.

A significant majority of the Company's telecommunications licenses are not amortized and are carried at their historical costs. The Company believes that telecommunications licenses generally have an indefinite life based on the historical ability to renew such licenses, that such renewals may be obtained indefinitely and at little cost, and that the related technology used is not expected to be replaced in the foreseeable future. The Company has elected to perform its annual testing of its telecommunications licenses in the fourth quarter of each fiscal year, or more often if events or circumstances indicate that there may be impairment. If the value of these assets were impaired by some factor, such as an adverse change in the subsidiary's operating market, the Company may be required to record an impairment charge. The impairment test consists of a comparison of the fair value of telecommunications licenses with their carrying amount on a license by license basis and as a part of the test the Company assesses the appropriateness of the application of the indefinite-lived assertion.

As of December 31, 2016 and 2015, the Company performed its annual impairment assessment of its goodwill and indefinite-lived intangible assets (telecommunications licenses) and determined that no impairment charge was required. See Note 7 for a discussion of the Company's quantitative and qualitative tests of its goodwill. See Note 3, *Pending Disposition- U.S. Telecom*, regarding the Company's impairment of certain fixed assets and goodwill.

Other Intangible Assets

Intangible assets resulting from the acquisitions of entities accounted for using the purchase method of accounting are estimated by management based on the fair value of assets acquired. These include acquired customer relationships, tradenames, and franchise rights.

Customer relationships are amortized over their estimated lives ranging from 7-13 years, which are based on the pattern in which economic benefit of the customer relationship is estimated to be realized.

Debt

Debt is measured at amortized cost. Debt issuance costs on term loans and specified maturity borrowings are recorded as a reduction to the carrying value of the debt and are amortized as interest expense in the consolidated income statements over the period of the debt. Fees related to revolving credit facilities and lines of credit are recorded in other assets in the consolidated balance sheet and are amortized as interest expense in the consolidated income statements over the life of the facility. Except for interest costs incurred for the construction of a qualifying asset which are capitalized during the period the assets are prepared for their intended use, interest costs are expensed.

Non-Controlling Interests

The non-controlling interests in the accompanying consolidated balance sheets reflect the original investments by the minority stockholders in GTT, Commnet's consolidated subsidiaries, One Communications, Innovative, Sovernet and its consolidated subsidiaries and Ahana Renewables, along with their proportional share of the earnings or losses, net of any distributions.

Changes in Accumulated Other Comprehensive Income (Loss)

Changes in accumulated other comprehensive income (loss), by component, were as follows (in thousands):

	Projected Pension Benefit Obligation	Translation Adjustment	Short Term Investment	Total
Balance at December 31, 2013	\$ (1,949)	(253)	—	(2,202)
Adjust funded status of pension plan, net of tax of \$0.6 million	(723)	—	—	(723)
Foreign currency translation adjustment	—	4	—	4
Balance at December 31, 2014	(2,672)	(249)	—	(2,921)
Adjust funded status of pension plan, net of tax of \$0.7 million	(809)	—	—	(809)
Foreign currency translation adjustment	—	26	—	26
Balance at December 31, 2015	(3,481)	(223)	—	(3,704)
Adjust funded status of pension plan, net of tax of \$0.7 million	5,251	—	—	5,251
Foreign currency translation adjustment	—	(687)	—	(687)
Unrealized gain on marketable securities	—	—	868	868
Balance at December 31, 2016	<u>\$ 1,770</u>	<u>\$ (910)</u>	<u>\$ 868</u>	<u>\$ 1,728</u>

Amounts totaling \$1.3 million, \$0.2 million, and \$0.2 million were reclassified from other comprehensive income to general and administrative operating expense related to the Company's defined pension plans for the years ending December 31, 2016, 2015, and 2014, respectively .

Revenue Recognition- Telecommunications

Service revenues are primarily derived from providing access to and usage of the Company's networks and facilities. Access revenues from postpaid customers are generally billed one month in advance and are recognized over the period that the corresponding service is rendered to customers. Revenues derived from usage of the Company's networks, including airtime, roaming, long-distance and Universal Service Fund revenues, are recognized when the services are provided and are included in unbilled revenues until billed to the customer. Prepaid airtime sold to customers is recorded as deferred revenue prior to the commencement of services and is recognized when the airtime is used or expires. The Company offers enhanced services including caller identification, call waiting, call forwarding, three-way calling, voice mail, and text and picture messaging, as well as downloadable wireless data applications, including ringtones, music, games, and other informational content. Generally, these enhanced features generate additional service revenues through monthly subscription fees or increased usage through utilization of the features. Other optional services such as equipment protection plans may also be provided for a monthly fee and are either sold separately or bundled and included in packaged rate plans. Revenues from enhanced features and optional services are recognized when earned. Access and usage-based services are billed throughout the month based on the bill cycle assigned to a particular customer. As a result of billing cycle cut-off times, management must estimate service revenues earned but not yet billed at the end of each reporting period.

Sales of communications products including wireless handsets and accessories represent a separate earnings process and are recognized when the products are delivered to and accepted by customers. The Company accounts for transactions involving both the activation of service and the sale of equipment in accordance with the authoritative guidance for the accounting for revenue arrangements with multiple deliverables. Fees assessed to communications customers to activate service are not a separate unit of accounting and are allocated to the delivered item (equipment) and recognized as product sales to the extent that the aggregate proceeds received from the customer for the equipment and activation fee do not exceed the relative fair value of the equipment. Commissions paid to third parties are expensed as incurred and included in sales and marketing expenses.

Wholesale revenues are those revenues generated from providing voice or data services to the customers of other wireless carriers principally through “roaming” agreements, and the revenue is recognized over the period that the service is rendered to customers.

Sales and use and state excise taxes collected from customers that are remitted to the governmental authorities are reported on a net basis and excluded from the revenues and sales.

Revenue Recognition-Renewable Energy

Revenue from the Company’s Renewable Energy segment is generated from the sale of electricity through long-term power purchase agreements (“PPA’s”) with various customers, or hosts, that range from 10 to 25 years. The Company, which is required to sell all generated power to the hosts, recognizes revenue from the PPA’s as electricity is generated and sold at contractual rates as defined within the respective PPA.

The Company’s Renewable Energy segment also generates revenue from the sale of Solar Renewable Energy Credits (“SRECs”). Revenue is recognized as SRECs are sold through long-term purchase agreements at the contractual rate specified in the agreement.

Expenses

Termination and access fee expenses. Termination and access fee expenses are charges that are incurred for voice and data transport circuits (in particular, the circuits between the Company’s wireless sites and its switches), internet capacity, other access fees incurred to terminate calls, customer bad debt expense, telecommunication spectrum fees and direct costs associated with the Company’s Renewable Energy segment.

Engineering and operations expenses. Engineering and operations expenses include the expenses associated with developing, operating and supporting the Company’s expanding telecommunications networks and renewable energy operations, including the salaries and benefits incurred to employees directly involved in the development and operation of the Company’s networks and renewable energy operations.

Sales and marketing expenses. Sales and marketing expenses include salaries and benefits incurred to sales personnel, customer service expenses, sales commissions and the costs associated with the development and implementation of promotion and marketing campaigns.

Equipment expenses. Equipment expenses include the costs of handset and customer resale equipment in the Company’s retail businesses.

General and administrative expenses. General and administrative expenses include salaries, benefits and related costs for general corporate functions including executive management, finance and administration, legal and regulatory, facilities, information technology and human resources. General and administrative expenses also include internal costs associated with the Company’s performance of due-diligence in connection with acquisition activities.

Transaction-related charges. Transaction-related charges include the external costs, such as legal, tax, accounting and consulting fees directly associated with acquisition and disposition-related activities. Transaction-related charges do not include internal costs, such as employee salary and travel-related expenses, incurred in connection with acquisitions or dispositions or any integration-related costs.

Restructuring charges. Restructuring charges include costs incurred in integrating our newly acquired Companies.

Depreciation and amortization expenses. Depreciation and amortization expenses represent the depreciation and amortization charges recorded on our property and equipment and intangible assets.

Impairment of goodwill and long-lived assets. The Company evaluates the carrying value of its long-lived assets, including property and equipment, whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. An impairment loss exists when estimated *undiscounted* cash flows attributable to non-current assets subject to depreciation and amortization and *discounted* cash flows for intangible assets not subject to amortization are less than their carrying amount. If an asset is deemed to be impaired, the amount of the impairment loss recognized represents the excess of the asset's carrying value as compared to its estimated fair value, based on management's assumptions and projections.

The Company also assesses the carrying value of goodwill and indefinite-lived intangible assets on an annual basis or more frequently if events or changes in circumstances indicate that the carrying value of goodwill may not be recoverable. The carrying value of each reporting unit, including goodwill assigned to that reporting unit, is compared to its fair value. If the fair value of the reporting unit does not exceed the carrying value of the reporting unit, including goodwill, an analysis is performed to determine if an impairment charge should be recorded.

Accounting for Grants

The Company has received funding from the U.S. Government and its agencies under Stimulus and Universal Service Fund programs. These funding programs are generally designed to fund telecommunications infrastructure expansion into rural or underserved areas of the United States. The funding programs are evaluated to determine if they represent funding related to capital expenditures (capital grants) or operating activities (income grants).

Funding received from Stimulus programs is on a cost-reimbursement basis for capital expenditures incurred by the Company to expand its network and is considered a capital grant. Accordingly, reimbursements for eligible expenditures under the Stimulus programs are recorded as a reduction to property, plant and equipment on the Company's consolidated balance sheets, an investing cash inflow and a future reduction in depreciation expense in the consolidated income statements. The depreciable period for the grant is commensurate with the related assets which typically range from 5 to 20 years. As of December 31, 2016, the Company has spent \$99.3 million in capital expenditures of which \$73.9 million has been or will be funded by the Stimulus programs. Accordingly, funding received for capital expenditures from the Stimulus Programs is recorded as a reduction to property, plant and equipment on the Company's consolidated balance sheets, an investing cash inflow within capital expenditures and a future reduction in depreciation expense in the consolidated income statements. Funding received for operating costs is recorded as a reduction to the Company's operating expenses in its consolidated statements of income and an operating cash inflow.

Funding received from Universal Service Fund programs is received over time for operating the Company's network in certain rural geographical areas and is considered an income grant. Accordingly, such funding is recognized as operating cash inflows. Once services are provided, revenue is recognized in the Company's consolidated income statements. During the year ended December 31, 2016 and December 31, 2015 the Company received approximately \$17.7 million and \$7.9 million, respectively, from the Universal Service Fund programs. Of these amounts, \$9.5 million for the year ended December 31, 2016 and \$1.3 million for the year ended December 31, 2015 were to support our U.S. Wireless business relating to high-cost areas.

Funding received from the Phase I Mobility Fund, as further described in Note 9, is for the use of both capital expenditures and operating costs incurred by the Company. Accordingly, funding received for capital expenditures from the Phase I Mobility Fund is recorded as a reduction to property, plant and equipment on the Company's consolidated balance sheets, an investing cash inflow within capital expenditures and a future reduction in depreciation expense in the consolidated income statements. Funding received for operating costs is recorded as a reduction to the Company's operating expenses in its consolidated income statements and an operating cash inflow.

Compliance with grant requirements is reviewed as of December 31, of each year to ensure that conditions related to grants have been met and there is reasonable assurance that the Company will be able to retain the grant

proceeds and to ensure that any contingencies that may arise from not meeting the conditions are appropriately recognized.

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of the differences between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company recognizes deferred tax assets to the extent that the Company believes these assets are more likely than not to be realized. In making such a determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If the Company determines that it would be able to realize our deferred tax assets in the future in excess of their net recorded amount, the Company would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Company records uncertain tax positions in accordance with ASC 740 on the basis of a two-step process whereby (1) the Company determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, the Company recognizes the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related authority. It is possible that the ultimate resolution of these uncertain matters may be greater or less than the amount that the Company estimated. If payment of these amounts proves to be unnecessary, the reversal of the liabilities would result in tax benefits being recognized in the period in which it is determined that the liabilities are no longer necessary. If the estimate of tax liabilities proves to be more than the ultimate assessment, a further charge to expense would result.

The Company recognizes interest and penalties related to unrecognized tax benefits within the income tax expense line in the accompanying consolidated statements of operations. Accrued interest and penalties are included within the related tax liability line in the consolidated balance sheets.

The Company does not provide for United States income taxes on earnings of foreign subsidiaries as such earnings are considered to be indefinitely reinvested.

As of December 31, 2014, the Company had deferred taxes that were classified as current and noncurrent assets and liabilities. The Company elected to prospectively adopt ASU 2015-17 as of December 31, 2015, thus reclassifying \$3.9 million of current deferred tax assets and \$0.2 million of current deferred tax liabilities to noncurrent on the accompanying consolidated December 31, 2015 balance sheet. The adoption of this guidance had no impact on the Company's consolidated results of income and comprehensive income.

Credit Concentrations and Significant Customers

The Company has been historically dependent on a limited amount of customers for its wholesale roaming business. The following table indicates the percentage of revenues generated from a single customer that exceeds 10% of the Company's consolidated revenue in any of the past three years:

Customer	2016	2015	2014
Verizon	12 %	19 %	16 %
AT&T	14 %	17 %	26 %

No other customer accounted for more than 10% of consolidated revenue in any of the past three years.

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The following table indicates the percentage of accounts receivable, from customers that exceed 10% of the Company's consolidated accounts receivable, net of allowances, as of December 31, 2016 and 2015:

Customer	2016	2015
AT&T	17 %	17 %
Verizon	12 %	13 %

Foreign Currency Gains and Losses

We translate the assets and liabilities of our foreign subsidiaries from their respective functional currencies, primarily the Indian Rupee and the Guyana Dollar, to U.S. dollars at the appropriate spot rates as of the balance sheet date. Changes in the carrying value of these assets and liabilities attributable to fluctuations in spot rates are recognized in foreign currency translation adjustment, a component of AOCI. Income statement accounts are translated using the monthly average exchange rates during the year.

Monetary assets and liabilities denominated in a currency that is different from a reporting entity's functional currency must first be remeasured from the applicable currency to the legal entity's functional currency. The effect of this remeasurement process is reported in other income on the income statement.

Employee Benefit Plans

The company sponsors pension and other postretirement benefit plans for employees of certain subsidiaries. Net periodic pension expense is recognized in the Company's income statement. The Company recognizes a pension or other postretirement plan's funded status as either an asset or liability in its consolidated balance sheet. Actuarial gains and losses are reported as a component of other comprehensive income and amortized through net periodic pension expense in subsequent periods.

Fair Value of Financial Instruments

In accordance with the provisions of fair value accounting, a fair value measurement assumes that a transaction to sell an asset or transfer a liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability and defines fair value based upon an exit price model.

The fair value measurement guidance establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The guidance describes three levels of inputs that may be used to measure fair value:

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- Level 1 Quoted prices in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions for the asset and liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis. Level 1 assets and liabilities include money market funds, debt and equity securities and derivative contracts that are traded in an active exchange market.
- Level 2 Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Level 2 assets and liabilities include debt securities with quoted prices that are traded less frequently than exchange-traded instruments and derivative contracts whose value is determined using a pricing model with inputs that are observable in the market or can be derived principally from or corroborated by observable market data. This category generally includes corporate obligations and non-exchange traded derivative contracts.
- Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. Level 3 assets and liabilities include financial instruments and intangible assets that have been impaired whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant management judgment or estimation.

Assets and liabilities of the Company measured at fair value on a recurring basis as of December 31, 2016 and 2015 are summarized as follows:

Description	December 31, 2016		
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Total
Certificates of deposit	\$ —	\$ 391	\$ 391
Money market funds	\$ 29,027	\$ —	\$ 29,027
Short term investments	\$ 1,751	\$ 7,486	\$ 9,237
Commercial Paper	\$ —	\$ 29,981	\$ 29,981
Total assets measured at fair value	\$ 30,778	\$ 37,858	\$ 68,636

Description	December 31, 2015		
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Total
Certificates of deposit	\$ —	\$ 377	\$ 377
Money market funds	\$ 76,263	\$ —	\$ 76,263
Total assets measured at fair value	\$ 76,263	\$ 377	\$ 76,640

Certificate of Deposit

As of December 31, 2016 and December 31, 2015, this asset class consisted of a time deposit at a financial institution denominated in U.S. dollars. The asset class is classified within Level 2 of the fair value hierarchy because the fair value was based on observable market data.

Money Market Funds

As of December 31, 2016 and December 31, 2015, this asset class consisted of a money market portfolio that comprises Federal government and U.S. Treasury securities. The asset class is classified within Level 1 of the fair value hierarchy because its underlying investments are valued using quoted market prices in active markets for identical assets.

Short Term Investments and Commercial Paper

As of December 31, 2016, this asset class consisted of short term foreign and U.S. corporate bonds and equity securities. Corporate bonds are classified within Level 2 of the fair value hierarchy because the fair value is based on observable market data. Equity securities are classified within Level 1 because fair value is based on quoted market prices in active markets for identical assets.

Other Fair Value Disclosures

The carrying amounts of cash and cash equivalents, accounts receivable, and accounts payable and accrued expenses approximate their fair values because of the relatively short-term maturities of these financial instruments.

The fair value of marketable securities is estimated using Level 2 inputs. At December 31, 2016, the fair value of marketable securities approximated its carrying amount of \$ 2.0 million and is included in other assets on the consolidated balance sheet.

The fair value of long-term debt is estimated using Level 2 inputs. At December 31, 2016, the fair value of long-term debt, including the current portion, was \$15 9.9 million and its book value was \$ 156.8 million. At December 31, 2015, the fair value of the long-term debt, including the current portion, was equal to its carrying amount of \$32 .9 million.

Net Income Per Share

Basic net income per share is computed by dividing net income attributable to the Company's stockholders by the weighted-average number of common shares outstanding during the period and does not include any other potentially dilutive securities. Diluted net income per share gives effect to all potentially dilutive securities using the treasury stock method.

The reconciliation from basic to diluted weighted average shares of Common Stock outstanding is as follows (in thousands):

	<u>Year ended December 31,</u>		
	<u>2016</u>	<u>2015</u>	<u>2014</u>
Basic weighted-average shares of common stock outstanding	16,131	16,022	15,898
Stock options	96	120	115
Diluted weighted-average shares of common stock outstanding	<u>16,227</u>	<u>16,142</u>	<u>16,013</u>

The following notes the number of potential share Common Stock not included in the above calculation because the effects of such were anti-dilutive (in thousands of shares):

	<u>For the Year Ended</u> <u>December 31,</u>		
	<u>2016</u>	<u>2015</u>	<u>2014</u>
Stock options	<u>5</u>	<u>2</u>	<u>—</u>
Total	<u>5</u>	<u>2</u>	<u>—</u>

Stock-Based Compensation

The Company applies the fair value recognition provisions of the authoritative guidance for the accounting for stock-based compensation and is expensing the fair value of the grants of options to purchase common stock over their vesting period of four years. Relating to grants of options, the Company recognized \$0.1 million, \$0.4 million and \$0.9 million of non-cash, share-based compensation expense during 2016, 2015, and 2014, respectively. See Note 10 for assumptions used to calculate the fair value of the options granted.

The Company also issued 100,005 restricted shares of its common stock in 2016; 93,864 restricted shares of common stock in 2015 and 109,318 restricted shares of common stock in 2014. These shares are being charged to income based upon their fair values over their vesting period of four years. Non-cash equity-based compensation expense, related to the vesting of restricted shares issued was \$6.2 million, \$3.4 million and \$3.1 million in 2016, 2015, and 2014, respectively.

In connection with certain acquisitions, the Company issued shares of the acquired company to its local management and recorded \$0.1 and \$0.3 million of stock based compensation during 2016 and 2015, respectively.

Stock-based compensation expense is recognized within general and administrative expenses within the consolidated income statements.

Business Combinations

The Company accounts for business combinations using the acquisition method of accounting, under which the purchase price of the acquisition is allocated to the assets acquired and liabilities assumed using the fair values determined by management as of the acquisition date. Contingent consideration obligations that are elements of the consideration transferred are recognized as of the acquisition date as part of the fair value transferred in exchange for the acquired business. Acquisition-related costs incurred in connection with a business combination are expensed as incurred.

Recent Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, “Revenue from Contracts with Customers”, which provides a single, comprehensive revenue recognition model for all contracts with customers. The revenue standard is based on the principle that revenue should be recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of initial application. On July 9, 2015, the FASB approved the deferral of the new standard's effective date by one year. The new standard is now effective for annual reporting periods beginning after December 15, 2017. The FASB will permit companies to adopt the new standard early, but not before the original effective date of annual reporting periods beginning after December 15, 2016. In March 2016, the FASB issued ASU 2016-08, “*Principal Versus Agent Considerations (Reporting Revenue Gross Versus Net)*.” In April 2016, the FASB issued ASU 2016-10, “*Identifying Performance Obligations and Licensing*.” In May 2016, the FASB issued ASU 2016-12, “*Narrow-Scope Improvements and Practical Expedients*.” In December 2016, the FASB issued Accounting Standards Update 2016-20, “*Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*.” These updates provide additional adoption guidance and clarification to ASU 2014-09. The amendments must be adopted concurrently. The Company is currently evaluating the overall impact and the method of adoption of ASU 2014-09, including the latest developments from the Transition Resources Group. Areas most likely impacted may include, but not be limited to, the following: the timing of revenue recognition and the allocation of revenue between equipment and services. In addition, the new standard may require certain amounts be recorded in accounts receivable and deferred revenues on the balance sheet and enhanced disclosures around performance obligations. The Company’s final determination of the adoption methodology will depend on a number of factors, such as the significance of the impact of the new standard on the financial results, data and information available at recently acquired businesses, system readiness and the ability to accumulate and analyze the information necessary to assess the impact on prior period financial statements and new disclosure requirements. The Company does not currently know or cannot reasonably estimate quantitative information related to the impact of the new standard on its Consolidated Financial Statements. The Company will adopt the standard on January 1, 2018.

In August 2014, the FASB issued ASU 2014-15, “Presentation of Financial Statements - Going Concern (Subtopic 205-40),” which requires management to assess a company’s ability to continue as a going concern and to provide related footnote disclosures in certain circumstances. ASU 2014-15 is effective for annual reporting periods ending after December 15, 2016. Early application is permitted. The Company adopted this guidance for the fourth quarter ended December 31, 2016. The adoption of this guidance did not impact the Company’s Consolidated Financial Statements.

In April 2015, the FASB issued ASU 2015-03, “Simplifying the Presentation of Debt Issuance Costs”, which amends the presentation of debt issuance costs on the consolidated balance sheet. Under the new guidance, debt issuance costs are presented as a direct deduction from the carrying amount of the debt liability rather than as an asset. The Company retrospectively adopted ASU 2015-03 on January 1, 2016 and determined that its adoption had no impact on its consolidated financial statements and related disclosures. This is a change in accounting principle.

In April 2015, the FASB issued ASU 2015-05, “Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement”, which provides guidance about whether a cloud computing arrangement includes software and how to account for that software license. The new guidance does not change the accounting for a customer’s accounting for service contracts. The standard is effective beginning January 1, 2017, with early adoption permitted, and may be applied prospectively or retrospectively. The Company does not expect ASU 2015-05 to have a material impact on its consolidated financial position, results of operations or cash flows.

In September 2015, the FASB issued ASU 2015-16, “Simplifying the Accounting for Measurement-Period Adjustments”, which provides updated guidance related to simplifying the accounting for measurement period adjustments related to business combinations. The amended guidance eliminates the requirement to retrospectively account for adjustments made during the measurement period. The standard was adopted January 1, 2016, and did not have a material impact on its consolidated financial position, results of operations or cash flows.

In February 2016, the FASB issued ASU 2016-02, “Leases (Topic 842)”, which provides comprehensive lease accounting guidance. The standard requires entities to recognize lease assets and liabilities on the balance sheet as well as disclosure of key information about leasing arrangements. ASU 2016-02 will become effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, with early adoption permitted. The Company is currently evaluating the impact of the new guidance on its Consolidated Financial Statements.

In March 2016, the FASB issued ASU 2016-09, “Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting”. The standard is intended to simplify several areas of accounting for share-based compensation arrangements, including the income tax impact, classification on the statement of cash flows and forfeitures. ASU 2016-09 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2016, and early adoption is permitted. The Company is currently evaluating the impact that the standard will have on its Consolidated Financial Statements.

In August 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-15, “Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments,” which provides further clarification on eight cash flow classification issues. The standard further clarifies the classification of the following: (i) debt prepayment or debt extinguishment costs; (ii) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; (iii) contingent consideration payments made after a business combination; (iv) proceeds from the settlement of insurance claims; (v) proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies; (vi) distributions received from equity method investees; (vii) beneficial interests in securitization transactions; and (viii) separately identifiable cash flows and application of the predominance principle. ASU 2016-15 will become effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017, with early adoption permitted. ASU 2016-15 should be applied using a retrospective transition method for each period presented. The Company is currently evaluating the impact of the new standard on our consolidated financial statements.

In October 2016 the FASB issued ASU 2016-16, *Accounting for Income Taxes: Intra-Entity Asset Transfers of Assets Other than Inventory*. The new standard eliminates for all intra-entity sales of assets other than inventory, the exception under current standards that permits the tax effects of intra-entity asset transfers to be deferred until the transferred asset is sold to a third party or otherwise recovered through use. As a result, a reporting entity would recognize the tax expense from the sale of the asset in the seller’s tax jurisdiction when the transfer occurs. Any deferred tax asset that arises in the buyer’s jurisdiction would also be recognized at the time of the transfer. The new standard will be effective for the Company on January 1, 2018. The Company is currently evaluating the potential impact that this standard may have on its results of operations.

In November 2016, the FASB issued Accounting Standards Update 2016-18, “*Statement of Cash Flows (Topic 230): Restricted Cash*,” or ASU 2016-18. The amendments in ASU 2016-18 are intended to reduce diversity in practice related to the classification and presentation of changes in restricted cash or restricted cash equivalents on the statement of cash flows. The amendments in ASU 2016-18 require that amounts generally described as restricted cash and restricted cash equivalents be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-18 is effective for annual reporting periods, including interim periods within those periods, beginning after December 15, 2017, with early adoption permitted. The Company is currently evaluation the potential impact that this standard may have on its Consolidated Financial Statements.

In January 2017, the FASB issued Accounting Standards Update 2017-01, “*Business Combinations (Topic 805): Clarifying the Definition of a Business*,” or ASU 2017-01. The amendments in ASU 2017-01 provide a screen to assist entities with evaluating whether transactions should be accounted for as acquisitions or disposals of assets or businesses. Under ASU 2017-01, an entity first determines whether substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets. If this threshold is met, the set is not a business. If it’s not met, the entity then evaluates whether the set meets the requirement that a business include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs. ASU

2017-01 also narrows the definition of outputs by more closely aligning it with how outputs are described in ASC 606. ASU 2017-01 is effective for annual reporting periods, including interim periods within those periods, beginning after December 15, 2017, with early adoption permitted. The Company prospectively adopted ASU 2017-01 for the fourth quarter of 2016. The standard will result in the Company accounting for more transactions as asset acquisitions as opposed to business combination.

In January 2017, the FASB issued Accounting Standards Update 2017-04, “*Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*,” or ASU 2017-04. The amendments in ASU 2017-04 simplify 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. Instead, under the amendments in ASU 2017-04, an entity performs its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and recognizes an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value, but not more than the total amount of goodwill allocated to the reporting unit. ASU 2017-04 is effective for annual reporting periods, including interim periods within those periods, beginning after December 15, 2019, with early adoption permitted. The Company is currently evaluation the potential impact that this standard may have on its Consolidated Financial Statements.

3. ACQUISITIONS AND DISPOSITIONS

International Telecom

One Communications (formerly KeyTech Limited)

On May 3, 2016, the Company completed our acquisition of a controlling interest in KeyTech Limited (“KeyTech”), a publicly held Bermuda company listed on the Bermuda Stock Exchange (“BSX”) that provides broadband and video services and other telecommunications services to residential and enterprise customers under the “Logic” name in Bermuda and the Cayman Islands. Subsequent to the completion of our acquisition of KeyTech, KeyTech changed its name, and the “Logic” name, to One Communications Ltd (“One Communications”). Prior to our acquisition, One Communications also owned a minority interest of approximately 43% in the Company’s consolidated subsidiary, Bermuda Digital Communications Ltd. (“BDC”), which provides wireless services in Bermuda under the “CellOne” name. As part of the transaction, the Company contributed its ownership interest of approximately 43% in BDC and approximately \$42 million in cash in exchange for a 51% ownership interest in One Communications. As part of the transaction, BDC was merged with and into a company within the One Communications group and the approximate 15% interest in BDC held, in the aggregate, by BDC’s minority shareholders was converted into the right to receive common shares in One Communications. Following the transaction, BDC became wholly owned by One Communications, and One Communications continues to be listed on the BSX. A portion of the cash proceeds that One Communications received upon closing was used to fund a one-time special dividend to One Communications’ existing shareholders and to retire One Communications subordinated debt. On May 3, 2016, the Company began consolidating the results of One Communications within our financial statements in our International Telecom segment.

The One Communications Acquisition was accounted for as a business combination of a controlling interest in One Communications in accordance with ASC 805, *Business Combinations*, and the acquisition of an incremental ownership interest in BDC in accordance with ASC 810, *Consolidation*. The total purchase consideration of \$41.6

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million of cash was allocated to the assets acquired and liabilities assumed at their estimated fair values as of the date of the acquisition.

Consideration Transferred	
Cash consideration - KeyTech	\$ 34,518
Cash consideration - BDC	7,045
Total consideration transferred	<u>41,563</u>
Non-controlling interests - KeyTech	32,909
Total value to allocate	<u>\$ 74,472</u>
Value to allocate KeyTech	67,427
Value to allocate - BDC	7,045
Purchase price allocation KeyTech:	
Cash	8,185
Accounts receivable	6,451
Other current assets	3,241
Property, plant and equipment	100,892
Identifiable intangible assets	10,590
Other long term assets	3,464
Accounts payable and accrued liabilities	(16,051)
Advance payments and deposits	(6,683)
Current debt	(6,429)
Long term debt	(28,929)
Net assets acquired	<u>74,731</u>
Gain on KeyTech bargain purchase	<u>\$ 7,304</u>
Purchase price allocation BDC:	
Carrying value of BDC non-controlling interest acquired	<u>2,940</u>
Excess of purchase price paid over carrying value of non-controlling interest acquired	<u>\$ 4,105</u>

The acquired property, plant and equipment is comprised of telecommunication equipment located in Bermuda and the Cayman Islands. The property, plant and equipment was valued using the income and cost approaches. Cash flows were discounted at approximately 15% rate to determine fair value under the income approach. The property, plant and equipment have useful lives ranging from 3 to 18 years and the customer relationships acquired have useful lives ranging from 9 to 12 years. The fair value of the non-controlling interest was determined using the income approach and a discount rate of approximately 15%. The acquired receivables consist of trade receivables incurred in the ordinary course of business. The Company has collected the full amount of the receivables.

The purchase price and resulting bargain purchase gain are the result of the market conditions and competitive environment in which One Communications operates along with the Company's strategic position and resources in those same markets. Both companies realized that their combined resources would accelerate the transformation of both companies to better serve customers in these markets. The bargain purchase gain is included in operating income in the accompanying income statement for the year ended December 31, 2016.

The Company's income statement for the year ended December 31, 2016 includes \$55.5 million of revenue and \$2.8 million of income before taxes attributable to the One Communication Acquisition. The Company incurred \$4.3

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million of transaction related charges pertaining to legal, accounting and consulting services associated with the transaction, of which \$3.4 million were incurred during the year ended December 31, 2016.

Innovative

On July 1, 2016, the Company completed its acquisition of all of the membership interests of Caribbean Asset Holdings LLC (“CAH”), the holding company for the Innovative group of companies operating video services, Internet, wireless and landline services in the U.S. Virgin Islands, British Virgin Islands and St. Maarten (“Innovative”), from the National Rural Utilities Cooperative Finance Corporation (“CFC”). The Company acquired the Innovative operations for a contractual purchase price of \$145.0 million, reduced by purchase price adjustments of \$5.3 million (the “Innovative Transaction”). In connection with the transaction, the Company financed \$60.0 million of the purchase price with a loan from an affiliate of CFC, the Rural Telephone Finance Cooperative (“RTFC”) on the terms and conditions of a Loan Agreement by and among RTFC, CAH and ATN VI Holdings, LLC, the parent entity of CAH and a wholly-owned subsidiary of the Company. The Company funded \$51.9 million of the purchase price in cash, subsequently paid \$22.5 million to fund Innovative’s pension in the fourth quarter of 2016, and recorded \$5.3 million as restricted cash to satisfy Innovative’s other postretirement benefit plans. Following the purchase, the Company’s current operations in the U.S. Virgin Islands under the “Choice” name will be combined with Innovative to deliver residential and business subscribers a full range of telecommunications and media services. On July 1, 2016, the Company began consolidating the results of Innovative within its financial statements in its International Telecom segment.

The Innovative Transaction was accounted as a business combination in accordance with ASC 805. The consideration transferred of \$111.9 million, and used for the purchase price allocation, differed from the contractual purchase price of \$145.0 million, due to certain GAAP purchase price adjustments including a reduction of \$5.3 million related to working capital adjustments and the Company agreeing to subsequently settle assumed pension and other postretirement benefit liabilities of \$27.8 million. As of December 31 2016, the Company transferred consideration of \$111.9 million which was allocated to the assets acquired and liabilities assumed at their estimated fair values as of the date of the acquisition. The final purchase price represents a reduction of \$0.4 million from the preliminary purchase price. The decrease was due to settlement of working capital adjustments. The table below represents the allocation of the consideration transferred to the net assets of Innovative based on their acquisition date fair values:

Consideration Transferred	\$ 111,860
Non-controlling interests	221
Total value to allocate	<u>112,081</u>
Purchase price allocation:	
Cash	4,229
Accounts receivable	6,553
Materials & supplies	6,533
Other current assets	1,927
Property, plant and equipment	108,284
Telecommunication licenses	7,623
Goodwill	20,586
Intangible assets	7,800
Other Assets	4,394
Accounts payable and accrued liabilities	(15,971)
Advance payments and deposits	(7,793)
Deferred tax liability	(2,935)
Pension and other postretirement benefit liabilities	(29,149)
Net assets acquired	<u>\$ 112,081</u>

The acquired property, plant and equipment is comprised of telecommunication equipment located in the U.S Virgin Islands, British Virgin Islands and St. Maarten. The property, plant and equipment was valued using the income and cost approaches. Cash flows were discounted between 14% and 25% based on the risk associated with the cash flows to determine fair value under the income approach. The property, plant and equipment have useful lives ranging from 1 to 18 years and the customer relationships acquired have useful lives ranging from 7 to 13 years. The fair value of the non-controlling interest was determined using the income approach with discount rates ranging from 15% to 25%. The acquired receivables consist of trade receivables incurred in the ordinary course of business. The Company has collected the full amount of the receivables. The Company recorded a liability equal to the funded status of the plans in its purchase price allocation. Discount rates between 3.6% and 3.9% were used to determine the benefit obligation.

The goodwill generated from the Innovative Transaction is primarily related to value placed on the acquired employee workforces, service offerings, and capabilities of the acquired businesses as well as expected synergies from future combined operations. The goodwill is not deductible for income tax purposes.

The Company acquired Innovative's pension and other postretirement benefit plans as part of the transaction. The plans cover employees located in the U.S. Virgin Islands and consist of noncontributory defined benefit pension plans and noncontributory defined medical, dental, vision and life benefit plans. As noted above, the contractual purchase price included an adjustment related to the funded status of Innovative's pension and other postretirement benefit plans. As contemplated by the transaction, the Company contributed approximately \$22.5 million during the fourth quarter of 2016 to Innovative's pension plans. This payment is recorded as a cash outflow from operations in the statement of cash flows. At December 31, 2016, the Company held \$5.1 million of restricted cash equal to the unfunded status of the other postretirement benefit plans. The cash is restricted due to the Company's intent to use the cash to satisfy future postretirement benefit obligations and the specific nature of the commitment

The Company's income statement for year ended December 31, 2016 includes \$53.0 million of revenue and \$1.5 million of income before taxes attributable to the Innovative Transaction. The Company incurred \$4.1 million of transaction related charges pertaining to legal, accounting and consulting services associated with the transaction, of which \$2.2 million were incurred during the year ended December 31, 2016.

Disposition

In September 2016, the Company entered into an agreement to sell the Innovative cable operations located in St. Maarten. The transaction was complete on January 3, 2017 and will be recorded in the Company's 2017 results. The Company does not expect to recognize a gain or loss on the transaction. Since the disposition does not relate to a strategic shift in our operations, the subsidiary's historical results and financial position are presented within continuing operations.

During March 2015, the Company sold certain assets and liabilities of our Turks and Caicos business in its International Telecom segment. As a result, we recorded a net loss of approximately \$19.9 million, which is included in other income (expense) on its statement of operations, arising from the deconsolidation of non-controlling interests of \$20.0 million partially offset by a gain of \$0.1 million arising from an excess of the sales proceeds over the carrying value of net assets disposed of. Since the disposition does not relate to a strategic shift in our operations, the subsidiary's historical results and financial position are presented within continuing operations.

Deconsolidation of Subsidiary

On December 15, 2016, the Company transferred control of its subsidiary in Aruba to another stockholder in a nonreciprocal transfer. Subsequent to that date, it no longer consolidated the results of the operations of the Aruba business which generated \$2.8 million in revenues during the year ended December 31, 2016. The Company did not recognize a gain or loss on the transaction.

Pro forma Results

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The following table reflects unaudited pro forma operating results of the Company for the year ended December 31, 2016 and December 31, 2015 assuming that the One Communications and Innovative Transactions occurred at the beginning of each period presented. The pro forma amounts adjust One Communications' and Innovative's results to reflect the depreciation and amortization that would have been recorded assuming the fair value adjustments to property, plant and equipment and intangible assets had been applied from January 1, 2015. Also, the pro forma results were adjusted to reflect changes to the acquired entities' financial structure related to the transaction. One Communications' results reflect the retirement of \$24.7 million of debt. Innovative's results reflect the retirement of \$185.8 million of debt and the addition of \$60 million of purchase price debt. Finally, ATN's results were adjusted to reflect ATN's incremental ownership in BDC. The pro forma results do not include the Company's US Telecom or Renewable Energy acquisitions because they are immaterial both individually and in the aggregate to the Company's historical results.

The pro forma results for the year ended December 31, 2016 include \$5.4 million of impairment charges, \$4.3 million recorded by One Communications and \$1.1 million recorded by Innovative. The pro forma results for the year ended December 31, 2015 include \$168.7 million of impairment charges, \$85.6 million recorded by One Communications and \$83.1 million recorded by Innovative. Both the 2016 and 2015 impairment charges were recorded prior to ATN's acquisition of the entities. Amounts are presented in thousands, except per share data:

(unaudited)	Year ended December 31,			
	2016		2015	
	As Reported	Pro-Forma	As Reported	Pro-Forma
Revenue	\$ 457,003	\$ 535,628	\$ 355,369	\$ 546,589
Net income (loss) attributable to ATN International, Inc. Stockholders	12,101	14,660	16,940	(97,102)
Earnings per share:				
Basic	0.75	0.91	1.06	(6.06)
Diluted	0.75	0.90	1.05	(6.02)

The unaudited pro forma data is presented for illustrative purposes only and is not necessarily indicative of the operating results that would have occurred if the acquisitions had been consummated on these dates or of future operating results of the combined company following this transaction.

U.S. Telecom

In July 2016, the Company acquired certain telecommunications fixed assets and the associated operations located in the western United States. The acquisition qualified as a business combination for accounting purposes. The Company transferred \$9.1 million of cash consideration in the acquisition. The consideration transferred was allocated to \$10.2 million of acquired fixed assets, \$3.5 million of deferred tax liability, and \$0.7 million to other net liabilities, resulting in goodwill of \$3.1 million. The deferred tax liability and goodwill increased by \$2.7 million from the preliminary purchase price allocation due to a measurement period adjustment. The adjustment had no impact on the Company's income. Results of operations for the business are included in the U.S. Telecom segment and are not material to the Company's historical results of operations.

Pending Disposition

During June 2016, as a result of recent industry consolidation activities and a review of strategic alternatives for the Company's U.S. Wireline business in the Northeast, the Company identified factors indicating the carrying amount of certain assets may not be recoverable. More specifically, the factors included the competitive environment, recent industry consolidation, and the Company's view of future opportunities in the market which began to evolve in the second quarter of 2016. On August 4, 2016, the Company entered into a stock purchase agreement to sell the majority of its U.S. Wireline business. The transaction is subject to customary closing conditions.

As a result of this transaction and the recent developments in the market, the Company determined it was appropriate to assess the reporting unit's assets for impairment. The reporting unit holds three types of assets for

purposes of impairment testing: i) other assets such as accounts receivable and inventory, ii) long lived assets such as property plant and equipment, and iii) goodwill. Management first assessed the other assets for impairment and determined no impairment was appropriate. Second, the property, plant and equipment was assessed for impairment. The assessment compared the undiscounted cash flows from the use and eventual disposition of the asset group to its carrying amount and determined the carrying amount was not recoverable. The asset group represents the lowest level of assets with identifiable independent cash flows. The impairment loss of \$3.6 million was equal to the amount by which the carrying amount exceeded the fair value. Third, management assessed goodwill for impairment following the two step impairment test. The carrying amount of the reporting unit exceeded its fair value, after considering the \$3.6 million asset impairment. The second step of the goodwill impairment test compares the implied fair value of the reporting unit's goodwill with the carrying amount of goodwill to measure the amount of impairment loss. The impairment loss equaled \$7.5 million. The Company utilized the income approach, with Level 3 valuation inputs, which considered both the purchase agreement and cash flows discounted at a rate of 14% in its fair value calculations. In total, the Company recorded an impairment charge of \$11.1 million. The impairment charge is included in income from operations for the year ended December 31, 2016.

Renewable Energy

Vibrant Energy

On April 7, 2016, the Company completed its acquisition of a solar power development portfolio in India from Armstrong Energy Global Limited ("Armstrong"), a well-known developer, builder, and owner of solar farms (the "Vibrant Energy Acquisition"). The business operates under the name Vibrant Energy. The Company also retained several Armstrong employees in the UK and India who are employed by the Company to oversee the development, construction and operation of the India solar projects. The projects to be developed initially are located in the states of Andhra Pradesh and Telangana and are based on a commercial and industrial business model, similar to the Company's existing renewable energy operations in the United States. As of April 7, 2016, the Company began consolidating the results of Vibrant Energy in its financial statements within its Renewable Energy segment.

The Vibrant Energy Acquisition was accounted for as a business combination in accordance with ASC 805. The total purchase consideration of \$6.2 million cash was allocated to the assets acquired and liabilities assumed at their estimated fair values as of the date of the acquisition. The table below represents the allocation of the consideration transferred to the net assets of Vibrant Energy based on their acquisition date fair values (in thousands):

Consideration Transferred	\$ 6,193
Purchase price allocation:	
Cash	\$ 136
Prepayments and other assets	636
Property, plant and equipment	7,321
Goodwill	3,279
Accounts payable and accrued liabilities	(5,179)
Net assets acquired	<u>\$ 6,193</u>

The consideration transferred includes \$3.5 million paid and \$2.7 million payable at future dates, which is contingent upon the passage of time and achievement of initial production milestones which are considered probable. The acquired property, plant and equipment is comprised of solar equipment and the accounts payable and accrued liabilities consists mainly of amounts payable for certain asset purchases. The fair value of the property, plant, and equipment was based on recent acquisition costs for the assets, given their recent purchase dates from third parties. The goodwill is not deductible for income tax purposes and primarily relates to the assembled workforce of the business acquired.

For the year ended December 31, 2016, the Vibrant Energy Acquisition accounted for \$0.4 million of the Company's revenue. The Company incurred \$11.4 million of transaction related charges pertaining to legal, accounting and consulting services associated with the transaction, of which \$10.1 million were incurred during the year ended December 31, 2016. Results of operations for the business are not material to the Company's historical results of operations.

4. DISCONTINUED OPERATIONS—SALE OF U.S. RETAIL WIRELESS BUSINESS

On September 20, 2013, the Federal Communications Commission announced its approval of the previously announced proposed sale of the Company's U.S. retail wireless business operated under the Alltel name to AT&T Mobility LLC for approximately \$780.0 million in cash plus \$16.8 million in working capital. The Company previously reported the operations of this business within its U.S. Wireless segment.

During 2014 and 2015, the Company recognized an additional \$1.1 million of gain relating to changes in certain estimates.

5. ACCOUNTS RECEIVABLE:

As of December 31, 2016 and 2015, accounts receivable consist of the following (in thousands):

	<u>2016</u>	<u>2015</u>
Retail	\$ 36,026	\$ 23,805
Wholesale	22,502	24,341
Other	40	168
Accounts receivable	58,568	48,314
Less: allowance for doubtful accounts	(13,149)	(9,294)
Total accounts receivable, net	<u>\$ 45,419</u>	<u>\$ 39,020</u>

6. FIXED ASSETS:

As of December 31, 2016 and 2015, property, plant and equipment consisted of the following (in thousands):

	Useful Life (in Years)	2016	2015
Telecommunications equipment and towers	5 -15	\$ 802,415	\$ 553,237
Solar assets	20-23	115,932	111,446
Office and computer equipment	3 -10	44,147	54,665
Buildings	15-39	43,609	18,540
Transportation vehicles	3 -10	12,043	8,882
Leasehold improvements	Shorter of useful life or lease term	325	11,592
Land	—	10,242	1,198
Furniture and fixtures	5 -10	7,657	6,584
Total property, plant and equipment		1,036,370	766,144
Construction in progress		101,992	41,103
Total property, plant and equipment		1,138,362	807,247
Less: Accumulated depreciation		(490,650)	(433,744)
Net fixed assets		\$ 647,712	373,503

Depreciation and amortization of fixed assets, using the straight-line method over the assets' estimated useful life, for the years ended December 31, 2016, 2015 and 2014 was \$73.3 million, \$55.9 million and \$50.3 million, respectively. Included within telecommunication equipment and towers are assets related to Indefeasible Rights of Use under capital lease with a cost of \$13.8 million and \$2.7 million and net book value of and \$12.4 million and \$1.8 million, as of December 31, 2016 and 2015, respectively. Remaining amounts due under the IRUs are \$1.2 million and \$0.0 million as of December 31, 2016 and 2015, respectively.

During the year ended December 31, 2015, we sold certain network assets and telecommunications licenses in our U.S. Telecom segment and recognized a gain on such disposition of \$2.8 million.

For the years ended December 31, 2016, 2015 and 2014, amounts of capital expenditures were offset by grants of \$2.3 million, \$2.6 million and \$2.3 million, respectively.

7. GOODWILL AND INTANGIBLE ASSETS

Goodwill

The Company tests goodwill for impairment on an annual basis, which has been determined to be as of December 31 of each fiscal year. The Company also tests goodwill between annual tests if an event occurs or circumstances change that indicate that the fair value of a reporting unit may be below its carrying value.

The Company employs both qualitative and quantitative tests of its goodwill. The company tests goodwill at the reporting unit which is one level below its operating segments. During 2016, the Company performed a qualitative assessment for some of the Company's reporting units and determined there were no indicators of impairment. For the other reporting units in 2016, goodwill was evaluated using a quantitative model. During 2015, the Company performed a qualitative assessment on goodwill to determine whether a quantitative assessment was necessary and determined there were no indicators of potential impairment. In 2014, the Company performed a qualitative assessment for some of the Company's reporting units and determined there were no indicators of impairment. For the other reporting units in 2014, goodwill was evaluated using a quantitative model. The quantitative test for goodwill impairment is determined using a two-step process. The first step involves a comparison of the estimated fair value of a reporting unit to its carrying amount, including goodwill. In performing the first step, the Company determines the fair value of a reporting unit using

a discounted cash flow (“DCF”) analysis. Determining fair value requires the exercise of significant judgment, including judgments about appropriate discount rates, perpetual growth rates, and the amount and timing of expected future cash flows. Discount rates are based on a weighted-average cost of capital (“WACC”), which represents the average rate a business must pay its providers of debt and equity. The cash flows employed in the DCF analysis were derived from internal earnings and forecasts and external market forecasts. If the estimated fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is not impaired and the second step of the impairment test is not necessary. If the carrying amount of a reporting unit exceeds its estimated fair value, then the second step of the goodwill impairment test must be performed.

The second step of our quantitative test for goodwill impairment compares the implied fair value of the reporting unit’s goodwill with its carrying amount of goodwill to measure the amount of impairment loss, if any. The implied fair value of goodwill is determined in the same manner as the amount of goodwill recognized in a business combination, whereby the estimated fair value of the reporting unit is allocated to all of the assets and liabilities of that unit (including any unrecognized intangible assets) as if the reporting unit had been acquired in a business combination and the fair value of the reporting unit was the purchase price paid. If the carrying amount of the reporting unit’s goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to that excess.

During June 2016, as a result of recent industry consolidation activities and a review of strategic alternatives for the Company’s U.S. Wireline business in the Northeast, the Company identified factors indicating the carrying amount of certain assets may not be recoverable. More specifically, the factors included the competitive environment, recent industry consolidation, and the Company’s view of future opportunities in the market which began to evolve in the second quarter of 2016. On August 4, 2016, the Company entered into a stock purchase agreement to sell the majority of its U.S. Wireline business. The transaction is subject to customary closing conditions.

As a result of this transaction and the recent developments in the market, the Company determined it was appropriate to assess the reporting unit’s assets for impairment. The reporting unit holds three types of assets for purposes of impairment testing: i) other assets such as accounts receivable and inventory, ii) long lived assets such as property plant and equipment, and iii) goodwill. Management first assessed the other assets for impairment and determined no impairment was appropriate. Second, the property, plant and equipment was assessed for impairment. The impairment test compared the undiscounted cash flows from the use and eventual disposition of the asset group to its carrying amount and determined the carrying amount was not recoverable. The impairment loss of \$3.6 million was equal to the amount by which the carrying amount exceeded the fair value. Third management assessed goodwill for impairment following the two step impairment test. The carrying amount of the reporting unit exceeded its fair value, after considering the \$3.6 million asset impairment. The second step of the goodwill impairment test compares the implied fair value of the reporting unit’s goodwill with the carrying amount of goodwill to measure the amount of impairment loss. The impairment loss equaled \$7.5 million. The Company utilized the income approach, with Level 3 valuation inputs, which considered both the purchase agreement and cash flows discounted at a rate of 14% in its fair value calculations. In total, the Company recorded an impairment charge of \$11.1 million. The impairment charge is included in income from operations for the year ended December 31, 2016.

The Company performed its annual impairment assessments of its goodwill as of December 31, 2016 and determined that no impairment charges were required, as the fair value of each reporting unit exceeded its book value. Accordingly, there were additional changes in the carrying amounts of goodwill during that year.

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The table below disclosed goodwill recorded in each of the Company's segments and accumulated impairment changes through during 2016. There were no changes to the Company's goodwill balances from January 1, 2014 through December 31, 2015 (in thousands):

	U.S. <u>Telecom</u>	International <u>Telecom</u>	Renewable <u>Energy</u>	<u>Consolidated</u>
Balance at December 31, 2015	\$ 39,639	\$ 5,438	\$ —	\$ 45,077
Acquisitions	3,121	20,586	3,279	26,986
Deconsolidation of Subsidiary	—	(1,698)	—	(1,698)
Impairment	(7,491)	—	—	(7,491)
Balance at December 31, 2016				
Gross	42,759	24,326	3,279	70,364
Accumulated Impairment	(7,491)	—	—	(7,491)
Net	<u>\$ 35,268</u>	<u>\$ 24,326</u>	<u>\$ 3,279</u>	<u>\$ 62,873</u>

Telecommunications Licenses

The Company tests those telecommunications licenses that are indefinite lived for impairment on an annual basis, which has been determined to be as of December 31 of each fiscal year. The Company also tests telecommunication licenses that are indefinite lived between annual tests if an event occurs or circumstances change that indicate that the fair value of a reporting unit may be below its carrying value.

The Company performed quantitative and qualitative assessments for its annual impairment assessment of substantially all of its indefinite lived telecommunications licenses as of December 31, 2016 and 2015 and determined that there were no indications of potential impairments.

The changes in the carrying amount of the Company's telecommunications licenses, by operating segment, for the three years ended December 31, 2016 were as follows (in thousands):

	U.S. <u>Telecom</u>	Int'l <u>Telecom</u>	<u>Consolidated</u>
Balance at December 31, 2014	\$ 24,944	\$ 19,146	\$ 44,090
Amortization	—	(622)	(622)
Balance at December 31, 2015	\$ 24,944	\$ 18,524	\$ 43,468
Deconsolidation of subsidiary	—	(2,178)	(2,178)
Acquired licenses	—	7,623	7,623
Amortization	—	(622)	(622)
Balance at December 31, 2016	<u>\$ 24,944</u>	<u>\$ 23,347</u>	<u>\$ 48,291</u>

The licenses acquired during 2016 were acquired in the Innovative Transaction and are expected to be available for use into perpetuity. A subsidiary in the Company's International Telecom segment was amortizing one of its telecommunications licenses until the date of its deconsolidation in December 2016.

Customer Relationships

The customer relationships, all of which are included in the International Telecom segment, are being amortized on an accelerated basis, over the expected period during which their economic benefits are to be realized. The Company

recorded \$2.0 million, \$0.4 million, and \$0.3 million of amortization related to customer relationships during year ended December 31, 2016, 2015, and 2014, respectfully.

Future amortization of customer relationships, in our International Telecom segment, is as follows (in thousands):

	Future Amortization
2017	\$ 3,281
2018	2,411
2019	1,897
2020	1,528
2021	1,300
Thereafter	4,612
Total	<u>\$ 15,029</u>

Other Intangible Assets

The Company held other intangibles of \$4.9 million consisting of \$3.0 million of franchise rights and \$1.9 million of tradenames in its International Telecom segment. These assets are recorded in other assets on the Company's balance sheet. In 2016, we assessed the value of a tradename and concluded that its book value exceeded its fair value. As a result, we recorded a non-cash impairment charge of \$0.3 million during the year ended December 31, 2016

8. LONG-TERM DEBT

On December 19, 2014, the Company amended and restated its then existing credit facility with CoBank, ACB and a syndicate of other lenders to provide for a \$225 million revolving credit facility (the "Credit Facility") that includes (i) up to \$10 million under the Credit Facility for standby or trade letters of credit, (ii) up to \$25 million under the Credit Facility for letters of credit that are necessary or desirable to qualify for disbursements from the FCC's mobility fund and (iii) up to \$10 million under a swingline sub-facility.

Amounts the Company may borrow under the Credit Facility bear interest at a rate equal to, at its option, either (i) the London Interbank

Offered Rate (LIBOR) plus an applicable margin ranging between 1.50% to 1.75% or (ii) a base rate plus an applicable margin ranging from 0.50% to 0.75%. Swingline loans will bear interest at the base rate plus the applicable margin for base rate loans. The base rate is equal to the higher of (i) 1.00% plus the higher of (x) the one-week LIBOR and (y) the one-month LIBOR ; (ii) the federal funds effective rate (as defined in the Credit Facility) plus 0.50% per annum; and (iii) the prime rate (as defined in the Credit Facility). The applicable margin is determined based on the ratio (as further defined in the Credit Facility) of the Company's indebtedness to EBITDA. Under the terms of the Credit Facility, the Company must also pay a fee ranging from 0.175% to 0.250% of the average daily unused portion of the Credit Facility over each calendar quarter.

On January 11, 2016, the Company amended the Credit Facility (the "Amendment") to provide for lender consent to, among other actions, (i) the contribution by the Company of all of its equity interests in ATN Bermuda Holdings, Ltd. to ATN Overseas Holdings, Ltd. in connection with the One Communications Transaction, a one-time, non-pro rata cash distribution by One Communications in an aggregate amount not to exceed \$13.0 million to certain of One Communications' shareholders; and (ii) the incurrence by certain subsidiaries of the Company of secured debt in an aggregate principal amount not to exceed \$60.0 million in connection with the Company's option to finance a portion of the Innovative Transaction. The Amendment increases the amount the Company is permitted to invest in "unrestricted" subsidiaries of the Company, which are not subject to the covenants of the Credit Facility , from \$275.0 million to \$400.0 million (as such increased amount shall be reduced from time to time by the aggregate amount of certain dividend payments to the Company's stockholders). The Amendment also provides for the incurrence by the Company of incremental term loan facilities, when combined with increases to revolving loan commitments under the Credit Facility ,

in an aggregate amount not to exceed \$200.0 million, which facilities shall be subject to certain conditions, including pro forma compliance with the total net leverage ratio financial covenant under the Credit Facility .

The Credit Facility contains customary representations, warranties and covenants, including a financial covenant that imposes a maximum ratio of indebtedness to EBITDA as well as covenants by the Company limiting additional indebtedness, liens, guaranties, mergers and consolidations, substantial asset sales, investments and loans, sale and leasebacks, transactions with affiliates and fundamental changes. In addition, the Credit Facility contains a financial covenant by us that imposes a maximum ratio of indebtedness to EBITDA. As of December 31, 2016, the Company was in compliance with all of the financial covenants of the Credit Facility. In addition, the Credit Facility restricts our Total Net Leverage (maximum ratio of indebtedness minus unrestricted cash to EBITDA).

As of December 31, 2016, the Company had no borrowings under the Credit Facility and approximately \$10.6 million of outstanding letters of credit.

Ahana Debt

On December 24, 2014, in connection with the Ahana Acquisition, the Company assumed \$38.9 million in long-term debt (the “Original Ahana Debt”). The Original Ahana Debt included multiple loan agreements with banks that bore interest at rates between 4.5% and 6.0%, matured at various times between 2018 and 2023 and were secured by certain solar facilities. Repayment of the Original Ahana Debt was being made in cash on a monthly basis until maturity.

The Original Ahana Debt also included a loan from Public Service Electric & Gas (the “PSE&G Loan”). The PSE&G Loan bears interest at 11.3%, matures in 2027, and is secured by certain solar facilities. Repayment of the Original Ahana Debt with PSE&G can be made in either cash or solar renewable energy credits (“SRECs”), at the Company’s discretion, with the value of the SRECs being fixed at the time of the loan’s closing. Historically, the Company has made all repayments of the PSE&G Loan using SRECs.

On December 19, 2016, Ahana’s wholly owned subsidiary, Ahana Operations, issued \$20.6 million in aggregate principal amount of 4.427% senior notes due 2029 (the “Series A Notes”) and \$45.2 million in aggregate principal amount of 5.327% senior notes due 2031 (the “Series B Notes”). Interest and principal are payable semi-annually beginning on March 31, 2017, until the respective maturity dates of March 31, 2029 (for the Series A Notes) and September 30, 2031 (for the Series B Notes). Cash flows generated by the solar projects that secure the Series A Notes and Series B Notes are only available for payment of such debt and are not available to pay other obligations or the claims of the creditors of Ahana or its subsidiaries. However, subject to certain restrictions, Ahana Operations holds the right to the excess cash flows not needed to pay the Series A Notes and Series B Notes and other obligations arising out of the securitizations. The Series A and Series B Notes are secured by certain assets of Ahana and are guaranteed by certain of its subsidiaries.

A portion of the proceeds from the issuances of the Series A Notes and Series B Notes were used to repay the Original Ahana Debt in full except for the PSE &G Loan which remained outstanding after the refinancing.

As of December 31, 2016, \$2.5 million of the Original Ahana Debt and \$65.8 million of the Series A Notes and Series B Notes remained outstanding.

One Communications Debt

In connection with the One Communications Transaction on May 3, 2016, the Company assumed \$35.4 million in debt (the “One Communications Debt”) in the form of a loan from HSBC Bank Bermuda Limited. The One Communications Debt matures in 2021, bears interest of the three-month LIBOR plus a margin of 3.25%, and repayment is made quarterly until maturity. The debt is secured by the property and assets of certain One Communications subsidiaries.

As of December 31, 2016, \$32.1 million of the One Communications Debt remained outstanding.

Innovative Debt

The Company funded the Innovative Acquisition with \$51.0 million in cash and financed the remaining \$60.0 million of the purchase price with a loan from an affiliate of the seller, the Rural Telephone Finance Cooperative. The Company paid a fee of \$0.9 million to lock the interest rate at 4% per annum over the term of the debt. The fee was recorded as a reduction to the debt carrying amount and will be amortized over the life of the loan. Interest is paid quarterly and principal repayment is not required until maturity on July 1, 2026. The debt is secured by certain assets of the Company's Innovative subsidiary.

As of December 31, 2016, \$60.0 million of the Innovative Debt remained outstanding and \$0.8 million of the rate lock fee were unamortized.

9. GOVERNMENT GRANTS

The Company has received funding from the U.S. Government and its agencies under Stimulus and Universal Services Fund programs. These are generally designed to fund telecommunications infrastructure expansion into rural or underserved areas of the United States. The fund programs are evaluated to determine if they represent funding related to capital expenditures (capital grants) or operating activities (income grants).

Phase I Mobility Fund Grants

As part of the Federal Communications Commission's ("FCC") reform of its Universal Service Fund ("USF") program, which previously provided support to carriers seeking to offer telecommunications services in high-cost areas and to low-income households, the FCC created the Phase I Mobility Fund ("Phase I Mobility Fund"), a one-time award meant to support wireless coverage in underserved geographic areas in the United States. In August 2013 and October 2014, the Company received FCC final approvals for \$21.7 million and \$2.4 million, respectively, of Phase I Mobility Fund support to its wholesale wireless business (the "Mobility Funds"), to expand voice and broadband networks in certain geographic areas in order to offer either 3G or 4G coverage. As part of the receipt of the Mobility Funds, the Company committed to comply with certain additional FCC construction and other requirements. A portion of these funds will be used to offset network capital costs and a portion is used to offset the costs of supporting the networks for a period of five years from the award date. In connection with the Company's application for the Mobility Funds, the Company has issued approximately \$10.6 million in letters of credit to the Universal Service Administrative Company ("USAC") to secure these obligations. If the Company fails to comply with any of the terms and conditions upon which the Mobility Funds were granted, or if the Company loses eligibility for the Mobility Funds, USAC will be entitled to draw the entire amount of the letter of credit applicable to the affected project plus penalties and may disqualify the Company from the receipt of additional Mobility Fund support.

The Mobility Funds projects and their results are included within the Company's U.S. Telecom segment. As of December 31 2016, the Company had received approximately \$ 19.7 million in Mobility Funds. Of these funds, \$ 5.8 million was recorded as an offset to the cost of the property, plant, and equipment associated with these projects and, consequentially, a reduction of future depreciation expense. The remaining \$13.9 million received offsets operating expenses, of which \$4.6 million has been recorded to date, \$ 3.4 million is recorded within long term liabilities, and the remaining \$5.8 million is recorded within current liabilities in the Company's consolidated balance sheet as of December 31, 2016. The balance sheet presentation is based on the timing of the expected usage of the funds which will reduce future operations expenses

10. EQUITY

Common Stock

The Company has paid quarterly dividends on its common stock since January 1999.

Treasury Stock

In September 2004, our Board of Directors approved a \$5.0 million stock buyback plan (the “2004 Repurchase Plan”). Through September 19, 2016, we repurchased \$4.1 million of our common stock, under the 2004 Repurchase Plan.

On September 19, 2016, our Board of Directors authorized the repurchase of up to \$50.0 million of our common stock, from time to time, on the open market or in privately negotiated transactions (the “2016 Repurchase Plan”). The 2016 Repurchase Plan replaces the 2004 Repurchase Plan. As of December 31, 2016, we have \$49.9 million available to be repurchased under the 2016 Repurchase Plan.

During the years ended December 31, 2016, 2015 and 2014, the Company repurchased the following shares under the 2004 Repurchase Plan and the 2016 Repurchase Plan:

Year ended December 31,	Shares Repurchased	Aggregate	
		Cost (in thousands)	Average Repurchase Price
2016	32,407	\$ 2,195	\$ 64.72
2015	—	—	—
2014	—	—	—

During the years ended December 31, 2016, 2015 and 2014, the Company repurchased the following shares from employees to satisfy tax withholding and stock options exercise obligations incurred in connection with the vesting of restricted stock awards and the exercise of stock options:

Year ended December 31,	Shares Repurchased	Aggregate	
		Cost (in thousands)	Average Repurchase Price
2016	38,279	\$ 2,775	\$ 72.50
2015	37,567	2,705	72.01
2014	34,293	2,160	63.01

Stock-Based Compensation

The Company has 2,000,000 shares reserved for the grant of stock options, restricted stock, restricted stock units, stock equivalents and awards of shares of common stock that are not subject to restrictions or forfeiture.

Stock Options

Stock options have a term of ten years and vest annually and ratably over a period of four years.

The following table summarizes stock option activity for the years ended December 31, 2016 and 2015:

Year Ended December 31, 2016				
	Number of Options	Weighted Avg. Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at January 1, 2016	268,875	\$ 38.64		
Granted	—	—		
Exercised	(43,053)	32.70		
Outstanding at December 31, 2016	225,822	39.77	3.9	\$ 9,114,963
Vested and expected to vest at December 31, 2016	225,554	39.73	3.9	\$ 9,112,630
Exercisable at December 31, 2016	222,072	39.23	3.8	\$ 9,082,338

Year Ended December 31, 2015				
	Number of Options	Weighted Avg. Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at January 1, 2015	351,253	\$ 36.55		
Granted	5,000	71.43		
Exercised	(87,378)	32.14		
Outstanding at December 31, 2015	268,875	38.64	4.7	\$ 10,646,006
Vested and expected to vest at December 31, 2015	268,011	38.53	4.7	\$ 10,640,134
Exercisable at December 31, 2015	248,875	38.05	4.5	\$ 9,998,956

The unvested options as of December 31, 2016 represent \$0.1 million in unamortized stock-based compensation which will be recognized over a weighted average term of 2.6 years.

The following table summarizes information relating to options granted and exercised during the years ended December 31, 2016, 2015 and 2014 (in thousands, except fair value of options granted data):

	2016	2015	2014
Weighted-average fair value of options granted	\$ —	\$ 30.70	\$ N/A
Aggregate intrinsic value of options exercised	1,591	3,488	1,098
Cash proceeds received upon exercise of options	1,060	1,999	1,621
Excess tax benefits from share-based compensation	591	1,423	513

The aggregate intrinsic value represents the total pre-tax intrinsic value (the difference between our closing common stock price on December 31st and the exercise price, multiplied by the number of the in-the-money stock options) that would have been received by the stock option holders had all stock options holders exercised their stock options on December 31st. The amount of aggregate intrinsic value will change based on the fair market value of our common stock.

The Company did not grant any options during 2016 or 2014. The estimated fair value of the options granted during 2015 were determined using a Black Scholes option pricing model, based on the following weighted average assumptions:

Risk-free interest rate	1.55 %
Expected dividend yield	1.76 %
Expected life	6.25 years
Expected volatility	51.85 %

The Company recognized \$0.1 million, \$0.9 million and \$1.4 million, respectively, of stock compensation expense relating to the granted options during 2016, 2015, and 2014, respectively.

Restricted Stock

Restricted stock issued under the 2008 Equity Investment Plan vest ratably over four years.

The following table summarizes restricted stock activity during the year ended December 31, 2016:

	Shares	Weighted Avg. Fair Value
Unvested as of January 1, 2016	218,401	\$ 60.60
Granted	100,005	73.34
Forfeited	(1,125)	66.44
Vested and issued	(88,241)	58.01
Unvested as of December 31, 2016	<u>229,040</u>	<u>\$ 67.13</u>

The following table summarizes restricted stock activity during the year ended December 31, 2015:

	Shares	Weighted Avg. Fair Value
Unvested as of January 1, 2015	195,143	\$ 55.13
Granted	93,864	66.26
Forfeited	(1,687)	65.18
Vested and issued	(68,919)	52.70
Unvested as of December 31, 2015	<u>218,401</u>	<u>\$ 60.60</u>

In connection with the grant of restricted shares, the Company recognized \$6.2 million, \$4.3 million and \$3.4 million of compensation expense within its income statements for the years ended December 31, 2016, 2015, and 2014, respectively. In addition, the Company recognized \$0.1 million of compensation expense within its income statement for the year ended December 31, 2016 for shares of the Company's subsidiaries granted to the management team of those subsidiaries.

The unvested shares as of December 31, 2016 represent \$11.2 million in unamortized stock based compensation which will be recognized over a weighted average period of 2.5 years .

11. INCOME TAXES

The components of income before income taxes for the years ended December 31, 2016, 2015 and 2014 are as follows (in thousands):

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Domestic	\$ 28,047	\$ 50,563	\$ 57,767
Foreign	17,327	5,638	28,401
Total	<u>\$ 45,374</u>	<u>\$ 56,201</u>	<u>\$ 86,168</u>

The following is a reconciliation from the tax computed at statutory income tax rates to the Company's income tax expense for the years ended December 31, 2016, 2015, and 2014 (in thousands):

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Tax computed at statutory U.S. federal income tax rates	\$ 15,782	\$ 19,652	\$ 30,160
Non controlling interest	(2,893)	(2,807)	(1,229)
Foreign tax rate differential	(3,074)	1,659	(5,757)
Over (under) provided in prior periods	1,069	652	(401)
Nondeductible expenses	1,134	1,113	757
Goodwill Impairment	2,622	—	—
Capitalized transactions costs	3,138	—	—
Change in tax reserves	2,561	2,564	2,153
State Taxes, net of federal benefit	1,853	935	1,252
Change in valuation allowance	(7,292)	(5,949)	(2,549)
Foreign tax credit expiration	4,179	6,396	2,999
Other, net	2,081	(78)	763
Total Income Tax Expense	<u>\$ 21,160</u>	<u>\$ 24,137</u>	<u>\$ 28,148</u>

The components of income tax expense (benefit) for the years ended December 31, 2016, 2015 and 2014 are as follows (in thousands):

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Current:			
United States—Federal	\$ 15,763	\$ (1,308)	\$ 14,761
United States—State	505	(383)	1,347
Foreign	10,528	7,959	12,153
Total current income tax expense	<u>\$ 26,796</u>	<u>\$ 6,268</u>	<u>\$ 28,261</u>
Deferred:			
United States—Federal	\$ (1,880)	\$ 16,760	\$ 5,205
United States—State	(291)	1,636	466
Foreign	(3,465)	(527)	(5,784)
Total deferred income tax expense (benefit)	<u>(5,636)</u>	<u>17,869</u>	<u>(113)</u>
Consolidated:			
United States—Federal	\$ 13,883	\$ 15,452	\$ 19,966
United States—State	214	1,253	1,813
Foreign	7,063	7,432	6,369
Total income tax expense	<u>\$ 21,160</u>	<u>\$ 24,137</u>	<u>\$ 28,148</u>

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The significant components of deferred tax assets and liabilities are as follows as of December 31, 2016 and 2015 (in thousands):

	<u>2016</u>	<u>2015</u>
Deferred tax assets:		
Receivables reserve	\$ 1,470	\$ 702
Temporary differences not currently deductible for tax	8,918	7,236
Deferred compensation	2,461	2,135
Foreign tax credit carryforwards	—	4,180
Pension	1,085	1,153
Net operating losses	29,571	4,463
Total deferred tax asset	<u>43,505</u>	<u>19,869</u>
Deferred tax liabilities:		
Property, plant and equipment, net	\$ 41,136	\$ 43,718
Intangible assets, net	6,122	13,743
Total deferred tax liabilities	<u>47,258</u>	<u>57,461</u>
Valuation allowance	<u>(42,462)</u>	<u>(7,814)</u>
Net deferred tax liabilities	<u>\$ (46,215)</u>	<u>\$ (45,406)</u>

Deferred tax assets and liabilities are reflected in the accompanying consolidated balance sheets as follows (in thousands):

	<u>2016</u>	<u>2015</u>
Deferred tax assets:		
Current	\$ —	\$ —
Long term	407	—
Total deferred tax asset	<u>\$ 407</u>	<u>\$ —</u>
Deferred tax liabilities:		
Current	\$ —	\$ —
Long term	(46,622)	(45,406)
Total deferred tax liabilities	<u>\$ (46,622)</u>	<u>\$ (45,406)</u>
Net deferred tax liabilities	<u>\$ (46,215)</u>	<u>\$ (45,406)</u>

As of December 31, 2016, additional components within the reconciliation of the tax expense from statutory income rates became significant to the financial statements; therefore the presentation of the 2015 and 2014 balances have been adjusted accordingly for comparative purposes.

As of December 31, 2016, the Company estimated that it had gross federal, state and foreign net operating loss (“NOL”) carryforwards of \$3.3 million, \$8.9 million and \$74.7 million respectively. Of these, \$83.5 million will expire between 2017 and 2036 and \$3.4 million may be carried forward indefinitely.

The Company assesses available positive and negative evidence to estimate if sufficient future taxable income will be generated to realize the existing deferred tax assets. A significant piece of negative evidence evaluated is cumulative losses incurred in certain reporting jurisdictions over the three-year period ended December 31, 2016. Other negative evidence examined includes, but is not limited to, losses expected in early future years, a history of tax benefits expiring unused, uncertainties whose unfavorable resolution would adversely affect future results, and brief carryback, carry forward periods. On the basis of this evaluation, the Company believed it was more likely than not that the benefit from some of these state and foreign deferred taxes would not be realized.

In recognition of this risk at December 31, 2015, the Company provided a valuation allowance of \$2.0 million and \$1.7 million for its state and foreign NOL carryforwards, respectively. Some of the foreign entities acquired in 2016

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maintained a full valuation allowance on their NOLs and other deferred tax assets. Where the business combination did not provide any positive evidence for which the Company could recognize these assets, a \$41.9 million valuation allowance was established as part of purchase accounting. At December 31, 2016, our state and foreign NOL carryforward valuation allowance was \$0.5 million and \$27.8 million for state and foreign NOL carryforwards, respectively. The remaining valuation allowance of \$14.1 million has been applied to the other foreign deferred taxes for entities with a full valuation allowance at December 31, 2016.

As of December 31, 2015, the Company had \$4.1 million of foreign tax credits, with a corresponding valuation allowance, which fully expired during the year ended December 31, 2016 and the valuation allowance was released.

The Company has approximately \$288.6 million of undistributed earnings of its foreign subsidiaries that as of December 31, 2016 are considered to be indefinitely reinvested and accordingly, no U.S. federal or state income taxes have been provided thereon. Determination of the amount of unrecognized deferred U.S. income tax liability is not practicable because of the complexities associated with its hypothetical calculation as such liability, if any, is dependent on circumstances existing if and when such remittance occurs.

The Company had net unrecognized tax benefits (including interest and penalty) of \$20.0 million as of December 31, 2016, \$18.9 million as of December 31, 2015 and, \$16.5 million as of December 31, 2014. The net increase of the reserve during the year ended December 31, 2016 was attributable to an increase in tax positions for prior periods of \$1.4 million, an increase in tax positions for the current period of \$2.3 million, partially offset by a settlement of a prior year position of \$0.8 million, and lapse in statutes of limitation of \$1.8 million.

The following shows the activity related to unrecognized tax benefits (not including interest and penalty) during the three years ended December 31, 2016 (in thousands):

Gross unrecognized tax benefits at December 31, 2013	14,050
Increase in unrecognized tax benefits taken during a prior period	177
Increase in unrecognized tax benefits taken during the current period	1,498
Lapse in statute of limitations	(226)
Settlements	—
Gross unrecognized tax benefits at December 31, 2014	15,499
Increase in unrecognized tax benefits taken during a prior period	—
Increase in unrecognized tax benefits taken during the current period	1,717
Lapse in statute of limitations	—
Settlements	—
Gross unrecognized uncertain tax benefits at December 31, 2015	17,216
Increase in unrecognized tax benefits taken during a prior period	561
Increase in unrecognized tax benefits taken during the current period	2,321
Lapse in statute of limitations	(1,673)
Settlements	(521)
Gross unrecognized uncertain tax benefits at December 31, 2016	<u>\$ 17,904</u>

The Company's accounting policy is to classify interest and penalties related to income tax matters as part of income tax expense. The accrued amounts for interest and penalties are \$2.1 million as of December 31, 2016, and \$1.7 million as of December 31, 2015, and \$1.0 million as of December 31, 2014.

All \$20.0 million of unrecognized tax benefits (including interest and penalty) would affect the effective tax rate if recognized.

The Company and its subsidiaries file income tax returns in the U.S. and in various, state and local and foreign jurisdictions. The statute of limitations related to the consolidated U.S. federal income tax return is closed for all tax years up to and including 2012. The expiration of the statute of limitations related to the various state and foreign income tax returns that the Company and subsidiaries file varies by jurisdiction.

12. RETIREMENT PLANS

The Company has a noncontributory defined benefit pension plan for eligible employees of its GTT and Innovative subsidiaries who meet certain age and employment criteria. The Company also has a noncontributory defined medical, dental, vision, and life benefit plan for eligible employees of its Innovative subsidiary who meet certain age and employment criteria. The Company acquired the Innovative plans as a result of the July 2016 Innovative Acquisition. Company contributions to fund the pension plans are intended to provide not only for benefits attributed for service to date but also for those expected to be earned in the future. The Company's funding policy is to contribute to the plan such amounts as are actuarially determined to meet funding requirements. The benefits are based on the participants' average salary or hourly wages during the last three years of employment and credited service years. The Company funds the other postretirement benefit plans as benefits are paid.

The weighted-average rates assumed in the actuarial calculations for the pension and other postretirement benefit plans are as follows as of December 31, 2016, 2015 and 2014:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Discount Rate – Pension Benefit	4.3 %	5.8 %	5.8 %
Discount Rate – Postretirement Benefit	3.9 %	N/A	N/A
Annual salary increase	6.5 %	6.5 %	6.5 %
Expected long-term return on plan assets	6.3 %	6.5 %	7.0 %

The expected long-term rate of return on plan assets was determined based on several factors including input from pension investment consultants, projected long-term returns of equity and bond indices, and historical returns over the life of the related obligations of the fund. The Company, in conjunction with its pension investment consultants, reviews its asset allocation periodically and rebalances its investments when appropriate in an effort to earn the expected long-term returns. The Company will continue to evaluate its long-term rate of return assumptions at least annually and will adjust them as necessary.

The annual salary increase assumption reflects the Company's estimated long average rate of salary increases. The assumption is not applicable to the Innovative pension and other postretirement plans as the obligations associated with these plans are not dependent on participant's salaries.

The discount rate was determined based on a review of market data including yields on high quality corporate bonds with maturities approximating the remaining life of the project benefit obligations.

The other postretirement benefit plans healthcare cost trend assumptions is based on health care trend rates. The 2017 assumed medical health care cost trend rate is 5.8% trending to an ultimate rate of 4.5% in 2075. The 2017 assumed dental care cost trend rate is 4.0% trending to an ultimate rate of 2.0% in 2030. The effect of a one-percentage-point increase in the assumed health care cost trend rates for each future year on the accumulated postretirement benefit

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obligation for health care benefits and the aggregate of the service and interest cost components of net periodic postretirement health care benefit cost is shown below:

	<u>Accumulated postretirement benefit obligation</u>	<u>Service cost plus interest cost</u>
At trend	5,108	194
At trend + 1%	5,487	214
Dollar Impact	379	20
Percentage Impact	7.4 %	10.3 %
At trend – 1%	4,775	177
Dollar Impact	(333)	(17)
Percentage Impact	(6.5)%	(8.8)%

Changes during the year in the projected benefit obligations and in the fair value of plan assets are as follows for 2016 and 2015 (in thousands):

	<u>2016</u>		<u>2015</u>	
	<u>Pension Benefits</u>	<u>Postretirement Benefits</u>	<u>Pension Benefits</u>	<u>Postretirement Benefits</u>
Projected benefit obligations:				
Balance at beginning of year:	\$ 14,400	\$ —	\$ 14,093	\$ —
Innovative Acquisition	69,178	5,472	—	—
Service cost	1,308	97	652	—
Interest cost	2,002	97	766	—
Curtailement	128	—	—	—
Benefits and settlements paid	(6,445)	(206)	(1,329)	—
Actuarial (gain) loss	(4,437)	(325)	218	—
Experience loss	(15)	(27)	—	—
Balance at end of year	<u>\$ 76,119</u>	<u>\$ 5,108</u>	<u>\$ 14,400</u>	<u>\$ —</u>
Plan net assets:				
Balance at beginning of year:	\$ 11,946	\$ —	\$ 13,165	\$ —
Innovative Acquisition	45,116	—	—	—
Actual return on plan assets	1,717	—	110	—
Company contributions	22,963	206	—	—
Benefits and settlements paid	(6,411)	(206)	(1,329)	—
Balance at end of year	<u>\$ 75,331</u>	<u>\$ —</u>	<u>\$ 11,946</u>	<u>\$ —</u>
Under funded status of plan	<u>\$ (788)</u>	<u>\$ (5,108)</u>	<u>\$ (2,454)</u>	<u>\$ —</u>

The Company reports an asset or liability on its balance equal to the funded status of its pension and other postretirement benefit plans. Plans in an overfunded status are aggregated and recorded as a net benefit asset in other assets. Plans in an underfunded status are aggregated and recorded as a net benefit liability in other liabilities. The funded status of the Company's pension and other retirement benefit plans is below (in thousands):

	2016			2015		
	GTT Pension Benefit	Innovative Pension Benefit	Postretirement Benefits	GTT Pension Benefit	Innovative Pension Benefit	Postretirement Benefits
Projected benefit obligation	\$ 12,549	\$ 63,571	\$ 5,108	\$ 14,400	\$ —	\$ —
Plan Net Assets	8,655	66,676	—	11,946	—	—
Over/ (Under) funded status of plan	<u>\$ (3,894)</u>	<u>\$ 3,105</u>	<u>\$ (5,108)</u>	<u>\$ (2,454)</u>	<u>\$ —</u>	<u>\$ —</u>

At December 31, 2016, the Company held \$5.1 million of restricted cash equal to the underfunded status of the other postretirement benefit plans. The cash is restricted due to the Company's intent and specific nature of the commitment.

The Company's investment policy for its pension assets is to have a reasonably balanced investment approach, with a long-term bias toward debt investments. The Company's strategy allocates plan assets among equity, debt and other assets to achieve long-term returns without significant risk to principal. The GTT pension fund has limitations from investing in the equity, debt or other securities of the employer, its subsidiaries or associates of the employer or any company of which the employer is a subsidiary or an associate. Furthermore, the GTT plan must invest between 70% - 80% of its total plan assets within Guyana.

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The fair values for the pension plan's net assets, by asset category, at December 31, 2016 are as follows (in thousands):

<u>Asset Category</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Cash, cash equivalents, money markets and other	\$ 32,976	\$ 32,976	\$ —	\$ —
Common stock - domestic	17,715	17,715	—	—
Common stock - foreign	4,845	3,629	1,216	—
Mutual funds - equities	7,141	6,180	961	—
Exchange traded funds - equities	1,553	1,553	—	—
Fixed income mutual funds	10,142	—	10,142	—
Fixed income securities	456	—	456	—
Annuities	503	—	—	503
Total	\$ 75,331	\$ 62,053	\$ 12,775	\$ 503

The plan's weighted-average asset allocations at December 31, 2016 and 2015, by asset category are as follows:

	<u>2016</u>	<u>2015</u>
Cash, cash equivalents, money markets and other	43.8 %	81.5 %
Common stock - domestic	23.5	14.7
Common stock - foreign	6.4	—
Mutual funds - equities	9.5	—
Exchange traded funds - equities	2.1	—
Fixed income mutual funds	13.5	—
Fixed income securities	0.6	3.8
Annuities	0.7	—
Total	100 %	100 %

Amounts recognized on the Company's consolidated balance sheets consist of (in thousands):

	<u>As of December 31,</u>			
	<u>2016</u>		<u>2015</u>	
	<u>Pension benefits</u>	<u>Postretirement benefits</u>	<u>Pension benefits</u>	<u>Postretirement benefits</u>
Accrued and current liabilities	\$ —	\$ 381	\$ —	\$ —
Other Liabilities	3,894	4,727	2,454	—
Other Assets	3,105	—	—	—
Accumulated other comprehensive income / (loss), net of tax	1,418	352	(3,481)	—

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Amounts recognized in accumulated other comprehensive loss consist of (in thousands):

	As of December 31,			
	2016		2015	
	Pension benefits	Postretirement benefits	Pension benefits	Postretirement benefits
Net actuarial gain / (loss)	\$ (386)	\$ 352	\$ (5,836)	\$ —
Accumulated other comprehensive income / (loss), pre-tax	(386)	352	(5,836)	—
Accumulated other comprehensive income / (loss), net of tax	1,418	352	(3,481)	—

Components of the plan's net periodic pension cost are as follows for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	2016		2015		2014	
	Pension benefits	Postretirement benefits	Pension benefits	Postretirement benefits	Pension benefits	Postretirement benefits
Service cost	\$ 1,308	\$ 97	\$ 652	\$ —	\$ 612	\$ —
Interest cost	2,002	97	766	—	720	—
Expected return on plan assets	(2,024)	—	(813)	—	(848)	—
Amortization of unrecognized net actuarial loss	1,271	—	245	—	218	—
Curtailment	128	—	—	—	—	—
Net periodic pension cost	\$ 2,685	\$ 194	\$ 850	\$ —	\$ 702	\$ —

For the year ended December 31, 2017, the Company expects to contribute approximately \$833 its pension plans.

The following estimated pension benefits, which reflect expected future service, as appropriate, are expected to be paid over the next ten years as indicated below (in thousands):

Fiscal Year	Pension Benefits
2017	\$ 4,433
2018	4,001
2019	4,348
2020	4,461
2021	4,676
2022 - 2026	22,651
	<u>\$ 44,570</u>

13. COMMITMENTS AND CONTINGENCIES

Regulatory and Litigation Matters

The Company and its subsidiaries are subject to certain regulatory and legal proceedings and other claims arising in the ordinary course of business, some of which involve claims for damages and taxes that are substantial in amount. The Company believes that, except for the items discussed below, for which the Company is currently unable to predict the final outcome, the disposition of proceedings currently pending will not have a material adverse effect on the Company's financial position or results of operations.

As of December 31, 2016 the Company had approximately \$10.6 million in letters of credit payable to USAC outstanding to cover its Mobility Fund obligations and there were no drawdowns against these letters of credit. The letters of credit accrue a fee at a rate of 1.75% per annum on the outstanding amounts. If the Company fails to comply with certain terms and conditions upon which the Mobility Funds are to be granted, or if it loses eligibility for Mobility Fund support, USAC will be entitled to draw the entire amount of the letter of credit applicable to the affected project including penalties. The Company is in compliance with all applicable terms and conditions. The results of the Company's Mobility Fund projects are included in the Company's "U.S. Telecom" segment.

Currently, the Company's Guyana subsidiary, GTT, holds a license to provide domestic fixed services and international voice and data services in Guyana on an exclusive basis until December 2030. Since 2001, the Government of Guyana has stated its intention to introduce additional competition into Guyana's telecommunications sector. In connection therewith, the Company and GTT have met on several occasions with officials of the Government of Guyana to discuss potential modifications of GTT's exclusivity and other rights under the existing agreement and license. On July 18, 2016, the Guyana Parliament passed telecommunications legislation, and on August 5, 2016, the legislation was signed into law, that introduces material changes to many features of Guyana's existing telecommunications regulatory regime with the intention of creating a more competitive market. In contrast to prior legislative proposals, the legislation that passed does not include a provision that permits other telecommunications carriers to receive licenses automatically upon signing of the legislation, nor does it have the effect of terminating the Company's exclusive license. Instead the legislation as passed requires the Minister of Telecommunications to conduct further proceedings and issue implementing orders to enact the various provisions of the legislation. The Company cannot predict the manner in which it will be implemented by the Minister of Telecommunications.

In December 2016 the Government of Guyana and the Company met to discuss modifications of the Company's exclusivity rights and other rights under its existing agreement and license. Those discussions are on-going. However, there can be no assurance that those discussions will be concluded before the Government issues new licenses contemplated by the legislation or at all, or that they will satisfactorily address contractual exclusivity rights. Although the Company believes that it would be entitled to damages or other compensation for any involuntary termination of its contractual exclusivity rights, it cannot guarantee that the Company would prevail in a proceeding to enforce its rights or that its actions would effectively halt any unilateral action by the Government.

Historically, GTT has been subject to other litigation proceedings and disputes in Guyana that, while not conclusively resolved, to the Company's knowledge have not been the subject of discussions or other significant activity in the last five years. It is possible, but not likely, that these disputes, as discussed below, may be revived. The Company believes that none of these additional proceedings would, in the event of an adverse outcome, have a material impact on the Company's consolidated financial position, results of operation or liquidity.

In a letter dated September 8, 2006, the National Frequency Management Unit ("NFMU") agreed that total spectrum fees in Guyana should not increase for the years 2006 and 2007. However, that letter implied that spectrum fees in 2008 and onward may be increased beyond the amount GTT agreed to with the Government. GTT has objected to the NFMU's proposed action and reiterated its position that an increase in fees prior to development of an acceptable methodology would violate the Government's prior agreement. In 2011, GTT paid the NFMU \$2.6 million representing payments in full for 2008, 2009 and 2010. However, by letter dated November 23, 2011, the NFMU stated that it did not concur with GTT's inference that the amount was payment in full for the specified years as it was their continued opinion that the final calculation for GSM spectrum fees was not agreed upon and was still an outstanding issue. By

further letter dated November 24, 2011, the NFMU further rejected a proposal that was previously submitted jointly by GTT and Digicel's which outlined a recommended methodology for the calculation of these fees. The NFMU stated that it would prepare its own recommendation which it would send to the Minister of Telecommunications for decision of the matter. GTT has paid undisputed spectrum fees according to the methodology used for its 2011 payments, and has reserved amounts payable according to this methodology. There have been limited further discussions on this subject and GTT has not had the opportunity to review any recommendation made to the Minister.

In November 2007, Caribbean Telecommunications Limited ("CTL") filed a complaint in the U.S. District Court for the District of New Jersey against GTT and ATN claiming breach of an interconnection agreement for domestic cellular services in Guyana and related claims. CTL asserted over \$200 million in damages. GTT and ATN moved to dismiss the complaint on procedural and jurisdictional grounds. On January 26, 2009, the court granted the motions to dismiss the complaint on the grounds asserted. On November 7, 2009 and again on April 4, 2013, CTL filed a similar claim against GTT and the Public Utility Commission in the High Court of Guyana. The matter remained idle from the April 2013 filing until December 2015 when CTL filed a "Statement of Claim" reiterating the claims previously made in its prior filings. On April 7, 2016 the High Court of Guyana struck and dismissed CTL's action as abandoned pursuant to the Court's rules of civil procedure and the claim is no longer pending.

On May 8, 2009, Digicel filed a lawsuit in Guyana challenging the legality of GTT's exclusive license rights under Guyana's constitution. Digicel initially filed this lawsuit against the Attorney General of Guyana in the High Court. On May 13, 2009, GTT petitioned to intervene in the suit in order to oppose Digicel's claims and that petition was granted on May 18, 2009. GTT filed an answer to the charge on June 22, 2009 and the case is pending. The Company believes that any legal challenge to GTT's exclusive license rights granted in 1990 is without merit and the Company intends to vigorously defend against such a legal challenge.

GTT has filed several lawsuits in the High Court of Guyana asserting that, despite its denials, Digicel is engaged in international bypass in violation of GTT's exclusive license rights, the interconnection agreement between the parties, and the laws of Guyana. GTT is seeking, among other things, injunctive relief to stop the illegal bypass activity, actual damages in excess of US\$9 million and punitive damages of approximately US\$5 million. Digicel filed counterclaims alleging that GTT has violated the terms of the interconnection agreement and Guyana laws. These suits, filed in 2010 and 2012, have yet to proceed to trial and it remains uncertain as to when a trial date may be set. GTT intends to vigorously prosecute these matters.

GTT is also involved in several legal claims regarding its tax filings with the Guyana Revenue Authority dating back to 1991 regarding the deductibility of intercompany advisory fees as well as other tax assessments. Should GTT be held liable for any of the disputed tax assessments, totaling \$44.1 million, the Company believes that the Government of Guyana would then be obligated to reimburse GTT for any amounts necessary to ensure that GTT's return on investment was no less than 15% per annum for the relevant periods. The Company believes that some adverse outcome is probable and has accordingly accrued \$5.0 million as of December 31, 2016 for these matters.

Lease Commitments and Other Obligations

The Company leases approximately 2.7 million square feet for its operations centers, administrative offices and retail stores as well as certain tower sites under non-cancelable operating leases. The Company's obligations for payments under these leases are as follows at December 31, 2016 (in thousands):

2017	20,908
2018	26,120
2019	16,100
2020	17,090
2021	7,170
Thereafter	15,009
Total obligations under operating leases	<u>\$ 102,397</u>

Rent expense for the years ended December 31, 2016, 2015 and 2014 was \$19.8 million, \$17.0 million and \$15.0 million, respectively.

14. RELATED-PARTY TRANSACTIONS

In October 2014, the Company's U.S. Virgin Islands business, Choice Communications, LLC ("Choice"), entered into a tower lease with Tropical Tower Ltd ("Tropical Tower"), an entity 90% owned by Cornelius B. Prior, Jr., the Chairman of the Company's Board of Directors. When aggregated with amounts that Choice currently pays to Tropical Tower for an existing tower lease entered into in April 2012, Choice will pay approximately \$117,000 per year in rental payments to Tropical Tower. Each tower lease has an initial term of five years, with two additional five year renewal periods and has provisions for an increase in rent by 5% each year. Our Audit Committee reviewed the specific structure and terms of the October 2014 lease, as negotiated by Choice management, and unanimously approved the arrangement described above in accordance with the terms of our Related Person Transaction Policy.

15. SEGMENT REPORTING

For the year ended December 31, 2015, the Company had five reportable segments for separate disclosure in accordance with the FASB's authoritative guidance on disclosures about segments of an enterprise. Those five segments were:

i) U.S. Wireless, which generated all of its revenues in and had all of its assets located in the United States, ii) International Integrated Telephony, which generated all of its revenues in and had all of its assets located in Guyana, iii) Island Wireless, which generated a majority of its revenues in, and had a majority of its assets located in, Bermuda and which also generated revenues in and had assets located in the U.S. Virgin Islands, Aruba and Turks and Caicos (through March 23, 2015), iv) U.S. Wireline, which generated all of its revenues in and had all of its assets located in the United States, and v) Renewable Energy, which generated all of its revenues in and had all of its assets located in the United States. The operating segments were managed separately because each offers different services and serves different markets.

To be consistent with how management allocates resources and assesses the performance of its business operations in 2016, the Company updated its reportable and operating segments in the first quarter of the year to consist of the following: i) U.S. Telecom, consisting of the Company's former U.S. Wireless and U.S. Wireline segments, ii) International Telecom, consisting of the Company's former Island Wireless and International Integrated Telephony segments and the results of its One Communications and Innovative Acquisitions as discussed below, and iii) Renewable Energy, consisting of the Company's former Renewable Energy segment and the results of its Vibrant Energy Acquisition. The prior year segment information has been recast to conform to the current year's segment presentation.

The following tables provide information for each operating segment (in thousands):

For the Year Ended December 31, 2016						
	U.S. Telecom	International Telecom	Renewable Energy	Reconciling Items (1)	Consolidated	
Revenue						
Wireless	\$ 148,053	\$ 80,745	\$ —	\$ —	\$ 228,798	
Wireline	26,448	161,571	—	—	188,019	
Equipment and Other	2,225	15,960	393	—	18,578	
Renewable Energy	—	—	21,608	—	21,608	
Total Revenue	176,726	258,276	22,001	—	457,003	
Depreciation and amortization	24,471	40,492	4,987	6,030	75,980	
Non-cash stock-based compensation	—	22	114	6,274	6,410	
Operating income (loss)	49,078	35,436	(246)	(34,471)	49,797	

For the Year Ended December 31, 2015						
	U.S. Telecom	International Telecom	Renewable Energy	Reconciling Items (1)	Consolidated	
Revenue						
Wireless	\$ 155,390	\$ 81,652	\$ —	\$ —	\$ 237,042	
Wireline	25,241	61,244	—	—	86,485	
Equipment and Other	2,355	8,447	—	—	10,802	
Renewable Energy	—	—	21,040	—	21,040	
Total Revenue	182,986	151,342	21,040	—	355,369	
Depreciation and amortization	22,239	24,883	4,820	4,948	56,890	
Non-cash stock-based compensation	—	—	267	4,708	4,975	
Operating income (loss)	74,459	28,200	6,720	(30,784)	78,595	

For the Year Ended December 31, 2014						
	U.S. Telecom	International Telecom	Renewable Energy	Reconciling Items (1)	Consolidated	
Revenue						
Wireless	\$ 153,040	\$ 88,650	\$ —	\$ —	\$ 241,690	
Wireline	26,155	59,129	—	—	85,284	
Equipment and Other	1,196	7,728	449	—	9,373	
Total Revenue	180,391	155,506	449	—	336,347	
Depreciation and amortization	19,070	28,079	105	3,980	51,234	
Non-cash stock-based compensation	—	—	—	4,323	4,323	
Operating income (loss)	85,519	28,674	(2,218)	(26,399)	85,576	

	U.S. Telecom	International Telecom	Renewable Energy	Reconciling Items (1)	Consolidated
December 31, 2016					
Net fixed assets	\$ 129,274	\$ 372,741	\$ 130,268	\$ 15,429	\$ 647,712
Goodwill	35,269	24,326	3,279	—	62,873
Total assets	240,006	597,454	190,253	170,505	1,198,218
December 31, 2015					
Net fixed assets	\$ 119,596	\$ 133,262	\$ 106,560	\$ 14,085	\$ 373,503
Goodwill	39,639	5,438	—	—	45,077
Total assets	227,707	278,770	122,788	315,739	945,004

Capital Expenditures

Year ended December 31,	U.S. Telecom	International Telecom	Renewable Energy	Reconciling Items (1)	Consolidated
2016	\$ 31,983	\$ 62,808	\$ 22,615	\$ 6,876	\$ 124,282
2015	37,588	22,804	38	4,323	64,753

(1) Reconciling items refer to corporate overhead expenses and consolidating adjustments.

The table below identifies the Company's revenues and long-lived assets by geographic location. The Company attributes revenue to geographic location based on location of the customer (in thousands):

	2016		2015		2014	
	Revenues	Long-Lived Assets	Revenues	Long-Lived Assets	Revenues	Long-Lived Assets
U.S.	\$ 198,300	\$ 265,528	\$ 204,024	\$ 247,169	\$ 180,841	\$ 240,341
Guyana	91,653	132,609	88,894	109,829	86,931	108,738
U.S. Virgin Islands	58,431	110,773	11,542	9,621	11,583	10,027
Bermuda	83,006	94,976	45,745	13,483	46,917	12,507
Other Foreign Countries	25,613	76,575	5,164	927	10,075	5,419
	<u>\$ 457,003</u>	<u>\$ 680,461</u>	<u>\$ 355,369</u>	<u>\$ 381,029</u>	<u>\$ 336,347</u>	<u>\$ 377,032</u>

16. QUARTERLY FINANCIAL DATA (UNAUDITED)

Following is a summary of the Company's quarterly results of operations for the years ended December 31, 2016 and 2015 (in thousands):

	2016 Consolidated for the Three Months Ended			
	March 31	June 30	September 30	December 31
Total revenue	\$ 89,686	\$ 99,991	\$ 138,795	\$ 128,531
Operating expenses	73,793	98,079	116,714	118,620
Income from operations	15,893	1,912	22,081	9,911
Other income (expense), net	(464)	(853)	(785)	(2,321)
Income (Loss) from continuing operations before income taxes	15,429	1,059	21,296	7,590
Income taxes	4,631	2,945	9,602	3,982
Income (Loss) from continuing operations	10,798	(1,886)	11,694	3,608
Income from discontinued operations:				
Income from discontinued operations, net of tax	—	—	—	—
Net income	10,798	(1,886)	11,694	3,608
Net income attributable to non-controlling interests, net of tax:				
Continuing operations	(4,678)	(1,200)	(4,523)	(1,712)
Net income attributable to ATN International, Inc. stockholders	6,120	(3,086)	7,171	1,896
Net income per weighted average basic share attributable to ATN International, Inc. stockholders				
Continuing operations	0.38	(0.19)	0.44	0.12
Total	0.38	(0.19)	0.44	0.12
Net income per weighted average diluted share attributable to ATN International, Inc. stockholders				
Continuing operations	0.38	(0.19)	0.44	0.12
Total	0.38	(0.19)	0.44	0.12

	2015 Consolidated for the Three Months Ended			
	March 31	June 30	September 30	December 31
Total revenue	\$ 85,345	\$ 90,326	\$ 96,782	\$ 82,916
Operating expenses	66,187	61,594	74,258	74,735
Income from operations	19,158	28,732	22,524	8,181
Other income (expense), net	(20,528)	(706)	(742)	(418)
Income from continuing operations before income taxes	(1,370)	28,026	21,782	7,763
Income taxes	(487)	13,008	10,134	1,482
Income from continuing operations	(883)	15,018	11,648	6,281
Income from discontinued operations:				
Gain on sale of discontinued operations, net of tax	389	—	—	702
Income from discontinued operations, net of tax	390	—	—	702
Net income	(493)	15,018	11,648	6,983
Net income attributable to non-controlling interests, net of tax:				
Continuing operations	(2,777)	(5,568)	(5,072)	(2,799)
Discontinued operations	—	—	—	—
Disposal of discontinued operations	—	—	—	—

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Net income attributable to ATN International, Inc. stockholders	(3,270)	9,450	6,576	4,184
Net income per weighted average basic share attributable to ATN International, Inc. stockholders				
Continuing operations	(0.18)	0.59	0.41	0.17
Discontinued operations:				
Discontinued operations	0.07	—	—	—
Gain on sale of discontinued operations	—	—	—	—
Total discontinued operations	0.07	—	—	—
Total	<u>(0.11)</u>	<u>0.59</u>	<u>0.41</u>	<u>0.17</u>
Net income per weighted average diluted share attributable to ATN International, Inc. stockholders				
Continuing operations	(0.18)	0.59	0.41	0.16
Discontinued operations:				
Discontinued operations	0.07	—	—	—
Gain on Sale of discontinued operations	—	—	—	—
Total discontinued operations	0.07	—	—	—
Total	<u>(0.11)</u>	<u>0.59</u>	<u>0.41</u>	<u>0.16</u>

During the three months ended December 31, 2015, the Company recognized an approximate \$0.7 million benefit to correct for tax basis differences and expense recognition related to prior periods. Of these errors, \$0.7 million primarily related to the three months ended September 30, 2015.

During the three months ended December 31, 2016, the Company recognized an approximate \$0.8 million charge to correct for a \$0.3 million understatement of expense related primarily to the nine months ended September 30, 2016 in our International Telecom segment and a \$0.5 million reduction to revenue primarily related to the nine months ended September 30, 2016 in our Renewable Energy segment.

The Company determined that the impact of the correction of these errors was not material to the current or any prior period financial statements.

ATN INTERNATIONAL, INC. AND SUBSIDIARIES

VALUATION AND QUALIFYING ACCOUNTS

(Amounts in Thousands)

	Balance at Beginning of Year	Purchase Price Accounting	Charged to Costs and Expenses	Deductions	Balance at End of Year
YEAR ENDED, December 31, 2014					
Description:					
Valuation allowance on foreign tax credit carryforwards	\$ 13,576	\$ —	\$ —	\$ 2,999	\$ 10,577
Valuation allowance on foreign net operating losses	1,610	—	—	110	1,500
Valuation allowance on state net operating losses	1,126	—	561	—	1,687
Allowance for doubtful accounts	9,005	—	2,417	80	11,342
	<u>\$ 25,317</u>	<u>\$ —</u>	<u>\$ 2,978</u>	<u>\$ 3,189</u>	<u>\$ 25,106</u>
YEAR ENDED, December 31, 2015					
Description:					
Valuation allowance on foreign tax credit carryforwards	\$ 10,577	\$ —	\$ —	\$ 6,397	\$ 4,180
Valuation allowance on foreign net operating losses	1,500	—	172	—	1,672
Valuation allowance on state net operating losses	1,687	—	275	—	1,962
Allowance for doubtful accounts	11,342	—	858	2,906	9,294
	<u>\$ 25,106</u>	<u>\$ —</u>	<u>\$ 1,305</u>	<u>\$ 9,303</u>	<u>\$ 17,108</u>
YEAR ENDED, December 31, 2016					
Description:					
Valuation allowance on foreign tax credit carryforwards	\$ 4,180	\$ —	\$ —	\$ 4,180	\$ —
Valuation allowance on foreign net operating losses	1,672	41,941	217	1,922	41,908
Valuation allowance on state net operating losses	1,962	—	—	1,409	553
Allowance for doubtful accounts	9,294	—	5,095	1,240	13,149
	<u>\$ 17,108</u>	<u>\$ 41,941</u>	<u>\$ 5,312</u>	<u>\$ 8,751</u>	<u>\$ 55,610</u>

**EXHIBIT INDEX
to Form 10-K for the Year Ended December 31, 2016**

- 2.1 Purchase Agreement, effective as of September 30, 2015, by and among Caribbean Asset Holdings, LLC, National Rural Utilities Cooperative Finance Corporation, ATN VI Holdings, LLC and ATN International, Inc. (incorporated by reference to Exhibit 2.1 to the Company's Quarterly Report on Form 10-Q (File No. 001-12593) for the quarterly period ended September 30, 2015 filed on November 9, 2015).
- 2.2 Amendment No. 1 to the Purchase Agreement, dated as of July 1, 2016, by and among National Rural Utilities Cooperative Finance Corporation, Caribbean Asset Holdings, LLC, ATN VI Holdings, LLC, and ATN International, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (file No. 001-12593) for the quarterly period ended June 30, 2016 filed on August 9, 2016).
- 2.3 Membership Interest Purchase Agreement, dated as of December 24, 2014, by and among Ahana Operations, LLC, Green Lake Capital, LLC, Walsin Lihwa Corp. and the Companies named therein (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K (File No. 001-12593) filed on December 29, 2014).
- 2.4 Transaction Agreement, dated as of October 5, 2015, by and among ATN International, Inc., ATN Caribbean Holdings, Ltd., ATN Bermuda Holdings Ltd., KeyTech Limited and Chancery Holdings Limited (incorporated by reference to Exhibit 2.2 to the Company's Current Report on Form 8-K (File No. 001-12593) filed on October 6, 2015).
- 3.1 Restated Certificate of Incorporation of ATN International, Inc. (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 (File No. 333-62416) filed on June 6, 2001).
- 3.2 Certificate of Amendment to the Restated Certificate of Incorporation of ATN International, Inc., as filed with the Delaware Secretary of State on August 14, 2006 (incorporated by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q (File No. 001-12593) for the quarterly period ended June 30, 2006 filed on August 14, 2006).
- 3.3 Certificate of Amendment to the Company's Restated Certificate of Incorporation, filed June 10, 2016 and effective June 21, 2016 (incorporated by reference to Exhibit 3.1 to the Company's Periodic Report on Form 8-K (File No. 001-12593) filed on June 27, 2016).
- 3.4 ** Amended and Restated By-Laws, effective as of February 27, 2017.
- 10.1 * ATN International, Inc. 1998 Stock Option Plan (as amended May 24, 2007 incorporated by reference to Appendix A to the Company's Proxy Statement on Schedule 14A (File No. 001-12593) filed on April 30, 2007).
- 10.2 * Director's Remuneration Plan as amended as of November 2, 1999 (incorporated by reference to Exhibit 4.7 to the Company's Registration Statement on Form S-8 (File No. 333-62416) filed on June 6, 2001).
- 10.3 * Form of Incentive Stock Option Agreement under 1998 Stock Option Plan (incorporated by reference to Exhibit 4.8 to the Company's Registration Statement on Form S-8 (File No. 333-62416) filed on June 6, 2001).
- 10.4 * 2005 Restricted Stock and Incentive Plan (incorporated by reference to Exhibit 4.5 to the Company's Registration Statement on Form S-8 (File No. 333-62416) filed on May 24, 2005).
- 10.5 * ATN International, Inc. 2008 Equity Incentive Plan, as amended and restated (incorporated by reference to Appendix C of the Definitive Proxy Statement on Schedule 14A (File No. 001-12593) filed on May 2, 2011).
- 10.6 * Form of Notice of Grant of Restricted Stock and Restricted Stock Agreement under 2008 Equity Incentive Plan (Non-Employee Directors) (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-12593) filed on May 21, 2008).
- 10.7 * Form of Notice of Grant of Restricted Stock and Restricted Stock Agreement under 2008 Equity Incentive Plan (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K (File No. 001- 12593) filed on May 21, 2008).
- 10.8 * Form of Notice of Grant of Incentive Stock Option and Option Agreement under 2008 Equity Incentive Plan (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K (File No. 001- 12593) filed on May 21, 2008).

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- 10.9 * Form of Notice of Grant of Nonqualified Stock Option and Option Agreement under 2008 Equity Incentive Plan (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K (File No. 001- 12593) filed on May 21, 2008).
- 10.10 * Deferred Compensation Plan for Select Employees of ATN International, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-12593) filed on January 6, 2009).
- 10.14 Fourth Amended and Restated Credit Agreement dated as of December 19, 2014 by and among the Company, as Borrower, CoBank, ACB, as Administrative Agent, Lead Arranger, Swingline Lender, an Issuing Lender and a Lender, Fifth Third Bank, as a Joint Lead Arranger, MUFG Union Bank, N.A., as a Joint Lead Arranger and an Issuing Lender, the Guarantors named therein and the other Lenders named therein (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-12593) filed on December 23, 2014).
- 10.15 Amendment, Consent and Confirmation Agreement, dated January 11, 2016, by and among ATN International, Inc. , as Borrower, CoBank, ACB, as Administrative Agent, and the Guarantors and other Lenders named therein (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-12593) filed on January 15, 2016).
- 10.16 Amendment to the Agreement between the Government of the Co-Operative Republic of Guyana and ATN International, Inc., dated November 2, 2012 (incorporated by reference to Exhibit 10.20 to the Company's Annual Report on Form 10-K (File No. 001-12593) for the year ended December 31, 2012 filed on March 18, 2013).
- 10.20 * Form of Severance Agreement executed between the Company and Mssrs. Benincasa, Slap, Kreisher, and Fougere dated as of February 26, 2016 (incorporated by reference to Exhibit 10.20 to the Company's Annual Report on Form 10-K (File No. 001-12593) filed on February 29, 2016).
- 10.21 * Severance Agreement between the Company and Mr. Michael Prior, dated as of February 26, 2016 (incorporated by reference to Exhibit 10.21 to the Company's Annual Report on Form 10-K (File No. 001-12593) filed on February 29, 2016).
- 10.22 Loan Agreement, dated as of July 1, 2016, by and among ATN VI Holdings, LLC, Caribbean Asset Holdings LLC, and Rural Telephone Finance Cooperative (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (File No. 001-12593) for the quarterly period ended June 30, 2016 filed on August 9, 2016).
- 10.23 Commitment Letter. dated September 24, 2015, from Rural Telephone Finance Cooperative to ATN VI Holdings, LLC (incorporated by reference to Exhibit 99.1 to the Company's Annual Report on Form 10-K (File No. 001-12593) filed on February 29, 2016).
- 10.24 Rate Lock Option Letter. dated September 30, 2015. between Rural Telephone Finance Cooperative and ATN VI Holdings, LLC (incorporated by reference to Exhibit 99.2 to the Company's Annual Report on Form 10-K (File No. 001-12593) filed on February 29, 2016).
- 21 ** Subsidiaries of ATN International, Inc.
- 23.1 ** Consent of Independent Registered Public Accounting Firm—PricewaterhouseCoopers LLP.
- 31.1 ** Certification of Principal Executive Officer pursuant to Rule 13a- 14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Rule 302 of the Sarbanes-Oxley Act of 2002.
- 31.2 ** Certification of Principal Financial Officer pursuant to Rule 13a- 14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Rule 302 of the Sarbanes-Oxley Act of 2002.
- 32.1 ** Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 32.2 ** Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted 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
- 101.LAB** XBRL Taxonomy Extension Label Linkbase Document

101.PRE** XBRL Taxonomy Extension Presentation Linkbase Document

* Management contract or compensatory plan or arrangement.

** Filed herewith.

**BY-LAWS OF
ATN INTERNATIONAL, INC.**

as amended and restated on February 27, 2017

(A Delaware Corporation)

ARTICLE I

Offices

SECTION 1. Registered Office. The registered office of the Corporation within the State of Delaware shall be in the City of Dover, County of Kent.

SECTION 2. Other Offices. The Corporation may also have an office or offices other than said registered office at such place or places, either within or without the State of Delaware, as the Board of Directors shall from time to time determine or the business of the Corporation may require.

ARTICLE II

Meetings of Stockholders

SECTION 1. Place of Meetings. All meetings of the stockholders for the election of directors or for any other purpose shall be held at any such place, either within or without the state of Delaware, as shall be designated from time to time by the Board of Directors and stated in the notice of meeting or in a duly executed waiver thereof.

SECTION 2. Annual Meeting. The annual meeting of stockholders, commencing with the year 1990, shall be held at such date and at such time as shall be designated from time to time by the Board of Directors and stated in the notice of meeting or in a duly executed waiver thereof. At such annual meeting, the stockholders shall elect a Board of Directors and transact such other business as may properly be brought before the meeting.

SECTION 3. Special Meetings. Special meetings of stockholders, unless otherwise prescribed by statute, may be called at any time by the Board of Directors or the Chairman of the Board, if one shall have been elected, or the President and shall be called by the Secretary upon the request in writing of a stockholder or stockholders holding of record at least fifty percent of the voting power of the issued and outstanding shares of stock of the Corporation entitled to vote at such meeting.

SECTION 4. Notice of Meetings. Except as otherwise expressly required by statute, written notice of each annual and special meeting of stockholders stating the date, place and hour of the meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called, shall be given to each stockholder of record entitled to vote thereat not less than ten nor more

than sixty days before the date of the meeting. Business transacted at any special meeting of stockholders shall be limited to the purposes stated in the notice. Notice shall be given personally or by mail or facsimile machine and, if by mail, shall be sent in a postage prepaid envelope, addressed to the stockholder at his address as it appears on the records of the Corporation. Notice by mail shall be deemed given at the time when the same shall be deposited in the United States mail, postage prepaid. Notice of any meeting shall not be required to be given to any person who attends such meeting, except when such person attends the meeting in person or by proxy for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened, or who, either before or after the meeting, shall submit a signed written waiver of notice, in person or by proxy. Neither the business to be transacted at, nor the purpose of, an annual or special meeting of stockholders need be specified in any written waiver of notice.

SECTION 5. List of Stockholders. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten days before each meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, showing the address of and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either at a place within the city, town or village where the meeting is to be held, which place shall be specified in the notice of meeting; or, if not specified, at the place where the meeting is to be held. The list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

SECTION 6. Quorum, Adjournments. The holders of a majority of the voting power of the issued and outstanding stock of the Corporation entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of stockholders, except as otherwise provided by statute or by the Certificate of Incorporation. If, however, such quorum shall not be present or represented by proxy at any meeting of stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have the power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented by proxy. At such adjourned meeting at which a quorum shall be present or represented by proxy, any business may be transacted which might have been transacted at the meeting as originally called. If the adjournment is for more than thirty days or, if after adjournment a new record date is set, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

SECTION 7. Organization. At each meeting of stockholders, the Chairman of the Board, if one shall have been elected or, in his absence or if one shall not have been elected, the President shall act as chairman of the meeting. The Secretary or, in his absence or inability to act, the person whom the chairman of the meeting shall appoint secretary of the meeting shall act as secretary of the meeting and keep the minutes thereof.

SECTION 8. Order of Business. The order of business at all meetings of the stockholders shall be as determined by the chairman of the meeting.

SECTION 9. Voting. Except as otherwise provided by statute or the Certificate of Incorporation, each stockholder of the Corporation shall be entitled at each meeting of stockholders to one vote for each share of capital stock of the Corporation standing in his name on the record of stockholders of the Corporation:

(a) on the date fixed pursuant to the provisions of Section 7 of Article V of these By-Laws as the record date for the determination of the stockholders who shall be entitled to notice of and to vote at such meeting; or

(b) if no such record date shall have been so fixed, then at the close of business on the day next preceding the day on which notice thereof shall be given, or, if notice is waived, at the close of business on the date next preceding the day on which the meeting is held.

Each stockholder of record entitled to vote at a meeting of stockholders may vote in person (including by means of remote communications, if any, by which stockholders may be deemed to be present in person and vote at such meeting) or may authorize another person or persons to vote for such stockholder by a proxy executed or transmitted in a manner permitted by the General Corporation Law of the State of Delaware by the stockholder or the stockholder's authorized agent and delivered (including by means of electronic or telephonic transmission) to the Secretary of the Corporation. No such proxy shall be voted upon after three years from the date of its execution, unless the proxy expressly provides for a longer period. Any such proxy shall be delivered to the secretary of the meeting at or prior to the time designated in the order of business for so delivering such proxies. When a quorum is present at any meeting, the vote of the holders of a majority of the voting power of the issued and outstanding stock of the Corporation entitled to vote thereon, present in person or represented by proxy, shall decide any question brought before such meeting, unless the question is one upon which by express provision of statute or of the Certificate of Incorporation or these By-Laws, a different vote is required, in which case such express provision shall govern and control the decision of such question. Unless required by statute, or determined by the chairman of the meeting to be advisable, the vote on any question need not be by ballot. On a vote by ballot, each ballot shall be signed by the stockholder voting, or by his proxy, if there be such proxy, and shall state the number of shares voted.

SECTION 10. Inspectors. The Board of Directors may, in advance of any meeting of stockholders, appoint one or more inspectors to act at such meeting or any adjournment thereof. If any of the inspectors so appointed shall fail to appear or act, the chairman of the meeting shall, or if inspectors shall not have been appointed, the chairman of the meeting may, appoint one or more inspectors. Each inspector, before entering upon the discharge of his duties, shall take and sign an oath faithfully to execute the duties of inspector at such meeting with strict impartiality and according to the best of his ability. The inspectors shall determine the number of shares of capital stock of the corporation outstanding and the voting power of each, the number of shares represented at the meeting, the existence of a quorum, the validity and effect of proxies, and shall receive votes, ballots or consents, hear and determine all challenges and questions arising in connection with the right to vote, count and tabulate all votes, ballots or consents, determine the results, and do such acts as are proper to conduct the election or vote with fairness to all stockholders. On request of the chairman of the meeting, the inspectors shall make a report in writing of any challenge, request or matter determined by them and shall execute a certificate of any fact found by them. No director or

candidate for the office of director shall act as an inspector of an election of directors. Inspectors need not be stockholders.

SECTION 11. Action by Consent. Whenever the vote of stockholders at a meeting thereof is required or permitted to be taken for or in connection with any corporate action, by any provision of statute or of the Certificate of Incorporation or of these By-Laws, the meeting and vote of stockholders may be dispensed with, and the action taken without such meeting and vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares of stock of the Corporation entitled to vote thereon were present and voted.

ARTICLE III

Board of Directors

SECTION 1. General Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors. The Board of Directors may exercise all such authority and powers of the corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by the stockholders.

SECTION 2. Number, Qualifications, Term of Office and Election. The number of directors constituting the initial Board of Directors shall be one. Thereafter, the number of directors may be fixed, from time to time, by the affirmative vote of a majority of the entire Board of Directors or by action of the stockholders of the Corporation. Any decrease in the number of directors shall be effective at the time of the next succeeding annual meeting of stockholders unless there shall be vacancies in the Board of Directors, in which case such decrease may become effective at any time prior to the next succeeding annual meeting to the extent of the number of such vacancies. Directors need not be stockholders. Except as otherwise provided by statute or these By-Laws, the directors (other than members of the initial Board of Directors) shall be elected at the annual meeting of stockholders. Each director shall hold office until his successor shall have been elected and qualified, or until his death, or until he shall have resigned, or have been removed, as hereinafter provided in these By-Laws.

Each director shall be elected by the vote of the majority of the votes cast with respect to that director's election at any meeting for the election of directors at which a quorum is present, provided that if the number of nominees exceeds the number of directors to be elected at such meeting (a "contested election"), the directors shall be elected by the vote of a plurality of the votes cast. For purposes of this Section 2, "a majority of the votes cast" shall mean that the number of votes cast "for" a director's election exceeds the number of votes cast "against" that director's election (with "abstentions" and "broker non-votes" not counted as a vote cast either "for" or "against" that director's election).

If, in an election that is not a contested election, an incumbent director does not receive a majority of the votes cast, such director shall submit an irrevocable resignation to the Nominating and Corporate Governance Committee, or such other committee designated by the Board of Directors pursuant to these By-laws. Such committee shall make a recommendation to the Board of Directors as to whether to accept or reject the resignation of such incumbent director, or whether other action should be taken. The Board of Directors shall act on the resignation, taking into account the committee's recommendation, and publicly disclose (by filing an appropriate disclosure with the Securities and Exchange Commission) its decision regarding the resignation within ninety days following certification of the election results. The committee in making its recommendation and the Board of Directors in making its decision each may consider any factors and other information that they consider appropriate and relevant.

If the Board of Directors accepts a director's resignation pursuant to this Section 2, or if a nominee for director is not elected and the nominee is not an incumbent director, then the Board of Directors may fill the resulting vacancy pursuant to Section 11 of Article III of these By-laws.

SECTION 3. Place of Meetings. Meetings of the Board of Directors shall be held at such place or places, within or without the State of Delaware, as the Board of Directors may from time to time determine or as shall be specified in the notice of any such meeting.

SECTION 4. Annual Meeting. The Board of Directors shall meet for the purpose of organization, the election of officers and the transaction of other business, as soon as practicable after each annual meeting of stockholders, on the same day and at the same place where such annual meeting shall be held. Notice of such meeting need not be given. In the event such annual meeting is not so held, the annual meeting of the Board of Directors may be held at such other time or place (within or without the State of Delaware) as shall be specified in a notice thereof given as hereinafter provided in Section 7 of this Article III.

SECTION 5. Regular Meetings. Regular meetings of the Board of Directors shall be held at such time and place as the Board of Directors may fix. If any day fixed for a regular meeting shall be a legal holiday at the place where the meeting is to be held, then the meeting which would otherwise be held on that day shall be held at the same hour on the next succeeding business day. Notice of regular meetings of the Board of Directors need not be given except as otherwise required by statute or these By-Laws.

SECTION 6. Special Meetings. Special meetings of the Board of Directors may be called by the Chairman of the Board, if one shall have been elected, or by two or more directors of the Corporation or by the President.

SECTION 7. Notice of Meetings. Notice of each special meeting of the Board of Directors (and of each regular meeting for which notice shall be required) shall be given by the Secretary as hereinafter provided in this Section 7, in which notice shall be stated the time and place of the meeting. Except as otherwise required by these By-Laws, such notice need not state the purposes of such meeting. Notice of each such meeting shall be mailed, postage prepaid, to each director, addressed to him at his residence or usual place of business, by first class mail, at least two days before the day on which such meeting is to be held, or shall be sent addressed to him at such place by telegraph, cable, telex, telecopier, facsimile or other similar means, or be delivered to him personally or be given to him by telephone or other similar means, at least twenty-four hours before

the time at which such meeting is to be held. Notice of any such meeting need not be given to any director who shall, either before or after the meeting, submit a signed waiver of notice or who shall attend such meeting, except when he shall attend for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

SECTION 8. Quorum and Manner of Acting. A majority of the entire Board of Directors shall constitute a quorum for the transaction of business at any meeting of the Board of Directors, and, except as otherwise expressly required by statute or the Certificate of Incorporation or these By-Laws, the act of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board of Directors. In the absence of a quorum at any meeting of the Board of Directors, a majority of the directors present thereat may adjourn such meeting to another time and place. Notice of the time and place of any such adjourned meeting shall be given to all of the directors unless such time and place were announced at the meeting at which the adjournment was taken, in which case such notice shall only be given to the directors who were not present thereat. At any adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally called. The directors shall act only as a Board of Directors and the individual directors shall have no power as such.

SECTION 9. Organization. At each meeting of the Board of Directors, the Chairman of the Board, if one shall have been elected, or, in the absence of the Chairman of the Board or if one shall not have been elected, the President (or, in his absence, another director chosen by a majority of the directors present) shall act as chairman of the meeting and preside thereat. The Secretary or, in his absence, any person appointed by the chairman shall act as secretary of the meeting and keep the minutes thereof.

SECTION 10. Resignations. Any director of the Corporation may resign by delivering a resignation in writing or by electronic transmission to the Corporation at its principal office or to the Chairman of the Board, the President or the Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some later time or upon the happening of some later event, including, in the case of a resignation delivered pursuant to Section 2 of this Article III, upon the acceptance of such resignation by the Board of Directors.

SECTION 11. Vacancies. Any vacancy in the Board of Directors, whether arising from death, resignation, removal (with or without cause), an increase in the number of directors or any other cause, may be filled by the vote of a majority of the directors then in office, though less than a quorum, or by the sole remaining director or by the stockholders at the next annual meeting thereof or at a special meeting thereof. Each director so elected shall hold office until his successor shall have been duly elected and qualified.

SECTION 12. Removal of Directors. Any director may be removed, either with or without cause, at any time, by the holders of a majority of the voting power of the issued and outstanding capital stock of the Corporation entitled to vote at an election of directors.

SECTION 13. Compensation. The Board of Directors shall have authority to fix the compensation for their services as directors and members of committees of the Board of Directors, together with reimbursement of expenses for attendance at meetings of the Board of Directors and for attendance at meetings of committees of the Board of Directors when such committee meetings

are held at a time other than in conjunction with the meetings of the Board of Directors. Any director may also serve the Corporation in any other capacity and may receive compensation therefor.

SECTION 14. Committees. The Board of Directors may, by resolution passed by a majority of the entire Board of Directors, designate one or more committees, including an executive committee, each committee to consist of one or more of the directors of the Corporation. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In addition, in the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

Except to the extent restricted by statute or the Certificate of incorporation, each such committee, to the extent provided in the resolution creating it, shall have and may exercise all the powers and authority of the Board of Directors and may authorize the seal of the Corporation to be affixed to all papers which require it. Each such committee shall serve at the pleasure of the Board of Directors and have such name as may be determined from time to time by resolution adopted by the Board of Directors. Each committee shall keep regular minutes of its meetings and report the same to the Board of Directors.

SECTION 15. Action by Consent. Unless restricted by the Certificate of Incorporation, any action required or permitted to be taken by the Board of Directors or any committee thereof may be taken without a meeting if all members of the Board of Directors or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the written consents or electronic transmissions are filed with the minutes of the proceedings of the Board of Directors or such committee, as the case may be. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

SECTION 16. Telephonic Meeting. Unless restricted by the Certificate of Incorporation, any one or more members of the Board of Directors or any committee thereof may participate in a meeting of the Board of Directors or such committee by means of a conference telephone or similar communications equipment by means of which all persons present at the meeting are able to hear and participate in such meeting. Participation by such means shall constitute presence in person at a meeting.

ARTICLE IV

Officers

SECTION 1. Number and Qualifications. The officers of the Corporation shall be elected by the Board of Directors and shall include the Chairman of the Board, the President, one or more Vice-Presidents, the Chief Financial Officer, the Treasurer and the Secretary. If the Board of Directors wishes, it may also elect other officers (including one or more Assistant Treasurers and one or more Assistant Secretaries) as may be necessary or desirable for the business of the Corporation. Any two or more offices may be held by the same person, and no officer except the Chairman of the Board need be a director. Each officer shall hold office until his successor shall

have been duly elected and shall have qualified, or until his death, or until he shall have resigned or have been removed, as hereinafter provided in these By-Laws.

SECTION 2. Resignations. Any officer of the Corporation may resign by delivering a resignation in writing or by electronic transmission to the Corporation at its principal office or to the President or the Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some later time or upon the happening of some later event.

SECTION 3. Removal. Any officer of the Corporation may be removed, either with or without cause, at any time, by the Board of Directors at any meeting thereof.

SECTION 4. Chairman of the Board. The Chairman of the Board, if one shall have been elected, shall be a member of the Board of Directors, an officer of the Corporation and, if present, shall preside at each meeting of the Board of Directors or the stockholders. He shall advise and counsel with the President and, in the President's absence, with other executives of the Corporation, and shall perform such other duties as may from time to time be assigned to him by the Board of Directors.

SECTION 5. [This section is intentionally omitted.]

SECTION 6. The President. The President shall, in the absence of the Chairman of the Board or if the Chairman of the Board shall not have been elected, preside at each meeting of the Board of Directors or the stockholders. The President shall be the chief executive officer of the Corporation and shall perform all duties incident to the office of President and chief executive officer and such other duties as may from time to time be assigned to him by the Board of Directors.

SECTION 7. Vice-President. Each Vice-President shall perform all such duties as from time to time may be assigned to him by the Board of Directors or the President. At the request of the President or in the President's absence or in the event of the President's inability or refusal to act, the Vice-President, or if there shall be more than one, the Vice-Presidents in the order determined by the Board of Directors (or if there be no such determination, then the Vice-Presidents in the order of their election), shall perform the duties of the President, and, when so acting, shall have the powers of and be subject to the restrictions placed upon the President in respect of the performance of such duties.

SECTION 8. Chief Financial Officer. The Chief Financial Officer shall perform all such duties as may from time to time be assigned to him by the Board of Directors.

SECTION 9. Treasurer. The Treasurer shall:

(a) have charge and custody of, and be responsible for, all the funds and securities of the Corporation;

(b) keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation;

(c) deposit all moneys and other valuables to the credit of the Corporation in such depositaries as may be designated by the Board of Directors or pursuant to its direction;

(d) receive, and give receipts for, moneys due and payable to the Corporation from any source whatsoever;

(e) disburse the funds of the Corporation and supervise the investment of its funds, taking proper vouchers therefor;

(f) render to the Board of Directors, whenever the Board of Directors may require, an account of the financial condition of the Corporation; and

(g) in general, perform all duties incident to the office of Treasurer and such other duties as from time to time may be assigned to him by the Board of Directors.

SECTION 10. Secretary. The Secretary shall:

(a) keep or cause to be kept in one or more books provided for the purpose, the minutes of all meetings of the Board of Directors, the committees of the Board of Directors and the stockholders;

(b) see that all notices are duly given in accordance with the provisions of these By-Laws and as required by law;

(c) be custodian of the records and the seal of the corporation and affix and attest the seal to all certificates for shares of the Corporation (unless the seal of the Corporation on such certificates shall be a facsimile, as hereinafter provided) and affix and attest the seal to all other documents to be executed on behalf of the Corporation under its seal;

(d) see that the books, reports, statements, certificates and other documents and records required by law to be kept and filed are properly kept and filed; and

(e) in general, perform all duties incident to the office of Secretary and such other duties as from time to time may be assigned to him by the Board of Directors.

SECTION 11. The Assistant Treasurer. The Assistant Treasurer, or if there shall be more than one, the Assistant Treasurers in the order determined by the Board of Directors (or if there be no such determination, then in the order of their election), shall, in the absence of the Treasurer or in the event of his inability or refusal to act, perform the duties and exercise the powers of the Treasurer and shall perform such other duties as from time to time may be assigned by the Board of Directors.

SECTION 12. The Assistant Secretary. The Assistant Secretary, or if there shall be more than one, the Assistant Secretaries in the order determined by the Board of Directors (or if there be no such determination, then in the order of their election), shall, in the absence of the secretary or in

the event of his inability or refusal to act, perform the duties and exercise the powers of the Secretary and shall perform such other duties as from time to time may be assigned by the Board of Directors.

SECTION 13. Officers' Bonds or Other Security. If required by the Board of Directors, any officer of the Corporation shall give a bond or other security for the faithful performance of his duties, in such amount and with such surety as the Board of Directors may require.

SECTION 14. Compensation. The compensation of the officers of the Corporation for their services as such officers shall be fixed from time to time by the Board of Directors. An officer of the Corporation shall not be prevented from receiving compensation by reason of the fact that he is also a director of the Corporation.

ARTICLE V

Stock Certificates and Their Transfer

SECTION 1. Stock Certificates. Every holder of stock in the Corporation shall be entitled to have a certificate, signed by, or in the name of the Corporation by, the Chairman of the Board or the President or a Vice-President and by the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary of the Corporation, certifying the number of shares owned by him in the Corporation. If the Corporation shall be authorized to issue more than one class of stock or more than one series of any class, the designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restriction of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate which the Corporation shall issue to represent such class or series of stock, provided that, except as otherwise provided in Section 202 of the General Corporation Law of the State of Delaware, in lieu of the foregoing requirements, there may be set forth on the face or back of the certificate which the Corporation shall issue to represent such class or series of stock, a statement that the Corporation will furnish without charge to each stockholder who so requests the designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

SECTION 2. Facsimile Signatures. Any or all of the signatures on a certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer, transfer agent or registrar at the date of issue.

SECTION 3. Lost Certificates. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen, or destroyed. When authorizing such issue of a new certificate or certificates, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen, or destroyed certificate or certificates, or his legal representative, to: (a) make proof in affidavit form that it has been lost, destroyed or wrongfully taken; (b) give to the Corporation a bond in such sum as it may direct sufficient to indemnify it against any claim that may be made against the Corporation on account of the alleged loss, theft or

destruction of any such certificate or the issuance of such new certificate; or (c) impose any other reasonable requirements.

SECTION 4. Transfers of Stock. Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the Corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its records; provided, however, that the corporation shall be entitled to recognize and enforce any lawful restriction on transfer. Whenever any transfer of stock shall be made for collateral security, and not absolutely, it shall be so expressed in the entry of transfer if, when the certificates are presented to the Corporation for transfer, both the transferor and the transferee request the Corporation to do so.

SECTION 5. Transfer Agents and Registrars. The Board of Directors may appoint, or authorize any officer or officers to appoint, one or more transfer agents and one or more registrars.

SECTION 6. Regulations. The Board of Directors may make such additional rules and regulations, not inconsistent with these By-Laws, as it may deem expedient concerning the issue, transfer and registration of certificates for shares of stock of the Corporation.

SECTION 7. Fixing the Record Date. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than sixty nor less than ten days before the date of such meeting, nor more than sixty days prior to any other action. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

SECTION 8. Registered Stockholders. The Corporation shall be entitled to recognize the exclusive right of a person registered on its records as the owner of shares of stock to receive dividends and to vote as such owner, shall be entitled to hold liable, in accordance with Sections 162-63 of the General Corporation Law of the State of Delaware, for calls and assessments a person registered on its records as the owner of shares of stock, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares of stock on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VI

Indemnification of Directors and Officers

SECTION 1. General. The corporation shall indemnify, to the fullest extent permitted by the General Corporation Law of the State of Delaware, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation) by reason of the fact that he is or was a director, officer, employee or agent of the

corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of a nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful.

SECTION 2. Derivative Actions. The Corporation shall indemnify, to the fullest extent permitted by the General Corporation Law of the State of Delaware, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that he is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by him in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation, provided that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

SECTION 3. Indemnification in Certain cases. To the extent that a director, officer, employee or agent of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in Sections 1 and 2 of this Article VI, or in defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith.

SECTION 4. Procedure. Any indemnification under Sections 1 and 2 of this Article VI (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the director, officer, employee or agent is proper in the circumstances because he has met the applicable standard of conduct set forth in such Sections 1 and 2. Such determination shall be made (a) by the Board of Directors by a majority vote of a quorum consisting of directors who were not parties to such action, suit or proceeding; or (b) if such a quorum is not obtainable or, even if obtainable, a quorum of disinterested directors so directs, by independent legal counsel in a written opinion; or (c) by the stockholders.

SECTION 5. Advances for Expenses. Expenses incurred in defending a civil or criminal action, suit or proceeding may be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of the director, officer,

employee or agent to repay such amount if it shall be ultimately determined that he is not entitled to be indemnified by the corporation as authorized in this Article VI.

SECTION 6. Rights Not-Exclusive. The indemnification and advancement of expenses provided by, or granted pursuant to, the other sections of this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any law, by-law, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in an official capacity and as to action in another capacity while holding such office.

SECTION 7. Insurance. The Corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the Corporation would have the power to indemnify him against such liability under the provisions of this Article VI.

SECTION 8. Definition of Corporation. For the purposes of this Article VI, references to “the Corporation” include all constituent corporations absorbed in a consolidation or merger as well as the resulting or surviving corporation so that any person who is or was a director, officer, employee or agent of such a constituent corporation or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise shall stand in the same position under the provisions of this Article VI with respect to the resulting or surviving corporation as he would if he had served the resulting or surviving corporation in the same capacity.

SECTION 9. Survival of Rights. The indemnification and advancement of expenses provided by, or granted pursuant to this Article VI shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

SECTION 10. Settlement or Claims. The Corporation shall not be liable to indemnify any director, officer, employee or agent under this Article VI (a) for any amounts paid in settlement of any action or claim effected without the Corporation’s written consent, which consent shall not be unreasonably withheld or (b) for any judicial award if the Corporation was not given a reasonable and timely opportunity, at its expense, to participate in the defense of such action.

SECTION 11. Effect of Amendment. Any amendment, repeal, or modification of this Article VI shall not adversely affect any right or protection of any director, officer, employee or agent existing at the time of such amendment, repeal, or modification.

SECTION 12. Subrogation. In the event of payment under this Article VI, the corporation shall be subrogated to the extent of such payment to all of the rights of recovery of the director, officer, employee or agent, as the case may be, who shall execute all papers required and shall do everything that may be necessary to secure such rights, including the execution of such documents necessary to enable the Corporation effectively to bring suit to enforce such rights.

SECTION 13. No Duplication of Payments. The Corporation shall not be liable under this Article VI to make any payment in connection with any claim made against any director, officer, employee or agent to the extent such director, officer, employee or agent has otherwise actually received payment (under any insurance policy, agreement, vote, or otherwise) of the amounts otherwise indemnifiable hereunder.

ARTICLE VII

General Provisions

SECTION 1. Dividends. Subject to the provisions of statute and the Certificate of Incorporation, dividends upon the shares of capital stock of the Corporation may be declared by the Board of Directors at any regular or special meeting. Dividends may be paid in cash, in property or in shares of stock of the Corporation, unless otherwise provided by statute or the Certificate of Incorporation.

SECTION 2. Reserves. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors may, from time to time, in its absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation or for such other purpose as the Board of Directors may think conducive to the interests of the Corporation. The Board of Directors may modify or abolish any such reserves in the manner in which it was created.

SECTION 3. Seal. The seal of the Corporation shall be in such form as shall be approved by the Board of Directors. The Corporate Seal shall be affixed and attached by the Secretary or an Assistant Secretary upon such instruments or documents as may be deemed appropriate, but the presence or absence of such seal on any instrument shall not affect its character or validity or legal effect in any respect.

SECTION 4. Fiscal Year. The fiscal year of the Corporation shall be fixed, and once fixed, may thereafter be changed, by resolution of the Board of Directors.

SECTION 5. Checks, Notes, Drafts, Etc. All checks, notes, drafts or other orders for the payment of money of the Corporation shall be signed, endorsed or accepted in the name of the Corporation by such officer, officers, person or persons as from time to time may be designated by the Board of Directors or by an officer or officers authorized by the Board of Directors to make such designation.

SECTION 6. Execution of Contracts, Deeds, Etc. The Board of Directors may authorize any officer or officers, agent or agents, in the name and on behalf of the Corporation to enter into or execute and deliver any and all deeds, bonds, mortgages, contracts and other obligations or instruments, and such authority may be general or confined to specific instances.

SECTION 7. Voting of Stock in Other Corporations. Unless otherwise provided by resolution of the Board of Directors, the Chairman of the Board or the President, from time to time, may (or may appoint one or more attorneys or agents to) cast the votes which the Corporation may be entitled to cast as a shareholder or otherwise in any other corporation, any of whose shares or

securities may be held by the Corporation, at meetings of the holders of the shares or other securities of such other corporation. In the event one or more attorneys or agents are appointed, the Chairman of the Board or the President may instruct the person or persons so appointed as to the manner of casting such votes or giving such consent. The Chairman of the Board or the President may, or may instruct the attorneys or agents appointed to, execute or cause to be executed in the name and on behalf of the Corporation and under its seal or otherwise, such written proxies, consents, waivers or other instruments as may be necessary or proper in the circumstances.

SECTION 8. Exclusive Forum. Unless the Corporation consents in writing to the selection of an alternative forum, the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director or officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation or any director or officer or other employee of the Corporation arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's Certificate of Incorporation or Bylaws (as either may be amended from time to time), or (iv) any action asserting a claim against the Corporation or any director or officer or other employee of the Corporation governed by the internal affairs doctrine shall be a state court located within the State of Delaware (or, if no state court located within the State of Delaware has jurisdiction, the federal district court for the District of Delaware).

ARTICLE VIII

Amendments

These By-Laws may be amended or repealed or new by-laws adopted (a) by action of the stockholders entitled to vote thereon at any annual or special meeting of stockholders or (b) if the Certificate of Incorporation so provides, by action of the Board of Directors at a regular or special meeting thereof. Any by-law made by the Board of Directors may be amended or repealed by action of the stockholders at any annual or special meeting of stockholders.

SUBSIDIARIES OF ATLANTIC TELE-NETWORK, INC.

	<u>Jurisdiction of Incorporation</u>	<u>Other name(s) under which entity does business</u>
Ahana Renewables, LLC(1)	Delaware	Ahana, Vibrant
GLC-(CA) SDCCD, LLC	Delaware	Ahana, Ahana Renewables
GLC Solar Fund II, LLC(2)	Delaware	Ahana, Ahana Renewables
GLC Solar Fund V, LLC(3)	Delaware	Ahana, Ahana Renewables
GLC Solar Fund VI, LLC(4)	Delaware	Ahana, Ahana Renewables
GLC Solar Fund VII, LLC(5)	Delaware	Ahana, Ahana Renewables
Atlantic Teleconnection Operating Company Limited	British Virgin Islands	GTT
Atlantic Teleconnection Holdings Company Limited	British Virgin Islands	GTT
ATN Horizons, LLC. (9)	Delaware	Ahana, Ahana Renewables
Bermuda Digital Communications, Ltd.	Bermuda	CellOne
One Communications, LLC (11)	Bermuda	One Communications
ATN Overseas Holdings, Ltd	Bermuda	One Communications
Logic Communications, Ltd	Bermuda	One Communications
ATN VI Holdings, LLC (10)	Delaware	Innovative
Vitelcom Cellular, Inc.	U.S. Virgin Islands	Innovative Wireless
Commnet Wireless, LLC(6)	Delaware	Choice Wireless, Commnet
Elbert County Wireless, LLC	Colorado	Commnet
Mora Valley Wireless, LP	Delaware	Commnet
Commnet Four Corners, LLC	Delaware	Commnet
Commnet of Nevada, LLC	Delaware	Commnet
Excomm, LLC	Delaware	Commnet
NTUA Wireless, LLC	Delaware	NTUA Wireless
Guyana Telephone and Telegraph Company Limited	Guyana	Cellink, E-magine, GT&T
GTT International Service SRL	Barbados	GTT
ION Holdco, LLC(7)	Delaware	ION
Sovernet Holding Corp.(8)	Vermont	Vermont Fiberconnect, Sovernet

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- (1) Includes thirteen consolidated wholly-owned subsidiaries also providing renewable energy services under the “Ahana Renewables” brand name in the United States and six wholly-owned subsidiaries under the “Vibrant Energy” brand name in Cayman, Singapore, and India.
- (2) Includes six consolidated wholly-owned subsidiaries also providing renewable energy services under the “Ahana Renewables” brand name in the United States.
- (3) Includes five consolidated wholly-owned subsidiaries also providing renewable energy services under the “Ahana Renewables” brand name in the United States.
- (4) Includes four consolidated wholly-owned subsidiaries also providing renewable energy services under the “Ahana Renewables” brand name in the United States.
- (5) Includes seven consolidated wholly-owned subsidiaries also providing renewable energy services under the “Ahana Renewables” brand name in the United States.
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- (6) Includes seventeen consolidated wholly-owned subsidiaries also providing wholesale wireless voice and data services under the “Commnet” brand name in the United States.
 - (7) Includes one consolidated wholly-owned subsidiary also providing wireline services under the “ION” brand name in the United States.
 - (8) Includes three consolidated wholly-owned subsidiaries also providing wireline services under the “Sovernet” brand name in the United States.
 - (9) Includes one consolidated wholly owned subsidiary also providing renewable energy services under the “Ahana Renewables” brand name in the United States.
 - (10) Includes ten consolidated wholly owned subsidiary also providing wireline and wireless services under the “Innovative” brand name in the U.S. Virgin Islands.
 - (11) Includes fifteen consolidated wholly owned subsidiary also providing wireline and wireless services under the “One Communications” brand name in the Bermuda and Cayman
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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-190523) and Form S-8 (Nos. 333-62416, 333-125179, 333-150940 and 333-174935) of ATN International, Inc. of our report dated March 1, 2017 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
March 1, 2017

**CERTIFICATIONS PURSUANT TO
RULE 13a-14(a) OR RULE 15d-14(a),
AS ADOPTED PURSUANT TO
RULE 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Michael T. Prior, certify that:

1. I have reviewed this annual report on Form 10-K of ATN International, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weakness in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 1, 2017

By: /s/ Michael T. Prior

Michael T. Prior
President and Chief Executive Officer

**CERTIFICATIONS PURSUANT TO
RULE 13a-14(a) OR RULE 15d-14(a),
AS ADOPTED PURSUANT TO
RULE 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Justin D. Benincasa, certify that:

1. I have reviewed this annual report on Form 10-K of ATN International, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weakness in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 1, 2017

By: /s/ Justin D. Benincasa

Justin D. Benincasa
Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the annual report on Form 10-K of ATN International, Inc. (the "Company") for the period ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Michael T. Prior, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 1, 2017

/s/ Michael T. Prior

Michael T. Prior
President and Chief Executive Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the annual report on Form 10-K of ATN International, Inc. (the "Company") for the period ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Justin D. Benincasa, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 1, 2017

/s/ Justin D. Benincasa

Justin D. Benincasa
Chief Financial Officer
