

**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, 2019

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	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$.01 per share	ATNI	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 every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

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

Large accelerated filer ☒

Accelerated filer ☐

Non-accelerated filer ☐

Smaller reporting company ☐

Emerging growth company ☐

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

Indicate by check mark whether the registrant 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 28, 2019, was approximately \$632 million based on the closing price of the registrant's Common Stock as reported on the Nasdaq Global Select Market.

As of March 2, 2020, the registrant had 16,001,433 outstanding shares of Common Stock, \$.01 par value.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Definitive Proxy Statement for the 2020 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 forward-looking statements relating to, among other matters, our future financial performance and results of operations including revenue expectations and capital expenditures for 2020; the competitive environment in our key markets, demand for our services and industry trends; the impact of federal support program revenues and the FirstNet transaction; our growth opportunities; our expectations for macro-economic growth in certain of our markets; and management’s plans and strategy for the future. 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) the general performance of our operations, including operating margins, revenues, capital expenditures, and the future growth and retention of our major customers and subscriber base; (2) government regulation of our businesses, which may impact our availability to participate in government subsidy and incentive programs, our FCC and other telecommunications licenses, or our renewables businesses; (3) our reliance on a limited number of key suppliers and vendors for timely supply of equipment and services relating to our network infrastructure; (4) economic, political and other risks and opportunities facing our operations; (5) our ability to maintain favorable roaming arrangements, receive roaming traffic and satisfy the needs and demands of our major wireless customers; (6) our ability to efficiently and cost-effectively upgrade our networks and IT platforms to address rapid and significant technological changes in the telecommunications industry and protect our system and data from cyber threats; (7) the loss of or an inability to recruit skilled personnel in our various jurisdictions, including key members of management; (8) our ability to expand and obtain funding for our renewable energy business; (9) our ability to find investment or acquisition or disposition opportunities that fit the strategic goals of the Company; (10) the occurrence of weather events and natural catastrophes; (11) increased competition; (12) the adequacy and expansion capabilities of our network capacity and customer service system or renewable energy development pipeline to support our customer growth; (13) our continued access to capital and credit markets; and (14) the risk of currency fluctuation for those markets in which we operate. 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.

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

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

PART I

ITEM 1. BUSINESS

Overview

We are a holding company that, directly and through our subsidiaries, owns and operates telecommunications businesses in North America, the Caribbean and Bermuda as well as a renewable energy business in India. We were incorporated in Delaware in 1987, began trading publicly in 1991 and spun off more than half of our operations to stockholders in 1998. Since that time, we have engaged in many strategic acquisitions and

investments to help grow our operations, using the cash generated from our established operating units to re-invest in our existing businesses, to make strategic investments in additional businesses, and to return cash to our investors. We have built, and seek to maintain, resources to support our operating subsidiaries and to improve their customer acquisition, retention, and satisfaction while maintaining optimal operating efficiencies. We look for businesses that offer growth opportunities or potential strategic benefits, but require additional capital investment in order to execute on their business plans. We hold controlling positions with respect to some of our investments and non- controlling positions in others. Our investments in earlier stage businesses frequently offer a product and service development component in addition to the prospect of generating returns on our invested capital. For a discussion of the risks involved in our investment strategy, see “*Risk Factors—We are actively evaluating investment, acquisition and other strategic opportunities, which may affect our long-term growth prospects.*”

We review our operations in three operating segments to facilitate both our internal and investor presentations of our results. These three operating segments are as follows:

- **International Telecom.** Our international wireless services include voice and data services to retail customers in Bermuda, Guyana and the US Virgin Islands. Our international wireline services include voice and data services in Bermuda, the Cayman Islands, Guyana and the US Virgin Islands, as well as video services in Bermuda, the Cayman Islands, and the US Virgin Islands. In addition, we offer managed information technology services to commercial customers and provide wholesale long-distance voice services to other telecommunications carriers in the countries in which we offer international wireline services.
- **US Telecom.** In the United States, we offer wireless and wireline services. We offer wholesale wireless voice and data roaming services and lease critical network infrastructure such as towers and transport facilities to national, regional, local and selected international wireless carriers in rural markets located principally in the Southwest United States. We also provide consumer and enterprise mobile and fixed telecommunications services in certain areas where we offer those wholesale services and wholesale long-distance wireline voice services to telecommunications carriers.
- **Renewable Energy.** In India, we provide distributed generation solar power to commercial and industrial customers. Through November 6, 2018, we also provided distributed generation solar power in the United States in Massachusetts, California and New Jersey.

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, 2019:

Segment	Services	Markets	Tradenames
International Telecom . . .	Wireline	Bermuda, Cayman Islands, Guyana, US Virgin Islands	Fireminds, GTT+, One, Logic, Viya
	Wireless	Bermuda, Guyana, US Virgin Islands	GTT+, One, Viya
	Video Services	Bermuda, Cayman Islands, US Virgin Islands	Logic, One, Viya
US Telecom	Wireless	United States (rural markets)	Choice, Choice NTUA Wireless, Commnet, WestNet, Geoverse
	Wireline	United States	Essexel, Deploycom
Renewable Energy	Solar	India	Vibrant Energy

We actively evaluate potential acquisitions, investment opportunities and other strategic transactions, both domestic and international, that meet our return on investment and other criteria. In addition, we consider non-controlling investments in earlier stage businesses that we consider strategically relevant, and which may offer long-term growth potential for us, either individually, or as research and development businesses that can support our operating subsidiaries in new product and service development and offerings. 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 further information about our financial segments and geographical information about our operating revenues and assets, see Notes 1 and 17 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. We take a long-term view and are willing to consider more difficult operating or political environments. Our businesses typically have or develop strong local brand identities that help them become leaders in the markets they serve. By providing access to low-cost capital, leveraging local brand identities and market knowledge and supplementing the business with our operational capabilities and experience at the holding company level, we are able to take on more complex, unproven markets at a more attractive value entry point. We strive to improve and expand our product and service offerings in the locations we serve in order to better satisfy customer needs, expand our customer bases and revenues and ensure the business is efficient and economically viable.
- ***Provide Operational Expertise in Collaboration 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 or markets in which we operate, and who have local credibility. By maintaining these relationships and leveraging our comprehensive management experience and operational, technical, and financial expertise, we can assist these local management teams in further improving operations and growing their businesses.
- ***Maintain a Disciplined Approach to Capital Allocation.*** We carefully assess the potential for cash flow 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 long-term revenue and cash flow potential. We consider new investments, acquisitions and dispositions on a disciplined, return-on-investment basis. More recently, we have made multiple investments in earlier stage businesses in all three operating segments (International and US Telecom and Renewable Energy) that we consider strategically relevant and that have the potential to provide a platform for future organic growth. Additionally, these investments, some of which are non-controlling investments, can provide a variety of benefits that enhance the potential to expand our business, including providing an entry point into emerging sectors of our existing businesses, as well as enhancing our product offerings, providing visibility into newer technologies and establishing and enhancing strategic relationships.

Recent Acquisitions

Platform Investments

International Telecom

In 2017, we completed our investment in a technology solutions business based in Bermuda that provides a variety of cloud-based managed services and information technology solutions for enterprise-hosted software applications.

In 2017, we also made a minority investment in an Australian-based tower operator.

U.S. Telecom

During the second quarter of 2018, we invested in a new platform, based in the United States, to develop in-building wireless network technology that enables building owners to capitalize on the growing demand for better indoor wireless solutions. Also during the second quarter of 2018, we provided funding for another new platform, based in the United States, seeking to “build to suit” large scale fiber networks to serve the telecommunications and content provider industries in need of lower latency long haul fiber transit services.

Dispositions

International Telecom

On August 18, 2017, we completed the sale of the Viya cable operations located in the British Virgin Islands.

On January 3, 2017, we completed the sale of the Viya cable operations located in St. Maarten.

These dispositions do not qualify as discontinued operations because the dispositions did not represent a strategic shift that had a major effect on our operations and financial results.

U.S. Telecom

On March 8, 2017, we completed the sale of our integrated voice and data communications and wholesale transport businesses in New England and New York (the “Sovernet Transaction”). This disposition did not qualify as discontinued operations because the disposition did not represent a strategic shift that has a major effect on our operations and financial results.

Renewable Energy (U.S. Operations)

On November 6, 2018, we completed the sale of our U.S. solar business that owned and managed distributed generation solar power projects operated under the Ahana name in Massachusetts, California and New Jersey. The transaction had a total value of approximately \$122.6 million, which included a cash purchase price of \$65.3 million and the assumption of approximately \$57.3 million in debt, which was subject to certain other post-closing adjustments.

Our Telecommunications Services

In addition to managing and reviewing our results by operating segment, we also evaluate our results by service, namely wireless and wireline telecommunications, as well as renewable energy. We provide mobile wireless voice and data communications services in Bermuda, Guyana and the United States.

Our International Telecom segment includes wireless and wireline operations in Guyana, Bermuda, the US Virgin Islands and the Cayman Islands. Our revenues from our International Telecom segment were approximately 74%, 70% and 63% of our consolidated revenues for fiscal years 2019, 2018 and 2017, respectively. Our US Telecom segment

includes wireless and wireline operations in the mainland United States. Our revenues from our US Telecom segment were approximately 25%, 26% and 33% of our consolidated revenues for fiscal years 2019, 2018 and 2017, respectively.

International Telecom Segment

Wireless Services

We provide wireless voice and data service to retail and business customers in Bermuda under the “One” brand name, in Guyana under the “GTT” brand name and in the US Virgin Islands under the “Viya” brand name. We also provide roaming services for many of the largest US providers’ customers visiting these locations. As of December 31, 2019, we had approximately 284,000 wireless subscribers in our International Telecom segment and over 87% of those 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 voice minutes, text messaging, a given amount of data and other features that recur on a monthly basis, which services are billed at the end of the service period. 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 most markets, we also provide certain homes and businesses with fixed wireless services including high speed internet.

Network. We currently operate multiple advanced wireless voice and data technologies in our international markets in the 700, 850, 900, 1800, 1900 and 2500 MHz frequency bands, including GSM/EDGE, UMTS/HSPA+, and LTE. We have extensive backbone facilities linking our sites, switching facilities and international interconnection points. Out-of- territory connectivity is provided by leased and owned undersea 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, by purchasing prepaid calling cards, or via mobile or web-based apps. We advertise frequently through print and electronic media and radio station spots and we 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 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 markets 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 US national operators.

Wireline Services

Voice services. We offer voice services that include local exchange, regional and long distance calling and voice messaging services in Bermuda, Guyana, the US Virgin Islands, and in other smaller markets in the Caribbean and the United States. As of December 31, 2019, we had an aggregate of approximately 167,000 access lines in service in our markets, which represent both residential and commercial subscribers. Across our international

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 voice and data services into and out of the country, and in the US 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' countries 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 countries 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. As of December 31, 2019, we had approximately 130,000 Internet customers across our markets.

Video services. We also offer video services over our coaxial cable and fiber-optic networks in our international markets. In the US Virgin Islands we are the only authorized video services operator and are a provider of video services to customers in Bermuda. As of December 31, 2019, we had approximately 38,000 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 US 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 US 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 in the US Virgin Islands with speeds up to 100 Mbps for residential customers. Following Hurricanes Irma and Maria in 2017 (collectively, the "Hurricanes"), service to our customers over the HFC network was impacted due to both the loss of power and damage to our network. While we have substantially completed remediation efforts to our network, it may take significant time to return to pre-hurricane revenue levels.

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 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, including Digicel, with respect to various products. In 2016, we acquired our wireline businesses in Bermuda and the US 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. In 2017, our competition in Bermuda made substantial additional wireline network investments and began offering video services and competitive high speed internet services. We believe our breadth of services and local economies of scale 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, pursuant to a license from the Government of Guyana. 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."*

Impact of Hurricanes

During September 2017, the US Virgin Islands economy, our customer base and our operations were severely impacted by Hurricanes Irma and Maria (collectively, the "Hurricanes"). Our wireless and wireline networks and commercial operations were all severely damaged by these storms and as a result of the significant damage to the wireline network and the lack of consistent commercial power in the territory, we were unable to provide most of our wireline services, which comprise the majority of our revenue in this business, from mid-September 2017 and through most of 2018. During the year ended December 31, 2017, we recorded a net pre-tax loss within our consolidated statement of operations of \$4.0 million related to the impact of the Hurricanes. This loss consisted of \$35.4 million for the write off of damaged assets, net of insurance recoveries of \$34.6 million which were received in February 2018. This loss also included \$3.2 million of additional operating expenses that were specifically incurred to address the impact of the Hurricanes.

During the year ended December 31, 2018, we received \$15.5 million in additional funding from the Federal Communications Commission's ("FCC") Universal Service Fund ("USF") to further subsidize our operations in the US Virgin Islands that was recorded as revenue. This level of additional funding is not expected to continue in future periods.

During the years ended December 31, 2019, 2018 and 2017, we spent \$0.1 million, \$80.2 million and \$8.6 million, respectively, for network restoration and resiliency enhancements that allowed the reconnection of a significant majority of affected households and businesses. Our wireline network restoration work is complete, however, whether our revenue recovers to pre-Hurricane levels may be impacted by population movements, the degree of the negative economic impact of the Hurricanes on the local economy, and our subscriber base's future appetite for wireline services.

US Telecom Segment

Wireless Services

Services. 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 and in 2018, we invested in a new platform to develop in-building wireless network technology that enables building owners to capitalize on the growing demand for better indoor wireless solutions.

The revenue and profits of our US wholesale wireless business historically were 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. We are increasingly providing network infrastructure services such as tower leasing and transport facilities to our carrier partners to supplement our historic

revenue base. 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 40 United States-based wireless service providers and, as of December 31, 2019, had roaming arrangements with each of the four US national wireless network operators: Verizon Wireless, AT&T, Sprint and T-Mobile. Other than these 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 2019, the four national wireless service providers together accounted for a substantial portion of our wholesale wireless revenues, with AT&T and Verizon accounting for an aggregate of approximately 13% 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. 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 are 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, 2019, we owned and operated a total of 1,043 domestic base stations on 453 owned and leased sites, a Network Operations Center (or "NOC"), a switching center, and maintained a 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 2019, we continued to expand and improve our network and plan to test and commercially deploy Voice Over LTE ("VoLTE") technology by the end of 2020. VoLTE technology allows customers to utilize a 4G LTE network for both voice and data services, and the migration of our wholesale and retail subscribers to the more efficient 4G technology from 2G/3G technologies will result in increased spectrum availability.

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 US 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.

Occasionally, we have entered into buildout projects with existing carrier customers to help the carrier 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 for a predetermined price, depending on when the option to purchase is exercised. In July 2018, we completed the sale of approximately 100 cell sites, which generated approximately \$13.9 million of wholesale revenue during the year ended December 31, 2018. We did not receive any additional cash proceeds at closing from the sale and recorded a gain on the sale of \$15.2 million.

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.

FirstNet Agreement

In July 2019, we entered into a Network Build and Maintenance Agreement (the "FirstNet Agreement") with AT&T Mobility, LLC ("AT&T") to build a portion of AT&T's network for the First Responder Network Authority ("FirstNet") as well as a commercial wireless network in or near its current operating area in the Southwestern United States (the "FirstNet Transaction"). Pursuant to the FirstNet Agreement and subject to certain limitations contained therein, all cell sites must be completed and accepted within a specified period of time. We expect to recognize construction revenue of approximately \$80 million to \$85 million over the next two years that will be mainly offset by construction costs as sites are completed. Revenues from construction are expected to have minimal impact on operating income.

Following acceptance of a cell site, AT&T will own the cell site and we will assign to AT&T any third-party tower lease applicable to such cell site. If the cell site is located on a communications tower we own, AT&T will pay us pursuant to a separate lease agreement for an initial term of eight years. In addition to building the network, we will provide ongoing equipment and site maintenance and high capacity transport to and from these cell sites for an initial term ending in 2029.

AT&T will continue to use our wholesale domestic wireless network for roaming services at a fixed rate per site during the construction period until such time as the cell site is transferred to AT&T. Thereafter, revenue from the maintenance, leasing and transport services provided to AT&T is expected to offset revenue from wholesale wireless roaming services. We began receiving revenue from the FirstNet Transaction in the third quarter of 2019 and expect overall operating income contributions from the FirstNet Transaction to have a relatively steady impact from 2020 onwards.

Wireline Services

Sales and Marketing. Our wholesale transport and capacity customers are predominately communications carriers such as local exchange carriers, wireless carriers, internet service providers and interstate integrated providers.

Competition. Our wholesale competitors include Level 3 and Verizon Communications, other regional wholesale providers and cable television companies that operate fiber-optic networks.

On March 8, 2017, we completed the Sovernet Transaction. This disposition did not qualify as discontinued operations because the disposition did not represent a strategic shift that has a major effect on our operations and financial results. Also during the second quarter of 2018, we provided funding for another new platform, based in the United States, seeking to "build to suit" large scale fiber networks to serve the telecommunications and content provider industries in need of lower latency long haul fiber transit services.

Renewable Energy Services

United States

On November 6, 2018, we completed the sale of our US Solar Operations. The transaction had a total value of approximately \$122.6 million, which included a cash purchase price of \$65.3 million and the assumption of approximately \$57.3 million in debt.

Prior to the sale of the US Solar Operations, we owned and operated 29 commercial solar projects at 60 sites with an aggregate 46.93 megawatts DC peak (“MWp”) of electricity generating capacity. We owned these sites through various indirect subsidiaries that were formed for the purpose of financing the development of, and owning and operating, the sites.

Services. Historically, our US solar projects were in the “commercial and industrial” (“C&I”) sector of the solar market, which is distinguished from utilities and residential customers. Our customers or “offtakers” included high-credit quality corporate entities, utilities, schools, and municipalities, which purchased electricity from us under the terms of long-term power purchase agreements (“PPAs”). In the future, we may develop a new project portfolio of US facilities through additional investments with off-takers with strong credit ratings 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.

Infrastructure. Prior to the sale of the US Solar Operations, our Facilities were comprised of rooftop, ground-mounted and elevated solar support structure photovoltaic (“PV”) installations. Our facilities were 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 used crystalline silicon PV modules mounted in ballasted, tracking or roof penetrating fixed-tilt configurations.

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 US renewable energy operations. As of December 31, 2019, we have five power evacuating solar projects (each, a “Facility”) for a total of 52 megawatts (“MWp”). We currently have a pipeline of acquisition opportunities and new construction capacity of up to an additional 180MWp. Solar projects are capital intensive and the greatest challenge to increasing our operating portfolio is our ability to secure third party debt to fund the installation of the additional capacity. Our strategy is also to seek third party equity capital in order to build a larger portfolio and achieve economies of scale and diversification benefits. Our ability to expand our business 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—Risks Related to Our Renewable Energy Segment.*”

Market Opportunity. We believe solar power in India is an attractive investment opportunity for our Renewable Energy business due to the large unmet demand for electricity, coupled with ideal weather conditions for solar energy and the continued low cost to build, due to decreases in solar panel pricing and the decreasing cost of debt.

We consider India to be an attractive market for solar power without the need to rely on governmental subsidies. 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 principle 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.

Services. We own our Facilities through various Special Purpose Entities. We sell electricity to C&I customers and do not expect to sell power directly to residential customers in India. Our target C&I customers or “offtakers” for our initial Facilities are corporate entities, including banks, manufacturers, hotel groups, and hospital groups, which purchase electricity from us under the terms of PPAs. We focus on customers that have high credit ratings or that we otherwise believe to present limited credit risk. The PPA terms agreed upon with our initial customer base are typically five years in duration, with an option to extend for another five years and priced at rates with annual rate escalators, allowing customers to secure electricity at predictable and stable prices over the duration of their long-term contract. We have also executed PPAs with offtakers utilizing a “group captive” construct whereby our offtakers own an equity interest in certain of our projects. This arrangement enables us to extend the term of a PPA for such projects up to twenty five years in duration at predictable and stable prices. As such, we believe the PPAs provide us with high-quality contracted cash flows, which, although our customers may terminate the PPAs with one-year notice, we nevertheless expect will continue over their average remaining life. Our PPAs typically have penalties for the non-delivery of power and therefore, 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 confidence. On the other hand, if the offtaker fails to take the agreed quantum of power, we can levy a penalty equal to the loss of revenue we incurred due to such failure on the part of the offtaker. In the event of non-payment, current regulations allow us to sell power to any commercial or industrial customer within 500 kilometers of our grid connection and we would seek to sell the allotted power to a different customer.

In developing each solar project, we use in-house resources for development, engineering and project management and hire third party EPC contractors to construct our Facilities. We actively manage their performance through our in-house technical and quality assurance team. To date, we have financed the construction of our Facilities mainly with internal equity and intercompany debt and following the completion of construction, our goal is to secure project debt financing for each completed Facility and to use those proceeds towards the construction of additional Facilities in 2020.

Infrastructure. Our existing Facilities are located on land that we own and are comprised of ground-mounted solar “PV” installations. The majority of our Facilities are single-axis tracking systems to increase the generating capability of our Facilities. For a more detailed discussion of the risks associated with land procurement and ownership in India, see “*Risk Factors—Risks Related to Our Renewable Energy Segment.*” We manage our Facilities through third party operation and maintenance (“O&M”) contracts and our corporate staff tracks the data and services provided by the third-party service provider. Our internal asset management team is hands-on and works closely with third-party vendor partners to maintain performance.

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 Tier 1 PV modules supplied by GCL Systems, a Tier 1 Chinese module supplier. 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. 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 Renewable Energy Segment* — We face significant competition from traditional and renewable energy companies.”

Employees

As of December 31, 2019, we had approximately 1,700 employees, of whom approximately 700 were employed in the United States (including in the US Virgin Islands). At the holding company level, we employ our executive management team and staff. Approximately half of our Guyana and US Virgin Island full-time work forces are represented by unions. In addition, approximately 20% of our Bermuda full-time workforce is also represented by unions. We believe we have good relations with our employees.

Regulation

Telecom Regulation

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. Our wireless and wireline operations and our video services operations in the United States and the US Virgin Islands are governed by the Communications Act of 1934, as amended (“Communications Act”), the implementing regulations adopted thereunder by the FCC, including the Telecommunications Act of 1996, as well as judicial and regulatory decisions interpreting and implementing the Communications Act, and other federal, state, and local statutes and regulations. Our operations are also governed by certain foreign laws and regulations.

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.

US Federal Telecom Regulation

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 enhanced 911 (“E 911”); and the interconnection of communications networks in the United States.

Licenses. We provide our wireless services pursuant to various commercial mobile radio services (“CMRS”) licenses, including cellular, broadband Personal Communications Services (“PCS”), 600 MHz Band, 700 MHz Band, Advanced Wireless Service (“AWS”), Broadband Radio Service (“BRS”) and Educational Broadband Service (“EBS”) licenses granted by the FCC, and pursuant to leases of spectrum from FCC licensed operators. Some of these licenses are site based while others cover specified geographic market areas, e.g., Cellular Market Areas and Basic Trading Areas, as defined by the FCC. The specific radio frequencies, the authorized spectrum amounts, and certain of the technical and service rules 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. The FCC has recently conducted auctions of high-band spectrum in the millimeter wave bands, and has announced plans to begin auctions of mid-band spectrum in 2020. There is no certainty as to whether any of this spectrum will be used for wireless services competitive with our services or as to the likelihood that we will acquire spectrum licenses made available in any future auction.

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 July 19, 2023 initial build out requirement applicable to any 600 MHz Band license (i.e., coverage to 40 percent of the population in the license area within six years of license grant), the license term for that license will be reduced by two years. If we fail to meet the July 19, 2029 end-of-term build out requirement applicable to any individual 600 MHz Band license (i.e., coverage to 75 percent of the population in the license area by the end of the license term), that license will terminate automatically and we will lose the ability to regain it.

License Renewals. Our FCC licenses generally expire between 2020 and 2030 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, the FCC will award a renewal expectancy to us and will generally renew our existing licenses without considering any competing applications. If we do not receive a renewal expectancy, 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.

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 such transactions 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 instead 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. The FCC utilizes a spectrum aggregation “screen” to determine whether a proposed secondary market transaction requires additional scrutiny. Under this approach, a transaction will be reviewed by the FCC for potential competitive effects if it will result in the acquiring entity having (1) total spectrum holdings generally exceeding approximately one-third of the total amount of suitable and available spectrum in any county (which the FCC raised in 2019 from 222 MHz to 240 MHz) or (2) over 68 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. However, we could trigger the spectrum screen if we attempt to acquire significant additional spectrum in the US Virgin Islands. 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 incurrence 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 radiofrequency field 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 911 and 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 and continues to evaluate the potential for improving location accuracy for 911 calls. 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.

The FCC also has adopted rules requiring wireless carriers and certain other text messaging service providers to provide text-to-911 service and 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. Like E-911 services, the obligation to provide these services is largely tied to requests from emergency service providers for these services. We are currently in compliance with all public safety answering point requests we have received. 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 250 licensed microwave links. Common carrier microwave stations are generally used in a point-to-point configurations for cellular site backhaul connections or to connect points on the telephone network that 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 ten years. The FCC grants license renewal applications in the ordinary course.

The FCC established a Wireless Emergency Alerts system that allows CMRS providers to transmit emergency alerts to the public. This system is voluntary. We have partially opted in to the service and are currently providing it to all of our retail wireless customers to the extent required by applicable regulations and where technically feasible. The rules governing participation contain many requirements, such as point of sale disclosures, geo-targeting alerts, alert logging, maximum message lengths, alert preservation, alerts regarding threats to police officers, and support for non-English messages.

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 regulations 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

The Communications Act encourages competition in local telecommunications markets by removing barriers to market entry and imposing on non-rural incumbent local exchange carriers ("ILECs") various requirements related to, among other things, interconnection, access to unbundled network elements, co-location, access to poles, ducts, conduits, and rights of way, wholesale and resale obligations, and telephone number portability. Our ILEC operations in the US Virgin Islands through Viya are exempt from most such federal requirements pursuant to a rural exemption.

While, to date, the FCC has declined to classify interconnected voice-over Internet protocol ("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 are subject to a number of these obligations.

The FCC recently completed several related proceedings in which it adopted actions to help expedite the deployment of wireline and wireless network infrastructure. Those actions include adopting rules to facilitate the attachment of new facilities to utility poles and eliminating or reducing requirements to provide notice of service discontinuance. We expect these FCC actions will facilitate our ability to expand our wireless network coverage. However, these FCC decisions have been appealed in federal circuit court, and we cannot predict with any certainty the likely timing or outcome of any court actions.

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 and federal laws also impose 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 requirements. Failure to comply with these regulations could subject us to penalties. The FCC is examining whether it should modernize its video regulations and already has updated or eliminated some requirements, but we cannot predict whether and to what extent the FCC will continue to pursue deregulation in this space.

Wireless and Wireline Services

Universal Service. In general, all telecommunications providers are obligated to contribute to the USF, which is used to promote the availability of qualifying telecommunications and broadband 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, and some states have changed or are considering changing their contribution methodologies. We contribute to the USF as required by the rules throughout the US, and receive funds from the USF for providing service in rural areas of the United States, including the US 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 Company 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 for high-cost areas. As part of the USF reforms, the FCC created a new program, the Connect America Fund.

In August 2018, we were awarded \$79.9 million over 10 years under a portion of the Connect America Fund program called the Connect America Fund Phase II Auction. The funding requires us to provide fixed broadband and voice services to certain eligible areas in the United States. We are subject to operational and reporting requirements under the program. Funding began in the second quarter of 2019 and we record the amounts received as revenue in our financial statements.

Our business in the US Virgin Islands also benefits from USF support. Our US Virgin Islands wireline business has historically received, and continues to receive, annual support of approximately \$16.4 million. In addition, after the devastation caused by the Hurricanes in September 2017, the FCC provided approximately \$9.7 million in recovery support in November 2017, and an additional \$7.3 million in recovery support in August 2018. In 2018, the FCC initiated a proceeding in which it proposed to allocate USF funding of up to \$18.7 million per year (inclusive of the \$16.4 million per year currently allocated to Viya) for 10 years to fixed voice and broadband providers in the US Virgin Islands through a new Connect USVI Fund. In September 2019, the FCC adopted an order in this proceeding establishing a new competitive proposal process for awarding the Connect USVI Fund support. The support will supplant the \$16.4 million that Viya currently receives per year. Viya has sought FCC reconsideration of certain aspects of this new process. It is difficult to predict when the competitive proposal process will occur, whether Viya will be selected as a support recipient, or, if so, how much support Viya will receive going forward. Viya may experience a significant reduction in USF support in the US Virgin Islands if it is not selected to be a Connect USVI Fund support recipient, and Viya may experience a material reduction in support even if it is selected.

Intercarrier Compensation. Under federal and state law, telecommunications providers are sometimes 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 such that most of these compensation obligations ceased by July 1, 2017, and most remaining obligations will cease by July 1, 2020. As a result, this type of intercarrier compensation is no longer material to our business.

Net Neutrality. In January 2018, the FCC released a decision rescinding various “net neutrality” requirements governing how broadband Internet access providers are permitted to offer broadband service, which decision largely eliminated its regulation of our ability to block, throttle, or prioritize specific types of Internet traffic. Under the current approach, however, broadband Internet access providers still must publicly disclose detailed information regarding their service offerings, Internet traffic management processes, and other practices affecting broadband customers. The FCC also held that states are preempted from enacting their own versions of these or similar requirements. A federal appeals court upheld most of the FCC’s decision, but it reversed the FCC’s blanket preemption of state broadband rules. The court held that state broadband laws only may be preempted on a case-by-case basis when they conflict with state or federal policy. The court also directed the FCC to further consider certain other issues related to its broadband regulatory framework, and we cannot predict whether the FCC will adopt further regulations in response to this judicial remand. A number of advocacy groups and states have petitioned the court for rehearing. We cannot predict what, if any, action the court will take in response to these petitions or whether further appeals will ensue. In the meantime, a number of states have adopted, or are considering, state-level net neutrality requirements. Some of these are currently subject to legal challenge by broadband providers and/or the United States government in federal district court. We cannot predict with any certainty the likely timing or outcome of these or future challenges or how state efforts to adopt net neutrality requirements will continue to evolve.

Telecommunications Privacy Regulations. We are subject to federal regulations relating to privacy and data security that impact all parts of our business. Certain federal statutory and regulatory privacy and data security requirements apply to our telecommunications services. Other parts of our business are subject to privacy and data security oversight by other federal regulators, including the Federal Trade Commission. In addition, federal and state regulators have adopted or are considering adopting new privacy laws. For instance, the state of California enacted a broad new privacy statute, effective January 1, 2020, although we do not believe that it is applicable to our business. Such state privacy regulations could impact at least some of our operations. In addition, the US Congress is actively discussing establishing a new privacy regime that would impose a uniform privacy framework across the United States and its territories. We believe that we comply with all currently applicable requirements, but we cannot predict the timeline for any future changes of law in this area or the impact of any such changes on our businesses.

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 (“CALEA”). Federal law also requires compliance with wiretap related record keeping and personnel related obligations. The FCC has adopted rules that apply CALEA obligations to high-speed Internet access and VoIP services. We believe that we are in compliance with all such requirements currently applicable to us. 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

One of our subsidiaries has received awards from the Broadband Technology Opportunities Program (“BTOP”) of the US Department of Commerce (“DOC”) pursuant to the American Recovery and Reinvestment Act of 2009 (“ARRA”). As a BTOP sub-recipient, 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. We are also required to comply with other terms and conditions of the individual DOC grants. We believe that we are currently in material compliance with all BTOP and DOC requirements applicable to our grants.

US State Regulation

Wireless Services

Federal law generally preempts state and local regulation of the entry of, or the rates charged by, any CMRS provider. For this reason, as a practical matter, we are generally free to establish wireless rates and offer new wireless products and services, and our wireless businesses are subject to minimal state regulatory requirements. However, the states in which we operate maintain nominal oversight jurisdiction. For example, states may regulate the “terms and conditions” of a CMRS provider’s service other than rates. States and localities also assess taxes and fees on wireless carriers.

The location and construction of our wireless transmission 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 or expand a system, 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 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 limited.

In 2018, the FCC completed several related proceedings in which it adopted actions to help expedite the deployment of wireless network infrastructure. Those actions include limiting state and local regulations governing the construction of towers and the installation of small cells and other facilities within and outside public rights-of-way when the FCC determines those regulations can be barriers to deployment. Among other things, the FCC established new shorter shot clocks for completion of local reviews of small wireless facility applications and eliminated federal environmental and historic preservation review of small wireless facilities. These decisions were challenged by various localities, and those appeals are pending. We cannot predict with certainty the likely timing or outcome of these court challenges. If the FCC’s actions are upheld, we expect them to materially limit state regulation that otherwise could encumber our ability to expand our wireless network coverage.

US Virgin Islands Regulation

Virgin Islands Public Service Commission

In addition to the regulations described above, our operations in the US Virgin Islands are also subject to the US Virgin Islands Public Utilities Code, pursuant to which the Virgin Islands Public Service Commission (“PSC”) regulates certain telecommunications and cable TV services that Viya provides in the US Virgin Islands. Among other things, the PSC establishes the rates and fees that we may charge local exchange residential and enterprise customers in the US Virgin Islands for certain wireline telecommunications services. 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 and certain of our subsidiaries entered into a transfer of control agreement with the PSC on July 1, 2016, which imposes certain operational and reporting obligations on the Viya companies. We believe that we have satisfied these requirements. Further, as a condition to Viya’s receipt of USF funds from the FCC, the PSC is required to certify on an annual basis that Viya is in compliance with certain eligible telecommunication carrier (“ETC”) obligations. We believe that we comply with all such obligations but cannot predict the outcome of future PSC proceedings relating to Viya’s ETC status.

Our subsidiaries provide cable TV service in the US 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 cannot predict what requirements will be included in the renewed franchise agreements. However, we understand that the renewed franchise agreements will likely contain substantially similar terms and conditions as the prior franchise agreements, including a 15-year term. We also believe that the renewed franchise agreements will exclude prior language permitting the PSC to regulate our cable rates. In August 2019, the FCC issued a decision placing some limits on the powers of local cable franchising authorities such as the PSC, including limits on their ability to impose franchise fees and to regulate non-cable services. A number of local franchising authorities have challenged that decision in federal appeals court and have asked that the FCC's rulings be stayed pending appeal. We cannot predict the outcome of that appeal, or how the FCC's actions will impact our business.

Virgin Islands Research and Technology Park

Our video, internet and wireless companies in the US Virgin Islands also receive tax benefits as qualifying participants in the US Virgin Islands' 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, property, and excise taxes as well as a 90% exemption against income taxes and a reduction in customs duties from 6% to 1%. These benefits resulted in tax exemptions of approximately \$1.8 million during the year ended December 31, 2019. 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.

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 20 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 15 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 January 2019, to discuss modifications of our exclusivity rights and other rights under our 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.

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 Telecom segment.

Bermuda Regulation

In 2013, the Government of Bermuda implemented the Electronic Communications Act of 2011 ("ECA"), which empowered the regulatory authority of Bermuda (the "Regulatory Authority") to regulate the electronic communications sector and allowed communications service providers to enter new lines of business as a means of increasing competition in the sector. As part of the Regulatory Authority's core mandate, it must review the relevant markets, determine the existence of significant market power, and implement any necessary remedies in the public interest. As part of its initial market review, the Regulatory Authority imposed regulatory and other fees and adopted additional regulation that has increased the regulatory costs incurred by our Bermuda operations. In 2017, the Regulatory Authority commenced another market review process as required by the ECA. In 2020, that market review process is expected to continue. We cannot now accurately predict the outcome of the ongoing market review, nor can we determine the competitive impact on our Bermuda business and its ability to grow.

Renewable Energy Services Regulation

India Regulation

The Electricity Act, 2003

The Electricity Act, 2003 (the "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 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, among other things, to 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 a 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 the promotion of renewable energy generation including through tax rebates, generation-linked incentives, creation of a national renewable energy fund, development of the renewable industry and for effective implementation and enforcement of such measures.

Generating companies are 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 Commissions 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.

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

The Central Electricity Regulatory Commission announced the Central Electricity Regulatory Commission (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2012 (the “Tariff Regulations”), which prescribe 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 that include, among other things, return on equity, interest on loan capital and depreciation. Accordingly, such tariffs cannot be determined independently by renewable energy power producers such as our company. Pursuant to the Tariff Regulations, 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 onward.

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 following 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.

MNRE

The Ministry of New and Renewable Energy (“MNRE”) in India has been facilitating the implementation of programs harnessing renewable power, renewable energy for industrial and commercial applications and development. The ministry is focused on a mix of subsidies, fiscal incentives, preferential tariffs, market mechanisms and affirmative actions such as renewable purchase obligations by way of legislation and policies. It has introduced the generation-based incentive scheme to support small grid solar projects, pursuant to which the MNRE will pay incentives to the state utilities when they directly purchase solar power from project developers. One such incentive is the exemption of customs and excise duties on all rooftop Solar PV Power Projects with a minimum capacity of 100 kw.

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 judgment is expected to boost the demand for renewable energy by captive players and also improve the marketability of renewable energy certificates in India.

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 Sections 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, through the SEC’s electronic data gathering, analysis and retrieval system (“EDGAR”), via electronic means on the SEC’s website at www.sec.gov, or 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.

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 Relating to Our International Telecom Segment

Changes in USF funding could have an adverse impact on our financial condition or results of operations.

Viya, our subsidiary operating video, internet, wireless and landline services in the US Virgin Islands, currently receives high-cost Universal Service Fund (“USF”) support in the US Virgin Islands of approximately \$16.4 million per year. In addition, after the devastation caused by the Hurricanes in September 2017, the FCC provided approximately \$15.4 million in accelerated USF support and in fixed and mobile recovery support through August 2018. The FCC, in response to the damage caused by the Hurricanes and as part of its general USF reform, has established a Connect USVI Fund budget for fixed networks of up to \$18.7 million per year for 10 years and a budget for mobile networks of up to \$4.4 million per year for 3 years in the US Virgin Islands. The Connect USVI Fund for fixed networks will replace the legacy high-cost USF support for the US Virgin Islands that Viya historically has been awarded and any entity that provided voice or broadband service in the US Virgin Islands in June 2018 is eligible to submit a competitive proposal.

We expect to participate in both the fixed and mobile network components of the USVI Connect Fund support assignment processes and we currently anticipate that the new fixed network fund recipient(s) will be determined as early as in the second half of 2020. There can be no guarantee that we will be selected by the FCC to receive fixed network funding for either of the coverage territories. Under the mechanism used to allocate mobile funding, we currently expect to receive a portion of the mobile funding but cannot be certain at this stage of the amount or timing of receipt of such funding. Any reduction in the overall amount of USF support we receive as a result of the USVI Connect Fund proceeding relative to historical levels of high-cost USF support we have received could negatively affect our efforts to build, maintain and operate networks in the US Virgin Islands and our ability to provide services supported by USF funds. For example, we could be selected to receive fixed network funding in neither coverage territory or in one coverage territory but not the other, meaning that another entity will have received funding for such territory; or we might be selected to receive funding in both coverage territories but at a funding level that is significantly below our historical high-cost USF support levels. Each of these potential outcomes could have a material adverse effect on our business, financial condition or results of operations in our International Telecom segment through loss of revenue, customer attrition and increased competition. In the event that Viya does not receive any funding in a territory, we will have to consider whether we provide further investment or operational resources to Viya or that territory.

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 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. Many of our programming contracts are for multiple year terms 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 will be 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 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, ultimately 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 of Guyana.

We are dependent on GTT for approximately 24% of our total consolidated revenues. A loss of exclusivity on international voice and data service would result in a reduction in 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 materially adversely affect our revenues and profits and diminish the value of our investment in Guyana.

Risks Related to our US Telecom Segment

We may not be able to timely and effectively meet our obligations to AT&T related to its partnership with the First Responder Network Authority.

On July 31, 2019, the Company, through its wholly owned subsidiary, Commnet Wireless, entered into a Network Build and Maintenance Agreement with AT&T Mobility LLC (“AT&T”), pursuant to which Commnet will engineer, construct, commission, and maintain a radio access network (“RAN”) for AT&T for its commercial use and also in support of AT&T’s public/private partnership with the First Responder Network Authority (“FirstNet Authority”). In connection with the Network Build & Maintenance Agreement, we are required to build a network in portions of several states in accordance with AT&T’s detailed specifications by specified milestone dates and thereafter, to maintain the network in accordance with certain quality metrics. Such services are structured as a set cost agreed upon with AT&T, to be paid over the initial eight year term of the Network Build and Maintenance Agreement. AT&T has the right to terminate this agreement, including its obligation to pay for ongoing maintenance of the sites, in the event that Commnet fails to meet certain milestones or completion dates with respect to the construction of the sites, or fails to meet certain quality metrics and service level agreements (“SLAs”) with respect to maintenance services for the built sites.

Our ability to meet required milestones and completion dates and perform the SLAs is dependent on a variety of factors, including:

- our ability to procure equipment and negotiate favorable payment and other terms with suppliers;
- our ability to effectively manage the construction of each of the cell sites, including securing reliable and efficient field construction resources; and
- our ability to cost effectively and reliably deliver and manage the network in accordance with SLAs for both the AT&T commercial and FirstNet Authority networks.

In addition, construction of the cell sites may be also 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. Any construction setbacks or delays could be costly and have a material adverse effect on our ability to perform under the time conditions and strict budget required under the Network Build and Maintenance Agreement.

If AT&T were to terminate the Network Build & Maintenance Agreement, this could have a material adverse impact on our prospects and results of operations in our US Telecom segment as we would have incurred costs to construct the sites, but might not be fully compensated for the construction of the sites through the initial term of the Agreement.

Changes in our relationships with our vendors, changes in tax policy or trade relations, interruptions in our supply chain or increased commodity or supply chain costs could adversely affect our results of operations.

A number of our equipment suppliers and vendors are based outside the United States, with China serving as one of our primary non-US sources for our international telecommunications and solar equipment. Because a large portion of our equipment is sourced, directly or indirectly, from outside the United States, major changes in policy or trade relations, such as the prohibition or limitation of use of certain telecommunications suppliers, the disallowance of tax deductions for imported products or the imposition of additional tariffs or duties on imported products, or other factors such as the recent impact that COVID-19, or Coronavirus, has had on procurement timelines, could adversely affect our business, results of operations, effective income tax rate, liquidity and net income.

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

A substantial portion of our US Wireless revenue is generated from four national wireless service providers. Our US wholesale wireless revenues accounted for approximately 18.7% of our consolidated revenues in 2019.

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 material 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 material 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 the past few years has been 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 Related to Our Renewable Energy Segment

Our Facilities have a limited operating history, which may make it more difficult to predict their future performance.

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 our PPAs is significantly affected by our ability to collect payments from offtakers under our PPAs. If for any reason our PPA 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 from the Renewable Energy segment. In addition, our inability to perform our obligations under the PPAs could also have a material adverse effect on these 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 government funds, (b) there is a change of law that substantially reduces the value of utility credits, (c) termination for convenience, (d) change of control in the managing structure of the offtaker, (e) insolvency of the offtaker, or (f) any change in the credit worthiness of the offtaker. 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 from the Renewable Energy segment and our financial condition. We cannot provide any assurance that PPAs containing such provisions will not be terminated or, in the event of termination, that 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.

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 Narendra Modi in India has expressed its intention to cut down on corruption and tax avoidance wherever possible and in parallel with its anti-corruption measures, the Indian government is also looking to encourage foreign investment in India. Some of these 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 (approximately equal to \$7.60 at the time) 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 market 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 travel 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 500 and 1,000 rupee notes from circulation, 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. In an effort 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.

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 Indian government to current open access rules, or other major policy changes, particularly when implemented in such a short time frame, 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.

Land title in India can be uncertain and difficult to procure, which could adversely impact the development of our solar projects.

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 may not be 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 subject to encumbrances that we are unaware of. As a result, potential disputes or claims over title to the land on which our power projects are or will be constructed may arise. 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. Further, the government may exercise its rights of eminent domain, or compulsory acquisition in respect of land on which our projects are or will be located. Any of this may adversely affect our business, results of operations and cash flows in the future. For instance, in one such state a PIL (Public Interest Litigation) has been filed in the courts against the acquisition of large parcels of land by the solar power generation companies. Any such litigation may result in new regulations, adversely affecting our project construction and operation.

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 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 component 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 prior to 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 on terms that are favorable to us.

Construction of our solar projects may be also 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. 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 is endeavoring to install 175 GW of renewable energy capacity by March 2022, of which it is intended that 100 GWp will be solar power capacity. New capacity additions have historically been lower than the targeted capacity. If the government fails to reach its targeted solar capacity, it will likely result in a slowdown in our growth opportunities and adversely affect our ability to achieve our long term business objectives, targets and goals. Moreover, 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 its 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.

For distributing power to an offtaker, we generally rely on transmission lines and other transmission and distribution facilities that are owned and operated by the respective state governments or public entities. In absence of such transmission and distribution networks, we may engage contractors to build transmission lines and other related infrastructure. In such a case, we will be exposed to additional costs and risks associated with developing transmission lines and other related infrastructure, such as the ability to obtain right of way from land owners for the construction of our transmission lines, which may delay and increase the costs of our projects. We may not be able to secure access to the available transmission and distribution networks at reasonable prices, in a timely manner or at all.

In some instances, we are required to distribute power to customers across long distances from our project sites. Any constraints or limited access to transmission and distribution networks, could curtail the transmission and dispatch of the full output of our projects and we may have to suspend producing electricity during the period when electricity cannot be transmitted, thereby reducing the net power generation of our projects. Any such curtailment of our power

projects' output levels will reduce our electricity output and limit operational efficiencies, which in turn could have an adverse effect on our business, results of operations and cash flows.

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 investors, financial leases and securitization. However, we cannot guarantee that we will be successful in obtaining 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 terms favorable to us.

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 and 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 (for example, 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 operational 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.

Environmental, Social and Governance Risks Related to Our Businesses

Storms and 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, fires, 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, such as the ongoing impacts of the Hurricanes in the US Virgin Islands in 2017, which we assessed caused damage and losses to our wireline and wireless networks of approximately \$100 million in operating losses and network rebuilding costs prior to insurance and any other recovery assistance. Major hurricanes also passed directly over Bermuda in 2003, 2014 and 2016, causing major damage to our network and to the island's infrastructure. Guyana has suffered from severe rains and flooding in the past as well. These types of events can also cause major disruption and harm to the communities and markets we serve, which can have a material adverse effect on our business. We cannot be sure that these types of events will not have an impact in the future or that we can procure insurance coverage against these types of severe weather events under reasonable business terms and conditions, or that any insurance coverage we are able to maintain will adequately compensate us for all damage and economic losses resulting from natural catastrophes. In addition, it may take significant time to return to pre-storm levels following any such storm or meteorological event. If we are unable to restore service on a timely and cost-effective basis, it could harm our reputation and have a material adverse effect on our business, financial condition or results of operations through continued loss of revenue and customer attrition to our competitors.

The electricity produced and revenues generated by a solar electric generation facility are highly dependent on suitable solar and associated weather conditions and our solar panels and inverters could be damaged by severe weather,

such as hailstorms 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.

In addition, climate change, causing rising ocean temperatures in the Atlantic Ocean, may result in the intensification of hurricanes over time. If the frequency or duration of more intense hurricanes increases in the Atlantic Ocean and Caribbean Sea, the likelihood of significant damage also increases, including in locations where we operate. After major events such as hurricanes, which can cause significant destruction to the power grid, our ability to access sites and facilities, obtain fuel and receive sufficient fuel supplies in order to provide power for stand-by generators is often severely limited, and in many cases, is not possible for extended periods of time. Our ability to access ports in order to obtain relief and supplies for affected areas will also likely be significantly hampered for extended periods of time.

Other Risks Related to Our Businesses

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, our 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. There can be no assurance that we will be able to successfully prevent a material security breach stemming from future cyberattacks. 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 IT systems. 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, including notification under data privacy laws and regulations, 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.

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 US 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, we may be required to materially modify our business plans or operations. We cannot be certain that we can do so in a cost effective manner. Our operations in the United States are subject to the Communications Act. The interpretation and implementation of the various 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, there have been indications that Congress may substantially revise the Telecommunications Act of 1996 and other regulations in the next few years. Our international operations are subject to similar regulations, the interpretation and implementation of which are also often debated, and which may have a material adverse effect on our business. Our interpretations of our obligations may differ from those of regulatory authorities. Both federal and state regulators, as well as international 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.

We may not be able to timely and effectively execute on several key shared and different initiatives across multiple jurisdictions.

Major business initiatives are underway with respect to improvement in mobile and other retail sales in all markets, digitization of internal processes to allow for quicker response time to customer requirements in the US Virgin Islands and Guyana, modernization of existing internal processes in Guyana and restructuring of US Telecom to decrease reliance on legacy wholesale revenue, including the substantial construction and support undertaking of the FirstNet project. Each of these requires significant oversight from senior management to aid in-market teams, and many of these projects are underway simultaneously in different locations. Failure to execute on multiple simultaneous and transformational initiatives will require in depth management attention in multiple jurisdictions in order to capitalize on post- hurricane restoration growth in the US Virgin Islands, economic growth in Guyana and stabilization of US Telecom post-FirstNet build.

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, although recently-issued 600 MHz licenses were issued for a slightly longer initial term to account for the need for broadcast television incumbents to vacate the spectrum before the new wireless licensees could construct. Licensees may renew their licenses (including renewal of 600 MHz licenses) for additional ten year periods by filing renewal applications with the FCC. Our 600 MHz wireless licenses all expire in 2029. Our other wireless licenses in the US expire between 2019 and 2030. We intend to renew our licenses expiring this year, and 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 E-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.

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;
- introduction of new telecom delivery platforms such as next generation satellite services, including SDN and IMS services; and
- consolidation among service providers within the industry.

For us to keep pace with these technological changes and remain competitive, at a minimum we must 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 and 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 and 5G fixed wireless access services 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 from 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 the 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 and other equipment 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 and Nokia and a limited number of solar equipment manufacturers, including GCL for photovoltaic modules 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.

Changes in our relationships with our vendors, changes in tax policy or trade relations, interruptions in our supply chain or increased commodity or supply chain costs could adversely affect our results of operations.

A number of our equipment suppliers and vendors are based outside the United States, with China serving as one of our primary non-US sources for our international telecommunications and solar equipment. Because a large portion of our equipment is sourced, directly or indirectly, from outside the United States, major changes in tax policy or trade relations, such as the disallowance of tax deductions for imported products or the imposition of additional tariffs or duties on imported products, could adversely affect our business, results of operations, effective income tax rate, liquidity and net income.

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

We actively evaluate acquisition, investment, business divestitures and combinations, 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 our entering into a new, unrelated business, including the ability of our holding company management team to effectively oversee the management team of such operations. Similarly, there are risks inherent in the sale of a business or assets, including the potential of a transaction's failing to close due to last minute negotiations, regulatory issues, or other unpredictable matters that can be costly and disruptive to our 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 or strategic investment. 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, 2019, we had approximately \$162.8 million in cash, cash equivalents, restricted cash, and short term investments and approximately \$86.4 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 markets 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, a large mobile telecommunications company in the Caribbean region, and other larger providers such as Liberty Global, a multinational telecommunications company.
- 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 further decrease prices. 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 result in reduced revenues, margins and returns.

Our International Telecom segment operates mainly in island locations, where a limited number of providers maintain strong competition in these small markets. In several of our markets, we hold a dominant position as the local incumbent carrier and in others we may have a competitive advantage in our ability to bundle some combination of voice, data, video and wireless services. Increased competition, whether from new entrants or increased capital investment by our competitors in their 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 on 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 the markets in which we currently operate or in the global market generally 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 US rural and wholesale wireless operations that serve tourist destinations; and
- 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.

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 set by the current US 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 US dollars or make payment on any debt denominated in US dollars. Any further currency fluctuation could have a material adverse impact on our ability to realize the returns we projected 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 depends on the ability of our executive officers and the officers of our operating units to develop and execute on our business plan, and to identify and pursue new opportunities and product innovations, as well as on our ability to attract and retain these officers and other highly qualified technical and management personnel. If our executive officers and the officers of our operating units are not able to execute on our business plan, this could adversely affect our business, financial condition and results of operations. Furthermore, 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 in which we operate 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 have executed 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 US 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.

Risks Related to Our Capital Structure

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

The credit facilities that we and our subsidiaries maintain include certain financial and other 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 facilities 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 founder is our largest stockholder and could exert significant influence over us.

Cornelius B. Prior, Jr., our founder and the father of our Chairman and Chief Executive Officer, together with related entities, affiliates and family members (including our Chairman and Chief Executive Officer), beneficially owns approximately 26% of our outstanding Common Stock. As a result, he has the ability 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. 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, 2020, the average daily trading volume of our Common Stock was approximately 61,000 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 or decrease the dividend amount 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, 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	International Telecom	US Telecom	Renewable Energy
Office	291,072	71,215	5,720
Retail stores	27,290	23,257	—
Technical operations	1,930,181	115,631	—

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, 2019, we operated twelve retail stores in our US Telecom segment and nineteen retail stores in our International Telecom segment.

Our offices and technical operations are in the following locations:

International Telecom	US Telecom	Renewable Energy
Georgetown, Guyana	Little Rock, AR	Hyderabad, India
Bermuda	Castle Rock, CO	Singapore
US Virgin Islands	Atlanta, GA	
Cayman Islands		

Within our telecommunications operations, we globally own 282 towers, lease an additional 371 towers and have five switch locations within rented locations. In addition, our renewable energy operations own 52MW commercial solar projects at five sites. We consider our owned and leased properties to be suitable and adequate for our business operations.

ITEM 3. LEGAL PROCEEDINGS

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 January 2019 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.

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 defend against 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 injunctive relief to stop the illegal bypass activity and punitive damages caused thereby. 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 been consolidated with Digicel's constitutional challenge described above, which is scheduled to proceed to trial in 2020. 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. We maintain that any liability GTT might be found to have with respect to the disputed tax assessments, totaling \$44.1 million, would be offset in part by the 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 DISCLOSURES

Not Applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following table sets forth information regarding our executive officers as of March 2, 2020:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Michael T. Prior	55	Chairman, President, Chief Executive Officer, and Director
Justin D. Benincasa	57	Chief Financial Officer
Brad Martin	44	Executive Vice President, Business Operations
William F. Kreisher	57	Senior Vice President, Corporate Development
Mary Mabey	38	Senior Vice President, General Counsel and Secretary

Executive Officers

Michael T. Prior is the chairman of the Board of Directors and 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 LLP 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.

Brad Martin is our Executive Vice President, Business Operations. Prior to joining us in 2018, he previously served as Chief Operating Officer for Senet Inc., a leading "low power wide area" network (LPWAN) operator and global service provider. From 2013 through 2015, Mr. Martin served as Senior Vice President and Chief Quality Officer with Extreme Networks, a global leader in software-driven networking solutions for Enterprise and Service Provider customers. Between 2008 and 2013, Mr. Martin served as Vice President of Engineering Operations and Quality with Siemens Enterprise Communications and Enterasys Networks, delivering voice and data networking hardware and software solutions to global enterprises. Mr. Martin holds a Bachelor of Science, Mechanical Engineering from the University of Maine, is a published author and featured industry speaker.

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 BellSouth 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 SITA (Equant). Mr. Kreisher holds a Masters in Business Administration from Fordham University and a Bachelor of Arts degree from the Catholic University of America.

Mary Mabey is our Senior Vice President and General Counsel. Ms. Mabey joined us in 2009 and previously served as our Deputy General Counsel. Prior to joining us, Ms. Mabey was with the law firm of Edwards Angell Palmer

& Dodge LLP (now Locke Lord LLP) in Boston, where she advised public and private companies in domestic and international transactions on corporate and securities law matters, merger, acquisition and financing transactions, corporate governance, and other general corporate matters. Ms. Mabey received a B.A. degree from the University of Notre Dame and a J.D. degree from the University of Texas School of Law.

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 number of holders of record of Common Stock as of March 2, 2020 was 88.

Issuer Purchases of Equity Securities in the Fourth Quarter of 2019

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”). As of December 31, 2019, we have \$37.5 million remaining authorized 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, 2019:

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, 2019 — October 31, 2019	—	\$ —	—	\$ 37,527,523
November 1, 2019 — November 30, 2019 . . .	—	—	—	\$ 37,527,523
December 1, 2019 — December 31, 2019 . . .	12,622 (1)	59.00	—	\$ 37,527,523

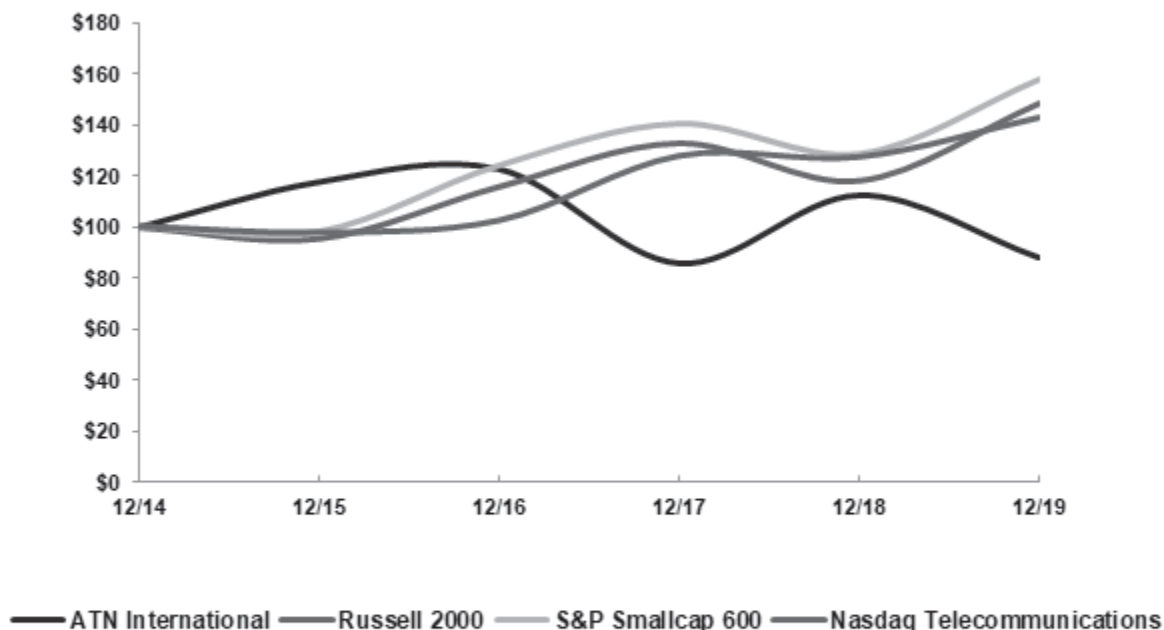
- (1) Represents shares purchased on December 16, 2019 from our executive officers and other employees who tendered these shares to us to satisfy their tax withholding obligations incurred in connection with the vesting of restricted stock awards at such date. These shares were not purchased under the 2016 Repurchase 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 ATN International's cumulative 5-Year total shareholder return on 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 in each index (with the reinvestment of all dividends) from 12/31/2014 to 12/31/2019.

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 12/31/14 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

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	12/14	12/15	12/16	12/17	12/18	12/19
ATN International	100.00	117.70	122.71	85.99	112.51	88.17
Russell 2000	100.00	95.59	115.95	132.94	118.30	148.49
S&P Smallcap 600	100.00	98.03	124.06	140.48	128.56	157.85
Nasdaq Telecommunications	100.00	97.52	102.36	127.62	127.16	142.60

The stock price performance included in this graph is not necessarily indicative of future stock price performance

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, 2019, 2018 and 2017 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 Note 6 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, 2019, 2018 and 2017 and the selected Consolidated Balance Sheet data as of December 31, 2019 and 2018 are derived from our Consolidated Financial Statements beginning on page F-1 of this Annual Report on Form 10-K. The selected Consolidated Income Statement data for the years ended December 31, 2016 and 2015 and the selected Consolidated Balance Sheet data as of December 31, 2017, 2016 and 2015 are derived from our Consolidated Financial Statements not included in this Annual Report on Form 10-K.

	Year ended December 31,				
	2019	2018	2017	2016	2015
	(In thousands, except per share data)				
Income Statement Data					
Revenue	\$ 438,722	\$ 451,207	\$ 481,193	\$ 457,003	\$ 355,369
Operating expenses	<u>425,345</u>	<u>390,184</u>	<u>425,885</u>	<u>405,733</u>	<u>276,774</u>
Income from operations	13,377	61,023	55,308	51,270	78,595
Other income (expense):					
Interest income	2,263	1,811	1,613	1,239	588
Interest expense	(5,010)	(7,973)	(8,838)	(5,362)	(3,180)
Other, net(1)	<u>(4,558)</u>	<u>(1,119)</u>	<u>(530)</u>	<u>(1,773)</u>	<u>(19,802)</u>
Other income (expense), net	<u>(7,305)</u>	<u>(7,281)</u>	<u>(7,755)</u>	<u>(5,896)</u>	<u>(22,394)</u>
Income from continuing operations before income taxes	6,072	53,742	47,553	45,374	56,201
Income (benefit) provisions	<u>4,105</u>	<u>18,870</u>	<u>(1,341)</u>	<u>21,160</u>	<u>24,137</u>
Income from continuing operations	1,967	34,872	48,894	24,214	32,064
Income from discontinued operations, net of tax	—	—	—	—	1,092
Net income	<u>1,967</u>	<u>34,872</u>	<u>48,894</u>	<u>24,214</u>	<u>33,156</u>
Net income attributable to non-controlling interests, net of tax	<u>(12,773)</u>	<u>(15,057)</u>	<u>(17,406)</u>	<u>(12,113)</u>	<u>(16,216)</u>
Net income attributable to ATN International, Inc. Stockholders	<u>\$ (10,806)</u>	<u>\$ 19,815</u>	<u>\$ 31,488</u>	<u>\$ 12,101</u>	<u>\$ 16,940</u>
Net income per weighted average basic share attributable to ATN International, Inc. Stockholders:					
Continuing operations	(0.68)	1.24	1.95	0.75	0.99
Discontinued operations	—	—	—	—	0.07
Total	<u>(0.68)</u>	<u>1.24</u>	<u>1.95</u>	<u>0.75</u>	<u>1.06</u>
Net income per weighted average diluted share attributable to ATN International, Inc. Stockholders:					
Continuing operations	(0.68)	1.24	1.94	0.75	0.98
Discontinued operations	—	—	—	—	0.07
Total	<u>(0.68)</u>	<u>1.24</u>	<u>1.94</u>	<u>0.75</u>	<u>1.05</u>
Dividends per share applicable to common stock	<u>0.68</u>	<u>0.68</u>	<u>1.02</u>	<u>1.32</u>	<u>1.22</u>

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
	(In thousands)				
Balance Sheet Data (as of December 31,):					
Cash, restricted cash, and short term investments	\$ 162,774	\$ 193,300	\$ 226,966	\$ 297,595	\$ 398,346
Working capital	109,054	135,116	181,223	217,264	384,137
Fixed assets, net.	605,581	626,852	643,146	647,712	373,503
Total assets.	1,130,726	1,107,304	1,205,605	1,198,218	945,004
Short-term debt (including current portion of long-term debt).	3,750	4,688	10,919	12,440	6,284
Long-term debt, net.	82,676	86,294	144,873	144,383	26,575
ATN International, Inc. stockholders' equity.	676,122	695,387	688,727	677,055	680,299
Statement of Cash Flow Data					
(for the years ended December 31,):					
Net cash provided by (used in):					
Operating activities:					
Continuing operations	\$ 87,903	\$ 115,865	\$ 145,725	\$ 111,656	\$ 139,079
Discontinued operations	—	—	—	—	158
Investing activities:					
Continuing operations	(88,262)	(87,319)	(172,318)	(296,580)	(31,971)
Discontinued operations	—	—	—	—	—
Financing activities:					
Continuing operations	(29,908)	(55,230)	(42,101)	75,334	(41,438)
Discontinued operations	—	—	—	—	—
Capital expenditures.	(72,725)	(185,921)	(142,371)	(124,282)	(64,753)

(1) During the year ended December 31, 2015, the Company recognized a loss on the deconsolidation of a subsidiary.

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

Overview

We are a holding company that, directly and through our subsidiaries, owns and operates telecommunications businesses in North America, the Caribbean and Bermuda as well as a renewable energy business in India. We were incorporated in Delaware in 1987, began trading publicly in 1991 and spun off more than a half of our operations to stockholders in 1998. Since that time, we have engaged in many strategic acquisitions and investments to help grow our operations, using the cash generated from our established operating units to re-invest in our existing businesses, to make strategic investments in additional businesses, and to return cash to our investors. We have built, and seek to maintain, resources to support our operating subsidiaries and to improve their customer acquisition, retention, and satisfaction while maintaining optimal operating efficiencies. We look for businesses that offer growth opportunities or potential strategic benefits, but require additional capital investment in order to execute on their business plans. We hold controlling positions with respect to some of our investments and non- controlling positions in others. Our investments in earlier stage businesses frequently offer a product and service development component in addition to the prospect of generating returns on our invested capital. For a discussion of the risks involved in our investment strategy, see *"Risk Factors—We are actively evaluating investment, acquisition and other strategic opportunities, which may affect our long-term growth prospects."*

We review our operations in three operating segments to facilitate both our internal and investor presentations of our results. Those three operating segments are as follows:

- ***International Telecom.*** Our international wireless services include voice and data services to retail customers in Bermuda, Guyana and the US Virgin Islands. Our international wireline services include voice and data services in Bermuda, the Cayman Islands, Guyana and the US Virgin Islands, as well as video services in Bermuda, the Cayman Islands, and the US Virgin Islands. In addition, we offer managed information technology services to commercial customers and provide wholesale long-distance voice services to other telecommunications carriers in the countries in which we offer international wireline services.
- ***US Telecom.*** In the United States, we offer wireless and wireline services. We offer wholesale wireless voice and data roaming services and lease critical network infrastructure such as towers and transport facilities to national, regional, local and selected international wireless carriers in rural markets located principally in the Southwest United States. We also provide consumer and enterprise mobile and fixed telecommunications services in certain areas where we offer those wholesale services and wholesale long-distance wireline voice services to telecommunications carriers.
- ***Renewable Energy.*** In India, we provide distributed generation solar power to commercial and industrial customers. Through November 6, 2018, we also provided distributed generation solar power in the United States in Massachusetts, California and New Jersey.

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, 2019:

Segment	Services	Markets	Tradenames
International Telecom . . .	Wireline	Bermuda, Cayman Islands, Guyana, US Virgin Islands	Fireminds, GTT+, One, Logic, Viya
	Wireless	Bermuda, Guyana, US Virgin Islands	GTT+, One, Viya
	Video Services	Bermuda, Cayman Islands, US Virgin Islands	Logic, One, Viya
US Telecom	Wireless	United States (rural markets)	Choice, Choice NTUA Wireless, Commnet, WestNet, Geoverse
	Wireline	United States	Essexel, Deploycom
Renewable Energy	Solar	India	Vibrant Energy

We actively evaluate potential acquisitions, investment opportunities and other strategic transactions, both domestic and international, that meet our return on investment and other criteria. In addition, we consider non-controlling investments in earlier stage businesses that we consider strategically relevant, and which may offer long-term growth potential for us, either individually, or as research and development businesses that can support our operating subsidiaries in new product and service development and offerings. 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 further information about our financial segments and geographical information about our operating revenues and assets see Notes 1 and 17 to the Consolidated Financial Statements included in this Report.

Dispositions

International Telecom

On August 18, 2017, we completed the sale of the Viya cable operations located in the British Virgin Islands.

On January 3, 2017, we completed the sale of the Viya cable operations located in St. Maarten.

These dispositions do not qualify as discontinued operations because the dispositions did not represent a strategic shift that had a major effect on our operations and financial results.

US Telecom

On March 8, 2017, we completed the sale of our integrated voice and data communications and wholesale transport businesses in New England and New York for consideration of \$25.9 million (the “Sovernet Transaction”). The consideration included \$20.9 million of cash, \$3.0 million of receivables and \$2.0 million of contingent consideration. The contingent consideration represented the fair value of payments related to certain operational milestones of the disposed assets. The value of the contingent consideration was up to \$4.0 million based on whether or not certain operational milestones were achieved by December 31, 2017. In September 2017, based on progress toward achieving the operational milestones, and the December 31, 2017 deadline under which to do so, management determined that earning the contingent consideration was unlikely. As a result, the fair value of the contingent consideration was reduced to zero. The amount was recorded as a loss on disposition of assets within operating income during the year ended December 31, 2017. This disposition does not qualify as discontinued operations because the disposition did not represent a strategic shift that has a major effect on our operations and financial results.

Renewable Energy (US Operations)

On November 6, 2018, we completed the sale of our US Solar Operations business that owned and managed distributed generation solar power projects operated under the Ahana name in Massachusetts, California and New Jersey (the “US Solar Transaction”). The US Solar Transaction had a total value of approximately \$122.6 million, which included a cash purchase price of \$65.3 million and the assumption of approximately \$57.3 million in debt, and is subject to certain other post-closing adjustments. Approximately \$6.5 million of the purchase price was held in escrow for a period of twelve months after the closing to secure our indemnification obligations. We received the escrow in November 2019.

The operations sold in connection with the US Solar Transaction do not qualify as discontinued operations because the disposition does not represent a strategic shift that has a major effect on our operations and financial results.

Platform Investments

International Telecom

In 2017, we completed our investment in a technology solutions business based in Bermuda that provides a variety of cloud-based managed services and information technology solutions for enterprise hosted software applications.

US Telecom

During the second quarter of 2018, we invested in a new platform, based in the United States, to develop in-building wireless network technology that enables building owners to capitalize on the growing demand for better indoor wireless solutions. Also during the second quarter of 2018, we provided funding for another new platform, based in the United States, seeking to “build to suit” large scale fiber networks to serve the telecommunications and content provider industries in need of lower latency long haul fiber transit services.

FirstNet Agreement

In July 2019, we entered into a Network Build and Maintenance Agreement (the “FirstNet Agreement”) with AT&T Mobility, LLC (“AT&T”) to build a portion of AT&T’s network for the First Responder Network Authority (“FirstNet”) as well as a commercial wireless network in or near its current operating area in the Southwestern United States (the “FirstNet Transaction”). Pursuant to the FirstNet Agreement and subject to certain limitations contained therein, all cell sites must be completed and accepted within a specified period of time. We expect to recognize construction revenue of approximately \$80 million to \$85 million over the next two years that will be mainly offset by construction costs as sites are completed. Revenues from construction are expected to have minimal impact on operating income.

Following acceptance of a cell site, AT&T will own the cell site and we will assign to AT&T any third-party tower lease applicable to such cell site. If the cell site is located on a communications tower we own, AT&T will pay us pursuant to a separate lease agreement for an initial term of eight years. In addition to building the network, we will provide ongoing equipment and site maintenance and high capacity transport to and from these cell sites for an initial term ending 2029.

AT&T will continue to use our wholesale domestic wireless network for roaming services at a fixed rate per site during the construction period until such time as the cell site is transferred to AT&T. Thereafter, revenue from the maintenance, leasing and transport services provided to AT&T is expected to offset revenue from wholesale wireless roaming services. We began receiving revenue from the FirstNet Transaction in the third quarter of 2019 and expect overall operating income contributions from the FirstNet Transaction to have a relatively steady impact from 2020 onwards.

Universal Service Fund

The Federal Universal Service Fund (“USF”) is a subsidy program managed by the FCC. USF funds are disbursed to telecommunication providers through four programs: the High Cost Program; Low Income Program; Schools and Libraries Program (“E-Rate”); and Rural Health Care Program. We participate in the High Cost Program, Low Income Program, Schools and Libraries Programs, and Rural Health Care Support programs as further described below. All of these funding programs are subject to certain operational and reporting compliance requirements. We believe we are in compliance with all applicable requirements.

The FCC’s Mobility Funds and Connect America Funds are administered through the High Cost Program. The High Cost Support program subsidizes telecommunications services in rural and remote areas. 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 received \$21.1 million of Phase I Mobility Fund support to our wholesale wireless business (the “Mobility Funds”) to be used to expand voice and broadband networks in certain geographic areas in order to offer either 3G or 4G service. Of these funds, \$7.2 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 offset operating expenses from inception of the program through part of the third quarter of 2018. The Mobility Funds projects and their operating results are included within our US Telecom segment. As part of the receipt of the Mobility Funds, we committed to comply with certain additional FCC construction and other requirements. If the requirements are not met the funds may be subject to claw back provisions. We currently expect to comply with all applicable requirements related to these funds.

During the years ended December 31, 2019, 2018 and 2017, we recorded \$16.4 million, \$16.5 million, and \$16.5 million, respectively, of revenue from High Cost Support in our International Telecom segment for our US Virgin Islands operations. Also, during each year ended December 31, 2019, 2018 and 2017, we recorded \$1.2 million of High Cost Support revenue in our US Telecom segment. We are subject to certain operational, reporting and construction requirements as a result of this funding and we believe that we are in compliance with all of these requirements. In addition, we recorded revenue of \$15.5 million during the year ended December 31, 2018, from additional funding authorized by the FCC following the Hurricanes.

In August 2018, we were awarded \$79.9 million over 10 years under the Connect America Fund Phase II Auction. The funding began in the second quarter of 2019 and we are required to provide fixed broadband and voice services to certain eligible areas in the United States. We are subject to operational and reporting requirements under the program and we expect to incur additional capital expenditures in order to comply with these requirements. We determined the award is a revenue grant, and as a result we will record the funding as revenue upon receipt. We recorded \$5.3 million of revenue in the year ended December 31, 2019 from the Connect America Fund Phase II program.

The E-Rate program provides discounted telecommunication access to eligible schools and libraries. The E-Rate program awards (i) special construction funding to build network connectivity for eligible participants, and (ii) pays for discounted recurring charges for eligible broadband services. The special construction funding is used to reimburse construction costs and is distributed upon completion of a project. As of December 31, 2019, we were awarded approximately \$15.8 million of E-Rate grants with construction completion obligations beginning in June 2020. Once these projects are constructed we are obligated to provide service to the E-Rate program participants. We receive funds upon construction completion and we are in various stages of constructing the networks. During 2019, we received \$5.4 million of which \$3.1 million was a reimbursement of capital expenditures and \$2.3 million offset operating activities. We expect to meet all requirements associated with these grants.

We also receive funding to provide discounted telecommunication services to eligible customers under the E-Rate, Lifeline, and Rural Health Care Support Programs. During the years ended December 31, 2019, 2018, and 2017 we recorded revenue of \$6.1 million, \$8.2 million, and \$10.2 million, respectively, in the aggregate from these programs.

We are subject to certain operational and reporting requirements under the above mentioned programs and we believe that we are in compliance with all of these requirements.

Tribal Bidding Credit

As part of the broadcast television spectrum incentive auction, the FCC implemented a tribal lands bidding credit to encourage deployment of wireless services utilizing 600 MHz spectrum on the lands of federally recognized tribes. We received a bidding credit of \$7.4 million under this program in 2018. A portion of these funds will be used to offset network capital costs and a portion will be used to offset the costs of supporting these networks. Our current estimate is that we will use \$5.4 million to offset capital costs and, consequently, reduce future depreciation expense and \$2.0 million to offset the cost of supporting the network which will reduce future operating expense. These credits are subject to certain requirements, including deploying service by January 2021 and meeting minimum coverage metrics. If the requirements are not met, the funds may be subject to claw back provisions. We currently expect to comply with all applicable requirements related to these funds.

Impact of Hurricanes

During September 2017, the US Virgin Islands economy, our customer base and our operations were severely impacted by Hurricanes Irma and Maria (collectively, the “Hurricanes”). Our wireless and wireline networks and commercial operations were all severely damaged by these storms and as a result of the significant damage to the wireline network and the lack of consistent commercial power in the territory, we were unable to provide most of our wireline services, which comprise the majority of our revenue in this business, from mid-September 2017 and through most of 2018. During the year ended December 31, 2017, the Company recorded a net pre-tax loss within the Company’s consolidated statement of operations of \$4.0 million related to the impact of the Hurricanes. This loss consisted of \$35.4 million for the write off of damaged assets, net of insurance recoveries of \$34.6 million which were received in February 2018. This loss also included \$3.2 million of additional operating expenses that were specifically incurred to address the impact of the Hurricanes.

During the year ended December 31, 2018, the Company received \$15.5 million in additional funding from the Federal Communications Commission’s (“FCC”) Universal Service Fund (“USF”) to further subsidize its operations in the US Virgin Islands that was recorded as revenue. This level of additional funding is not expected to continue in future periods.

During the years ended December 31, 2019, 2018 and 2017, we spent \$0.1 million, \$80.2 million and \$8.6 million, respectively, for network restoration and resiliency enhancements that allowed the reconnection of a significant majority of affected households and businesses. Our wireline network restoration work is complete, however, whether our revenue recovers to pre-Hurricane levels will be impacted by population movements, the degree of the negative economic impact of the Hurricanes on the local economy, and our subscriber base’s future appetite for wireline services.

Selected Segment Financial Information

The following represents selected segment information for the years ended December 31, 2019 and 2018 (in thousands):

	For the Year Ended December 31, 2019				
	International Telecom	US Telecom	Renewable Energy	Corporate and Other (1)	Consolidated
Revenue					
Wireless.	\$ 88,054	\$ 105,434	\$ —	\$ —	\$ 193,488
Wireline.	236,486	3,214	—	—	239,700
Renewable Energy	—	—	5,534	—	5,534
Total Revenue	324,540	108,648	5,534	—	438,722
Operating income (loss)	46,921	8,064	(7,243)	(34,365)	13,377

For the Year Ended December 31, 2018

	<u>International Telecom</u>	<u>US Telecom</u>	<u>Renewable Energy</u>	<u>Corporate and Other (1)</u>	<u>Consolidated</u>
Revenue					
Wireless.	\$ 89,946	\$ 108,878	\$ —	\$ —	\$ 198,824
Wireline.	223,623	6,602	—	—	230,225
Renewable Energy	—	—	22,158	—	22,158
Total Revenue	313,569	115,480	22,158	—	451,207
Operating income (loss)	45,022	36,813	13,440	(34,252)	61,023

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

A year-to-date comparison of our segment results is as follows:

International Telecom. Revenues within our International Telecom segment increased \$10.9 million, or 3.5%, to \$324.5 million from \$313.6 million for the year ended December 31, 2019 and 2018, respectively, as a result of an increase in broadband revenues in many of our international telecom markets. The year ended December 31, 2018 includes \$15.5 million of non-recurring funding from the USF to help our US Virgin Islands operations recover from the impact of the Hurricanes.

Operating expenses within our International Telecom segment increased by \$9.0 million, or 3.4%, to \$277.6 million from \$268.6 million for the year ended December 31, 2019 and 2018, respectively. The increase was primarily the result of increased expenses in the US Virgin Islands as their operations become more normalized following the impact of the Hurricanes.

As a result, our International Telecom segment's operating income increased \$1.9 million, or 4.2%, to \$46.9 million from \$45.0 million for the year ended December 31, 2019 and 2018, respectively.

US Telecom. Revenue within our US Telecom segment decreased by \$6.9 million, or 6.0%, to \$108.6 million from \$115.5 million for the year ended December 31, 2019 and 2018, respectively.

Revenue within our wireless operations decreased by \$3.5 million, or 3.2%, to \$105.4 million from \$108.9 million for the year ended December 31, 2019 and 2018, respectively. This decrease was primarily the result of the July 2018 sale of approximately 100 cell sites, which generated \$4.3 million in revenue during the year ended December 31, 2018, and a reduction in wholesale traffic. These decreases were partially offset by \$5.3 million in revenue recognized from the Connect America Fund II award which began in 2019.

Revenue within our wireline operations decreased \$3.4 million, or 51.5%, to \$3.2 million from \$6.6 million for the year ended December 31, 2019 and 2018, respectively, as a result of a decrease in traffic volumes within our wholesale long-distance services.

Operating expenses within our US Telecom segment increased \$21.9 million, or 27.8%, to \$100.6 million from \$78.7 million for the year ended December 31, 2019 and 2018, respectively. This increase in operating expenses was primarily related to the \$15.2 million gain on the July 2018 sale of approximately 100 cell sites, the completion of the Phase I Mobility Fund support in 2018 which was recorded as a \$3.5 million offset to expenses during the year ended December 31, 2018 and an increase within our in-building wireless business which began operations in mid-2018.

As a result of the above, our US Telecom segment's operating income decreased \$28.7 million, or 78.0%, to \$8.1 million from \$36.8 million for the year ended December 31, 2019 and 2018, respectively.

Renewable Energy. Revenue within our Renewable Energy segment decreased \$16.7 million, or 75.2%, to \$5.5 million from \$22.2 million for the year ended December 31, 2019 and 2018, respectively, primarily as a result the US Solar Transaction.

Operating expenses within our Renewable Energy segment increased by \$4.0 million, or 45.2%, to \$12.8 million from \$8.8 million for the year ended December 31, 2019 and 2018. For the year ended December 31, 2019, operating expenses within our renewable energy segment includes a \$3.3 million impairment of intangibles and a \$2.6 million loss on the settlement of certain partner settlement agreements. During the year ended December 31, 2018, operating expenses within our renewable energy segment included a \$4.0 million loss on the settlement of certain agreements transaction-related charges associated with the US Solar Transaction of \$2.1 million. Those charges were offset by the gain on the US Solar Transaction of \$12.4 million. The remaining decrease of \$8.4 million was related to the US operations which were sold with the US Solar Transaction.

As a result of the above, our Renewable Energy segment's operating income decreased by \$20.6 million to a loss of \$7.2 million compared to income of \$13.4 million for the year ended December 31, 2019 and 2018, respectively.

The following represents a year over year discussion and analysis of our results of operations for the years ended December 31, 2019 and 2018 (in thousands):

	Year Ended December 31,		Amount of Increase	Percent Increase
	2019	2018	(Decrease)	(Decrease)
REVENUE:				
Wireless.....	\$ 193,488	\$ 198,824	\$ (5,336)	(2.7)%
Wireline.....	239,700	230,225	9,475	4.1
Renewable Energy.....	5,534	22,158	(16,624)	(75.0)
Total revenue.....	438,722	451,207	(12,485)	(2.8)
OPERATING EXPENSES (<i>excluding depreciation and amortization unless otherwise indicated</i>):				
Termination and access fees.....	112,943	114,478	(1,535)	(1.3)
Engineering and operations.....	77,649	73,031	4,618	6.3
Sales, marketing and customer services.....	38,730	35,207	3,523	10.0
General and administrative.....	100,534	104,267	(3,733)	(3.6)
Transaction-related charges.....	244	2,642	(2,398)	(90.8)
Restructuring charges.....	—	515	(515)	(100.0)
Depreciation and amortization.....	89,125	85,719	3,406	4.0
Goodwill impairment.....	3,279	—	3,279	100.0
(Gain) loss on disposition of long-lived assets.....	2,841	(26,425)	29,266	110.8
Loss on damaged assets and other hurricane related charges, net of insurance recovery.....	—	750	(750)	(100.0)
Total operating expenses.....	425,345	390,184	35,161	9.0
Income from operations.....	13,377	61,023	(47,646)	(78.1)
OTHER INCOME (EXPENSE):				
Interest income.....	2,263	1,811	452	25.0
Interest expense.....	(5,010)	(7,973)	2,963	37.2
Other expense.....	(4,558)	(1,119)	(3,439)	(307.3)
Other income (expense), net.....	(7,305)	(7,281)	(24)	0.3
INCOME BEFORE INCOME TAXES.....	6,072	53,742	(47,670)	(88.7)
Income tax expense.....	4,105	18,870	(14,765)	(78.2)
NET INCOME.....	1,967	34,872	(32,905)	(94.4)
Net income attributable to non-controlling interests, net of tax:.....	(12,773)	(15,057)	2,284	15.2
NET INCOME (LOSS) ATTRIBUTABLE TO ATN INTERNATIONAL, INC. STOCKHOLDERS.....	<u>\$ (10,806)</u>	<u>\$ 19,815</u>	<u>\$ (30,621)</u>	<u>(154.5)%</u>

Wireless revenue. Our wireless revenue consists of wholesale revenue generated within our US Telecom segment and retail revenue generated within both our US Telecom and International Telecom segments. Within our International Telecom segment, wireless revenue is generated in Bermuda and the Caribbean (including the US Virgin Islands).

Wholesale wireless revenue. Our US Telecom segment generates wholesale wireless revenue from providing mobile voice and 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. Wholesale wireless revenue also includes tower lease income.

The most significant competitive factor we face in our US Telecom's wholesale wireless business is the extent to which our carrier customers choose to roam on our networks and lease tower space and transport ("backhaul")

services or elect to build or acquire their own infrastructure in a market, reducing or eliminating their need for our services in those markets. We also face competition from other providers of such shared infrastructure solutions. In the past, we have entered into buildout projects with existing carrier customers to help these customers 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 have differed from our FirstNet Transaction and have typically included a purchase right in favor of the carrier to purchase that portion of the network for a predetermined price, depending on when the right to purchase is exercised.

Retail wireless revenue. Both our US Telecom and International Telecom segments generate retail wireless revenues by providing mobile voice and data services to our subscribers. Retail wireless revenues also include roaming revenues generated by other carriers' customers roaming into our retail markets, handset and data modem sales and real estate rental income. Beginning in 2019, retail wireless revenue also includes revenue from the Connect America Fund II award.

Wireless revenue decreased by \$5.3 million, or 2.7%, to \$193.5 million for the year ended December 31, 2019 from \$198.8 million for the year ended December 31, 2018. The net decrease in wireless revenue, within our segments, consisted of the following:

- *International Telecom.* Within our International Telecom segment, wireless revenue decreased by \$1.8 million, or 2.0%, to \$88.1 million for the year ended December 31, 2019 from \$89.9 million for the year ended December 31, 2018. This decrease was primarily related to a decrease in roaming rates and revenue within the US Virgin Islands as a result of fewer customers from other carriers roaming on our network in 2019 as compared to 2018.
- *US Telecom.* Wireless revenue within our US Telecom segment decreased by \$3.5 million, or 3.2%, to \$105.4 million from \$108.9 million for the year ended December 31, 2019 and 2018, respectively. This decrease was attributable to a decline in revenues in our wholesale wireless operations of \$8.7 million, or 9.6%, to \$82.1 million from \$90.8 million for the year ended December 31, 2019 and 2018, respectively. Of this decrease in wholesale wireless revenue, \$4.3 million was related to the July 2018 sale of 100 cell sites while the remaining \$4.4 million of this decrease was the result of a reduction in wholesale traffic.

Revenue from our retail wireless operations increased by \$5.3 million, or 29.3%, to \$23.4 million from \$18.1 million. This increase was the result of the recognition of \$5.3 million in revenue from the Connect America Fund II award which began in 2019.

We expect wireless revenues within our International Telecom segment to increase as we continue to invest in upgrading our networks and service offerings. Growth in revenue from anticipated subscriber growth in certain markets, however, may be partially 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.

We expect that wholesale wireless revenue within our US Telecom segment will increase over the next year during the construction phase of the FirstNet Transaction and then stabilize at lower levels as a result of continued reduced contractual rates and imposed revenue caps.

We expect that retail wireless revenue within our US Telecom segment will increase in future years as a result of the Connect America Fund II award.

We believe that maintaining roaming and other wireless services favorable to our carrier customers allows us to preserve revenue for a longer period of time while creating the potential for long-lived shared infrastructure solutions for carriers in areas they may consider to be non-strategic.

Wireline revenue. Wireline revenue is generated by our US Telecom and International Telecom segments. Within our US Telecom segment, wireline revenue is generated by our wholesale long-distance voice services to telecommunications carriers. Within our International Telecom segment, wireline revenue is generated in Bermuda and the Caribbean (including the US Virgin Islands) and includes internet, voice, and video service revenues as well as revenues from our new managed services and technology business.

Wireline revenue increased by \$9.5 million, or 4.1%, to \$239.7 million from \$230.2 million for the year ended December 31, 2019 and 2018, respectively. The net increase in wireline revenue, within our segments, consisted of the following:

- *International Telecom.* Within our International Telecom segment, wireline revenue increased by \$12.9 million, or 5.8%, to \$236.5 million from \$223.6 million, for the year ended December 31, 2019 and 2018, respectively, primarily as a result of an increase in broadband revenues in many of our international telecom markets partially offset by \$15.5 million of additional non-recurring funding from the USF, received during the year ended December 31, 2018, to help our US Virgin Island operations recover from the impact of the Hurricanes.
- *US Telecom.* Wireline revenue within our US Telecom segment decreased \$3.4 million, or 51.5%, to \$3.2 million from \$6.6 million for the year ended December 31, 2019 and 2018, respectively, as a result of a decrease in traffic volumes within our wholesale long-distance services.

Within our International Telecom segment, we anticipate that wireline revenue may increase as our operations within the US Virgin Islands become more normalized following the impact of the Hurricanes. However, returning revenues to levels reported prior to the Hurricanes will take longer, or may never occur, as a result of population movements. In all of our international markets we may incur a decline in video revenues as a result of subscribers using alternative methods to receive video content. We anticipate that wireline revenue from our international long-distance business in Guyana will continue to decrease as consumers seek to use alternative technology services to place calls, as well 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 the 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 broadband services to consumers and enterprises in Guyana, an increase in regulated local calling rates in Guyana or possible economic growth within that country. 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 15 to the Consolidated Financial Statements included in this Report.

Renewable energy revenue. For 2019, renewable energy revenue includes the generation of power through Power Purchase Agreements (“PPAs”) from our solar plants in India. Our PPAs, which are typically priced at or below local retail electricity rates and allow our customers to secure electricity at predictable and stable prices over the duration of their long-term contract, provide us with high-quality contracted cash flows. In the United States, and until the sale of those operations on November 6, 2018, renewable energy revenue represented revenue from the sale of electricity through PPAs and the sale of solar renewable energy credits. During the year ended December 31, 2018, our renewable energy operations within the United States generated \$16.8 million of revenue.

Renewable energy revenue decreased by \$16.6 million, or 75.0%, to \$5.5 million from \$22.2 million for the year ended December 31, 2019 and 2018, respectively, primarily as a result of the impact of the US Solar Transaction.

We believe that our renewable energy revenue may exhibit moderate growth as additional solar plants in India become operational.

Termination and access fee expenses. Termination and access fee expenses are charges that we incur for voice and data transport circuits (in particular, the circuits between our wireless sites and our switches), internet capacity, video programming costs, other access fees we pay to terminate our calls, telecommunication spectrum fees and direct costs associated with our managed services and technology business and renewable energy

operations. Termination and access fees also include the cost of handsets and customer resale equipment incurred by our retail businesses.

Termination and access fees decreased by \$1.5 million, or 1.3%, to \$112.9 million from \$114.5 million for the year ended December 31, 2019 and 2018, respectively. The net decrease in termination and access fees, within our segments, consisted of the following:

- *International Telecom.* Within our International Telecom segment, termination and access fees decreased by \$0.3 million, or 0.4%, to \$73.7 million from \$74.0 million, for the year ended December 31, 2019 and 2018, respectively. Our US Virgin Islands operations incurred an increase in programming and other variable costs of \$2.6 million that were not incurred during 2018 as a result of the impact of the Hurricanes. This increase was offset by an expense decrease in other markets as a result of a decline in subscribers.
- *US Telecom.* Termination and access fees within our US Telecom segment remained consistent at \$38.9 million for the year ended December 31, 2019 and 2018. This consistency was primarily a result of increased circuit costs in 2019 offset by the \$2.1 million impact of the sale of approximately 100 cell sites during July 2018, the \$3.5 million impact of the completion of the Phase I Mobility Fund support in 2018 which recorded such amounts as an offset to termination and access fees as well as a decrease in termination costs within our wholesale long-distance service as a result of a decline in traffic volume.
- *Renewable Energy.* Termination and access fees within our Renewable Energy segment decreased \$1.4 million, or 77.8%, to \$0.4 million from \$1.8 million for the year ended December 31, 2019 and 2018, respectively, as a result of the US Solar Transaction.

In our International Telecom and Renewable Energy segments, we expect that termination and access fee expenses will remain fairly consistent as a percentage of revenues in future periods. Within the US Telecom segment, our performance under the FirstNet Transaction will result in an increase in termination and access fee expenses during the construction phase over the next two years.

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

Engineering and operations expenses increased by \$4.6 million, or 6.3%, to \$77.6 million from \$73.0 million for the year ended December 31, 2019 and 2018, respectively. The net increase in engineering and operations expenses, within our segments, consisted of the following:

- *International Telecom.* Within our International Telecom segment, engineering and operations expenses increased by \$2.5 million, or 4.2%, to \$62.0 million from \$59.5 million, for the year ended December 31, 2019 and 2018, respectively. This increase was primarily related to an increase in expenses within most of our international markets, primarily related to the expansion and upgrades of our networks.
- *US Telecom.* Engineering and operations expenses increased within our US Telecom segment by \$2.3 million, or 18.1%, to \$15.0 million from \$12.7 million, for the year ended December 31, 2019 and 2018, respectively, primarily as a result of a \$2.1 million increase in these expenses in order to support our upgraded networks.
- *Renewable Energy.* During 2018, our Renewable Energy segment recorded \$0.1 million of engineering and operations expenses. This segment did not incur any engineering and operations expenses during 2019.
- *Corporate Overhead.* Engineering and operations expenses within our corporate overhead remained consistent at \$0.7 million for the year ended December 31, 2019 and 2018.

In our International Telecom segment, we expect that engineering and operations expenses will remain fairly consistent as a percentage of revenues. We expect engineering and operating expenses to increase in our US Telecom segment during the construction phase of the FirstNet Transaction.

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 \$3.5 million, or 10.0%, to \$38.7 million from \$35.2 million for the year ended December 31, 2019 and 2018, respectively. The net increase in sales and marketing expenses, within our segments, consisted of the following:

- *International Telecom.* Within our International Telecom segment, our sales and marketing expenses increased by \$1.0 million, or 3.1%, to \$33.1 million from \$32.1 million for the year ended December 31, 2019 and 2018, respectively. The increase was incurred within most of our international markets.
- *US Telecom.* Sales and marketing expenses increased within our US Telecom segment by \$2.6 million, or 83.9%, to \$5.7 million from \$3.1 million, for the year ended December 31, 2019 and 2018, respectively, primarily as a result of our in-building wireless business, which began operations in mid-2018.

Within our International Telecom segment, we expect that sales and marketing expenses will remain fairly consistent as a percentage of that segment's revenue. We expect sales and marketing expenses within our US Telecom segment to increase as a result of the expansion of our in-building wireless business.

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 decreased by \$3.7 million, or 3.6%, to \$100.5 million from \$104.3 million for the year ended December 31, 2019 and 2018, respectively. The net decrease in general and administrative expenses, within our segments, consisted of the following:

- *International Telecom.* General and administrative expenses decreased within our International Telecom segment by \$0.9 million, or 1.7%, to \$52.6 million from \$53.5 million, for the year ended December 31, 2019 and 2018, respectively. The decrease was primarily related to cost reduction measures within both our managed services and technology platform businesses as well as certain markets within this segment.
- *US Telecom.* General and administrative expenses increased by \$1.7 million, or 10.6%, to \$17.7 million from \$16.0 million for the year ended December 31, 2019 and 2018, respectively, primarily due to our in-building wireless network business and to support our operations.
- *Renewable Energy.* General and administrative expenses within our Renewable Energy segment decreased by \$3.3 million, or 50.0%, to \$3.3 million from \$6.6 million for the year ended December 31, 2019 and 2018, respectively. This decrease was primarily related to the US Solar Transaction partially offset by an increase in such expenses within our international operations.
- *Corporate Overhead.* General and administrative expenses within our corporate overhead decreased by \$1.2 million, or 4.3%, to \$26.9 million from \$28.1 million, for the year ended December 31, 2019 and 2018, respectively, primarily related to certain cost reduction measures, partially offset by an increase in information technology expenditures to further enhance our network security.

We expect to incur additional general and administrative expenses to support our in-building wireless network operations as well as to further enhance our network security.

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 \$0.2 million of transaction-related costs during the year ended December 31, 2019. During the year ended December 31, 2018, we incurred \$2.6 million of transaction-related charges relating to our in-building wireless network and large-scale fiber network businesses.

Restructuring charges. Restructuring charges are costs incurred as a result of reorganizing our operations from acquisition or disposition activities. During the year ended December 31, 2018, we incurred \$0.5 million of restructuring charges which were primarily related to the US Solar Transaction. There were no restructuring charges incurred during 2019.

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 \$3.4 million, or 4.0%, to \$89.1 million from \$85.7 million for the year ended December 31, 2019 and 2018, respectively. The net increase in depreciation and amortization expenses, within our segments, consisted primarily of the following:

- *International Telecom.* Depreciation and amortization expenses increased within our International Telecom segment by \$7.1 million, or 14.5%, to \$56.0 million from \$48.9 million, for the year ended December 31, 2019 and 2018, respectively. This increase was recognized throughout all of our international markets as a result of upgrades and expansions to this segment's network assets including the network repairs and resiliency enhancements in the US Virgin Islands which were impacted by the Hurricanes.
- *US Telecom.* Depreciation and amortization expenses decreased within our US Telecom segment by \$1.5 million, or 6.1%, to \$23.1 million from \$24.6 million, for the year ended December 31, 2019 and 2018, respectively, primarily as a result of the completion of the July 2018 sale of approximately 100 cell sites within our US wireless operations. We recorded approximately \$1.9 million of depreciation expense in 2018 related to the 100 disposed cell sites. This decrease was partially offset by the effects of additional capital expenditures within this segment during 2018 and 2019.
- *Renewable Energy.* Depreciation and amortization expenses within our Renewable Energy segment decreased by \$3.3 million, or 50.0%, to \$3.3 million from \$6.6 million for the year ended December 31, 2019 and 2018, respectively. Of this decrease, \$4.3 million was the result of the impact of the US Solar Transaction. This decrease was partially offset by an increase, as a result of capital expenditures, in our international operations of \$1.0 million.
- *Corporate Overhead.* Depreciation and amortization expenses increased by \$1.1 million, or 19.6%, to \$6.7 million from \$5.6 million for the year ended December 31, 2019 and 2018, respectively, as a result of certain shared services assets being placed into service.

We expect depreciation expense to increase as we acquire tangible assets to expand or upgrade our telecommunications networks and expand our solar power generating assets.

Goodwill impairment. During the year ended December 31, 2019, we recorded a \$3.3 million goodwill impairment charge within our Renewable Energy segment. See Note 9 to the Consolidated Financial Statements in this Report.

(Gain) loss on disposition of long-lived assets. During the year ended December 31, 2019, we recorded a \$2.8 million loss on the disposition of long-lived assets primarily in connection with certain asset disposals and partner settlement agreements within our Renewable Energy segment.

During the year ended December 31, 2018, we recorded a gain on the disposition of long-lived assets of \$26.4 million. Within our US Telecom segment, we recorded a gain of \$17.2 million primarily as the result of a \$15.2 million gain on the sale of approximately 100 cell sites and a \$2.9 million gain on the sale of certain telecommunication licenses. Within our Renewable Energy segment, we recorded a gain on the US Solar Transaction of \$12.4 million. These gains were partially offset by a \$3.2 million loss recorded in connection with certain asset disposals and partner settlement agreements within our Renewable Energy segment and a \$1.1 million loss on the disposal of miscellaneous assets within our US wireless operations.

Loss on damaged assets and other Hurricane-related charges. During the year ended December 31, 2018, we incurred \$0.8 million in expenses associated with the procurement of continued building maintenance, security services, the supply of alternative power and related professional fees.

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

Interest income increased \$0.5 million, or 25.0%, to \$2.3 million from \$1.8 million for the year ended December 31, 2019 and 2018, respectively, as the higher rate of return on our cash, cash equivalents and short-term investments was partially offset by a decrease in those balances.

Interest expense. Interest expense decreased by \$3.0 million, or 37.2%, to \$5.0 million from \$8.0 million for the year ended December 31, 2019 and December 31, 2018, respectively, primarily as a result of the US Solar Transaction and the effects of the April 2019 amendment to our primary credit facility.

During the year ended December 31, 2019, we incurred interest expense on the Viya Debt and the One Communications Debt as well as commitment fees, letter of credit fees and the amortization of debt issuance costs on our outstanding credit facilities. During the year ended December 31, 2018, we also incurred \$2.9 million of interest expense on the Ahana Debt which was assumed by the acquirer in November 2018 as a part of the US Solar Transaction.

Other expenses. Other expense, net represents miscellaneous non-operational income earned and expenses incurred.

For the year ended December 31, 2019, other expenses were \$4.6 million which was primarily related to a \$4.7 million write down of previously acquired non-controlling equity investments and \$1.6 million relating to a net loss on foreign currency transactions. These expenses were partially offset by \$1.0 million of income recognized on certain employee benefit plans.

For the year ended December 31, 2018, we recorded \$1.1 million of other expenses which were primarily related to \$2.4 million in losses on foreign currency transactions partially offset by \$1.3 million in income related to certain employee benefit plans.

Income taxes. Our effective tax rate for the years ended December 31, 2019 and 2018 was 67.6% and 35.1%, respectively. The effective tax rate for the year ended December 31, 2019 was primarily impacted by the following items: (i) a \$3.9 million net increase of unrecognized tax positions, (ii) a \$3.8 million net increase for permanently non-deductible expenses, (iii) a \$1.2 million deferred tax benefit related to an investment tax credit, and (vi) the mix of income generated among the jurisdictions in which we operate along with the exclusion of losses in jurisdictions where we cannot benefit from those losses as required by ASC 740-270-30-36(a), primarily in the US Virgin Islands and India.

The effective tax rate for the year ended December 31, 2018 was primarily impacted by the following items: (i) a \$10.6 million net increase of unrecognized tax positions, (ii) a \$4.7 million net benefit to record a return to accrual

adjustment, (iii) a \$1.2 million benefit to recognize a capital loss carryover due to capital gains on sale of wireless licenses, (iv) a \$1.4 million net benefit to record a valuation allowance release on an indefinite lived intangible asset, (v) a \$1.7 million provision associated with the intercompany sale of assets from the US to the US Virgin Islands, and (vi) the mix of income generated among the jurisdictions in which we operate along with the exclusion of losses in jurisdictions where we cannot benefit from those losses as required by ASC 740-270-30-36(a), primarily in the US Virgin Islands and India.

Our effective tax rate is based upon 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 any transactional or one-time items in the future and the mix of income in any given year generated among the jurisdictions in which we operate. While we believe we have adequately provided for all tax positions, amounts asserted by taxing authorities could materially differ from our accrued positions as a result of uncertain and complex application of tax laws and regulations. Additionally, the recognition and measurement of certain tax benefits include estimates and judgment by management. Accordingly, we could record additional provisions or benefits for US federal, state, and foreign tax matters in future periods as new information becomes available.

The Tax Cuts and Jobs Act of 2017 (the “Tax Act” also commonly referred to as US tax reform), which was signed into law on December 22, 2017, has resulted in significant changes to the US corporate income tax system and the US Virgin Islands mirror code which replaces “United States” with “US Virgin Islands” throughout the Internal Revenue Code. The Tax Act transitions international taxation from a worldwide system to a modified territorial system and includes two base erosion prevention measures on non-US earnings, which has the effect of subjecting certain earnings of our foreign subsidiaries to US taxation as global intangible low taxed income (“GILTI”) and eliminates the deduction of certain payments made to related foreign corporations, and imposes a minimum tax if greater than regular tax under the base-erosion and anti-abuse tax (“BEAT”). These changes became effective beginning in 2018 but did not have an impact on us in the initial year. Based on our annual results for 2019 we are not calculating a GILTI inclusion for 2019. We do not believe we are subject to BEAT and therefore have not included the impacts of BEAT in our consolidated financial statements for the year ended December 31, 2019.

Net income attributable to non-controlling interests, net of tax. Net income attributable to non-controlling interests, net of tax reflected an allocation of \$12.8 million and \$15.1 million of income generated by our less than wholly owned subsidiaries for the year ended December 31, 2019 and 2018, respectively, a decrease of \$2.3 million, or 15.2%. Changes in net income attributable to non-controlling interests, net of tax, within our segments, consisted of the following:

- *International Telecom.* Net income attributable to non-controlling interests, net of tax decreased by \$0.1 million, or 1.0%, to \$9.7 million from \$9.8 million for the year ended December 31, 2019 and 2018, respectively, primarily as a result of a decrease in non-controlling ownership interests partially offset by an increase in profitability at certain less than wholly owned subsidiaries.
- *US Telecom.* Net income attributable to non-controlling interests, net of tax decreased by \$0.1 million, or 3.1%, to \$3.1 million from \$3.2 million for the year ended December 31, 2019 and 2018, respectively, primarily as a result of decreased profitability at certain less than wholly owned subsidiaries within our US wireless retail operations.
- *Renewable Energy.* As a result of the US Solar Transaction, no allocation of income or losses was recorded to non-controlling interests during the year ended December 31, 2019. Net income attributable to non-controlling interests, net of tax, was \$2.1 million during the year ended December 31, 2018.

Net income (loss) attributable to ATN International, Inc. stockholders. Net income (loss) attributable to ATN International, Inc. stockholders was a loss of \$10.8 million and income of \$19.8 million for the years ended December 31, 2019 and 2018, respectively.

On a per diluted share basis, net income (loss) per diluted share was a loss of \$0.68 and income of \$1.24 per diluted share for the year ended December 31, 2019 and 2018, respectively.

Selected Segment Financial Information

The following represents selected segment information for the years ended December 31, 2018 and 2017 (in thousands):

For the Year Ended December 31, 2018					
	International Telecom	US Telecom	Renewable Energy	Corporate and Other (1)	Consolidated
Revenue					
Wireless.	\$ 89,946	\$ 108,878	\$ —	\$ —	\$ 198,824
Wireline.	223,623	6,602	—	—	230,225
Renewable Energy	—	—	22,158	—	22,158
Total Revenue	313,569	115,480	22,158	—	451,207
Operating income (loss)	45,022	36,813	13,440	(34,252)	61,023
For the Year Ended December 31, 2017					
	International Telecom	US Telecom	Renewable Energy	Corporate and Other (1)	Consolidated
Revenue					
Wireless.	\$ 89,473	\$ 143,028	\$ —	\$ —	\$ 232,501
Wireline.	215,132	12,695	—	—	227,827
Renewable Energy	—	—	20,865	—	20,865
Total Revenue	304,605	155,723	20,865	—	481,193
Operating income (loss)	28,308	55,317	5,179	(33,496)	55,308

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

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

International Telecom. Revenues within our International Telecom segment increased \$9.0 million, or 3.0%, to \$313.6 million from \$304.6 million for the years ended December 31, 2018 and 2017, respectively.

During the year ended December 31, 2018, we received \$15.5 million in additional funding from the USF to further subsidize our operations in the US Virgin Islands that was recorded as revenue. This level of additional funding is not expected to continue in future periods. The impact of this additional funding on our revenues was offset by the impact of the Hurricanes and the sale of our operations in the British Virgin Islands in August 2017 which reported \$3.1 million of revenue during the year ended December 31, 2017.

An increase in broadband revenues and the addition of our new managed services and technology platform, which began operations in September 2017, increased our revenues within the International Telecom market.

Operating expenses within our International Telecom segment decreased by \$7.7 million, or 2.8%, to \$268.6 million from \$276.3 million for the years ended December 31, 2018 and 2017, respectively. The decrease was primarily the result of a \$3.2 million reduction in hurricane-related expenses (including a loss on damaged assets and other hurricane-related charges, net of insurance recovery) and a \$3.8 million reduction in television programming and other variable costs that were not incurred as a result of the impact of the Hurricanes.

As a result, our International Telecom segment's operating income increased \$16.7 million, or 59.0%, to \$45.0 million from \$28.3 million for the years ended December 31, 2018 and 2017, respectively.

US Telecom. Revenue within our US Telecom segment decreased by \$40.2 million, or 25.8%, to \$115.5 million from \$155.7 million for the years ended December 31, 2018 and 2017, respectively.

Revenue within our wireless operations decreased by \$34.1 million, or 23.8%, to \$108.9 million from \$143.0 million for the years ended December 31, 2018 and 2017, respectively. All of this decrease was attributable to our wholesale wireless operations which had its revenue negatively impacted by \$9.6 million relating to the July 2018 sale of 100 cell sites with the remaining \$24.5 million decrease resulting from a reduction in wholesale roaming rates, reduced roaming traffic, and the impact of contractual revenue caps with certain carriers. Revenue from our retail wireless operations remained unchanged at \$18.1 million for the years ended December 31, 2018 and 2017.

Revenue within our wireline operations decreased by \$6.1 million, or 48.0%, to \$6.6 from \$12.7 for the years ended December 31, 2018 and 2017, respectively. The impact of the Sovernet Transaction resulted in a decrease in revenue of \$4.2 million. In addition, a decline in traffic volumes within our wholesale long-distance services resulted in a decrease of \$1.9 million in that business.

Operating expenses within our US Telecom segment decreased \$19.4 million, or 19.3%, to \$81.0 million from \$100.4 million for the years ended December 31, 2018 and 2017, respectively. This decrease in operating expenses was primarily related to the July 2018 sale of 100 cell sites and the related \$15.2 gain recognized on such transaction as well as a \$4.0 million decrease related to the Sovernet Transaction.

As a result of the above, our US Telecom segment's operating income decreased \$18.5 million, or 33.5%, to \$36.8 million from \$55.3 million for the years ended December 31, 2018 and 2017, respectively.

Renewable Energy. Revenue within our Renewable Energy segment increased \$1.3 million, or 6.2%, to \$22.2 million from \$20.9 million for the year ended December 31, 2018 and 2017, respectively, primarily as a result of a \$3.2 million increase in revenue from our newly completed solar power plants in India partially offset by a \$1.9 million decrease in revenue in our US operations primarily as a result of the US Solar Transaction.

Operating expenses within our Renewable Energy segment decreased by \$6.9 million, or 43.9%, to \$8.8 million from \$15.7 million for the years ended December 31, 2018 and 2017, respectively, primarily related to the \$11.9 million gain on the US Solar Transaction.

As a result of the above, our Renewable Energy segment's operating income increased by \$8.2 million, or 157.7%, to \$13.4 million from \$5.2 million for the years ended December 31, 2018 and 2017, respectively.

The following represents a year over year discussion and analysis of our results of operations for the years ended December 31, 2018 and 2017 (in thousands):

	Year Ended December 31,		Amount of Increase	Percent Increase
	2018	2017	(Decrease)	(Decrease)
REVENUE:				
Wireless.	\$ 198,824	\$ 232,501	\$ (33,677)	(14.5)%
Wireline.	230,225	227,827	2,398	1.1
Renewable Energy	22,158	20,865	1,293	6.2
Total revenue	451,207	481,193	(29,986)	(6.2)
OPERATING EXPENSES <i>(excluding depreciation and amortization unless otherwise indicated):</i>				
Termination and access fees	114,478	120,624	(6,146)	(5.1)
Engineering and operations	73,031	74,614	(1,583)	(2.1)
Sales and marketing	35,207	35,184	23	0.1
General and administrative	104,267	102,294	1,973	1.9
Transaction-related charges	2,642	1,009	1,633	161.8
Restructuring charges	515	1,169	(654)	(55.9)
Depreciation and amortization	85,719	86,934	(1,215)	(1.4)
(Gain) loss on disposition of long-lived assets.	(26,425)	101	(26,526)	(26,263.4)
Loss on damaged assets and other hurricane related charges, net of insurance recovery	750	3,956	(3,206)	(81.0)
Total operating expenses	390,184	425,885	(35,701)	(8.4)
Income from operations	61,023	55,308	5,715	10.3
OTHER INCOME (EXPENSE):				
Interest income	1,811	1,613	198	12.3
Interest expense	(7,973)	(8,838)	865	(9.8)
Loss on deconsolidation of subsidiary	—	(529)	529	100.0
Other expense, net	(1,119)	(1)	(1,118)	100.0
Other income and expense, net.	(7,281)	(7,755)	474	(6.1)
INCOME FROM CONTINUING OPERATIONS BEFORE INCOME TAXES.	53,742	47,553	6,189	13.0
Income tax provisions (benefit).	18,870	(1,341)	20,211	(1,507.2)
NET INCOME.	34,872	48,894	(14,022)	(28.7)
Net income attributable to non-controlling interests, net of tax:	(15,057)	(17,406)	2,349	(13.5)
NET INCOME ATTRIBUTABLE TO ATN INTERNATIONAL, INC. STOCKHOLDERS	\$ 19,815	\$ 31,488	\$ (11,673)	(37.1)%

Wireless revenue. Wireless revenue decreased by \$33.7 million, or 14.5%, to \$198.8 million for the year ended December 31, 2018 from \$232.5 million for the year ended December 31, 2017. The decreases in wireless revenue, within our segments, consisted of the following:

- *International Telecom.* Within our International Telecom segment, wireless revenue increased by \$0.4 million, or 0.4%, to \$89.9 million for the year ended December 31, 2018 from \$89.5 million for the year ended December 31, 2017. This increase was primarily related to an increase in voice and data traffic within most of our international markets partially offset by a \$2.9 million decrease in revenues in the US Virgin Islands which was negatively impacted by the Hurricanes.
- *US Telecom.* Wireless revenue within our US Telecom segment decreased by \$34.1 million, or 23.8%, to \$108.9 million from \$143.0 million, for the years ended December 31, 2018 and 2017, respectively. Of this decrease, \$34.1 million represented a decrease in wholesale wireless revenue, which was a 27.3% decrease to

\$90.8 million from \$124.9 million for the years ended December 31, 2018 and 2017, respectively. Of this decrease in wholesale wireless revenue, \$9.6 million was related to the July 2018 sale of 100 cell sites with the remaining decrease a result of a reduction in wholesale roaming traffic, roaming rates and the impact of contractual revenue caps with certain carrier customers. Wireless revenue within our US Telecom's retail operations remained unchanged at \$18.1 million for the years ended December 31, 2018 and 2017.

Wireline revenue. Wireline revenue increased by \$2.4 million, or 1.1%, to \$230.2 million from \$227.8 million for the years ended December 31, 2018 and 2017, respectively. The changes in wireline revenue, within our segments, consisted of the following:

- *International Telecom.* Within our International Telecom segment, wireline revenue increased by \$8.5 million, or 4.0%, to \$223.6 million from \$215.1 million, for the years ended December 31, 2018 and 2017, respectively. Within the US Virgin Islands, revenue decreased by \$0.6 million, net of the \$15.5 million of additional support from the USF, as a result of the Hurricanes. In other international markets, we recognized an increase in broadband data revenues as a result of subscriber growth.
- *US Telecom.* Wireline revenue decreased within our US Telecom segment by \$6.1 million, or 48.0%, to \$6.6 million from \$12.7 million, for the years ended December 31, 2018 and 2017, respectively, primarily due to the Sovernet Transaction which resulted in a \$4.2 million reduction in wireline revenue. The remainder of the decrease relates to a decrease in traffic volume within our wholesale long-distance voice services operations.

Renewable energy revenue. During the years ended December 31, 2018 and 2017, our renewable energy operations within the United States generated \$16.8 million and \$18.7 million of revenue, respectively.

Renewable energy revenue increased by \$1.3 million, or 6.2%, to \$22.2 million from \$20.9 million for the years ended December 31, 2018 and 2017, respectively, primarily as a result of the increase in revenue from our newly completed solar power plants in India, partially offset by a \$1.9 million decrease in our US operations primarily as a result of the US Solar Transaction, the expiration of certain incentive energy credits from the state of California and adverse weather conditions in the northeast United States.

Termination and access fee expenses. Termination and access fees decreased by \$6.1 million, or 5.1%, to \$114.5 million from \$120.6 million for the years ended December 31, 2018 and 2017, respectively. Net decreases in termination and access fees, within our segments, consisted of the following:

- *International Telecom.* Within our International Telecom segment, termination and access fees decreased by \$1.5 million, or 2.0%, to \$74.0 million from \$75.5 million, for the years ended December 31, 2018 and 2017, respectively. Of this decrease, \$3.8 million was caused by a reduction in television programming and other variable costs that were not incurred as a result of the impact of the Hurricanes and the sale of our operations in the British Virgin Islands. These decreases were partially offset by the additional costs incurred by our new managed services and technology platform, which began operations in September 2017, and within our other international markets.
- *US Telecom.* Termination and access fees within our US Telecom segment decreased by \$4.9 million, or 11.2%, to \$38.9 million from \$43.8 million, for the years ended December 31, 2018 and 2017, respectively. Of this decrease, \$2.2 million was related to the effects of the Sovernet Transaction within our wireline operations. Additionally, a decrease in traffic volume within our wholesale long-distance voice services business resulted in a decrease in termination and access fees of \$0.7 million within that business with the remaining \$1.9 million decrease being attributable to decreased traffic volume in our US wireless business.
- *Renewable Energy.* Termination and access fees within our Renewable Energy increased \$0.4 million, or 28.6%, to \$1.8 million from \$1.4 million for the years ended December 31, 2018 and 2017, respectively, as a result of increased activity in our India operations.

Engineering and operations expenses. Engineering and operations expenses decreased by \$1.6 million, or 2.1%, to \$73.0 million from \$74.6 million for the years ended December 31, 2018 and 2017, respectively. The net decrease in engineering and operations, within our segments, consisted of the following:

- *International Telecom.* Within our International Telecom segment, engineering and operations expenses decreased by \$0.8 million, or 1.3%, to \$59.5 million from \$60.3 million, for the years ended December 31, 2018 and 2017, respectively. This decrease was primarily related to operational efficiencies in some of our international markets partially offset by expenses within our new managed services and technology platform which began operations in September 2017.
- *US Telecom.* Engineering and operations expenses decreased within our US Telecom segment by \$0.7 million, or 5.2%, to \$12.7 million from \$13.4 million, for the years ended December 31, 2018 and 2017, respectively, primarily as a result of the Sovernet Transaction, which resulted in a decrease of \$0.6 million, and operating efficiencies within our wireless businesses. These decreases were partially offset by \$0.4 million of aggregate expenses incurred within our in-building and large-scale fiber network businesses.
- *Renewable Energy.* Engineering expenses within our Renewable Energy segment decreased \$0.3 million, or 75.0%, to \$0.1 million from \$0.4 million for the years ended December 31, 2018 and 2017, respectively.
- *Corporate Overhead.* Engineering expenses within our corporate overhead increased \$0.1 million, or 16.7%, to \$0.7 million from \$0.6 million for the years ended December 31, 2018 and 2017, respectively.

Sales and marketing expenses. Sales and marketing expenses remained unchanged at \$35.2 million for the year ended December 31, 2018 and 2017. The changes in sales and marketing expenses, within our segments, consisted of the following:

- *International Telecom.* Within our International Telecom segment, our sales and marketing expenses increased by \$0.3 million, or 0.9%, to \$32.1 million from \$31.8 million for the years ended December 31, 2018 and 2017, respectively. The increase reported from most of our international markets, primarily related to the promotion of our new broadband products, was offset by a decrease of \$0.9 million in our US Virgin Islands operations, caused as a result of the Hurricanes.
- *US Telecom.* Sales and marketing expenses decreased within our US Telecom segment by \$0.2 million, or 6.1%, to \$3.1 million from \$3.3 million, for the years ended December 31, 2018 and 2017, respectively, primarily as a result of a decrease in marketing and advertising within the retail operations of our wireless business and the effects of the Sovernet Transaction. These decreases were partially offset by \$0.3 million of aggregate expenses incurred within our in-building and large-scale fiber network businesses.

General and administrative expenses. General and administrative expenses increased by \$2.0 million, or 2.0%, to \$104.3 million from \$102.3 million for the years ended December 31, 2018 and 2017, respectively. Net increases in general and administrative expenses, within our segments, consisted of the following:

- *International Telecom.* General and administrative expenses increased within our International Telecom segment by \$0.2 million, or 0.4%, to \$53.5 million from \$53.3 million, for the years ended December 31, 2018 and 2017, respectively. The increase was primarily related to our new managed services and technology platform partially offset by operational efficiencies in some of our other markets.
- *US Telecom.* General and administrative expenses increased by \$1.8 million, or 12.7%, to \$16.0 million from \$14.2 million primarily to support our wireless operations and the addition of our in-building and large scale fiber network businesses partially offset by the \$0.5 million impact of the Sovernet Transaction.
- *Renewable Energy.* General and administrative expenses within our Renewable Energy segment decreased by \$0.7 million, or 9.6%, to \$6.6 million from \$7.3 million for the years ended December 31, 2018 and 2017, respectively. This decrease was primarily related to the US Solar Transaction.

- *Corporate Overhead.* General and administrative expenses increased within our corporate overhead by \$0.6 million, or 2.2%, to \$28.1 million from \$27.5 million, for the years ended December 31, 2018 and 2017, respectively, primarily related to an increase in information technology expenditures to further enhance our cyber and network security.

Transaction-related charges. We incurred \$2.6 million and \$1.0 million of transaction-related charges during the years ended December 31, 2018 and 2017, respectively. The transaction-related charges during the year ended December 31, 2018 were primarily related to the US Solar Transaction within our Renewable Energy segment as well as our new in-building and large scale fiber network platforms within our US Telecom segment. Substantially all of the 2017 expenses were related to the Sovernet Transaction.

Restructuring charges. During the year ended December 31, 2018, we incurred \$0.5 million of restructuring charges which were primarily related to the US Solar Transaction. During the year ended December 31, 2017, we incurred \$1.2 million of restructuring charges within our Viya operations in connection with the integration of those operations with our legacy operations in the US Virgin Islands.

Depreciation and amortization expenses. Depreciation and amortization expenses decreased by \$1.2 million, or 1.4%, to \$85.7 million from \$86.9 million for the years ended December 31, 2018 and 2017, respectively. Net decreases in depreciation and amortization expenses, within our segments, consisted primarily of the following:

- *International Telecom.* Depreciation and amortization expenses decreased within our International Telecom segment by \$1.1 million, or 2.2%, to \$48.9 million from \$50.0 million, for the years ended December 31, 2018 and 2017, respectively. This decrease was primarily related to a \$4.5 million reduction in depreciation expense within our US Virgin Islands market on assets that were damaged and written off as a result of the Hurricanes partially offset by the expansion and upgrades of our network assets in our other International Telecom markets.
- *US Telecom.* Depreciation and amortization expenses decreased within our US Telecom segment by \$1.0 million, or 3.9%, to \$24.6 million from \$25.6 million, for the years ended December 31, 2018 and 2017, respectively, as a result of the completion of the sale of approximately 100 cell sites within our US wireless operations which reduced depreciation expense by \$1.9 million and the effects of the Sovernet Transaction, which reduced depreciation and amortization expenses by \$0.6 million. These decreases were partially offset by network expansions and upgrades within other geographic areas of our US wireless operations.
- *Renewable Energy.* Depreciation and amortization expenses within our Renewable Energy segment decreased by \$0.1 million, or 1.5%, to \$6.6 million from \$6.7 million, for the years ended December 31, 2018 and 2017, respectively, as a result of the US Solar Transaction partially offset by capital expenditures primarily related to the construction of our solar operations in India.
- *Corporate Overhead.* Depreciation and amortization expenses increased by \$0.9 million or 19.1% to \$5.6 million from \$4.7 million for the years ended December 31, 2018 and 2017, respectively, as a result of certain tangible assets being placed into service.

(Gain) loss on disposition of long-lived assets. During the year ended December 31, 2018, we recorded a gain on the disposition of long-lived assets of \$26.4 million. Within our US Telecom segment, we recorded a gain of \$17.2 million primarily as the result of a \$15.2 million gain on the sale of approximately 100 cell sites and a \$2.9 million gain on the sale of certain telecommunication licenses. Within our Renewable Energy segment, we recorded a gain on the US Solar Transaction of \$12.4 million. These gains were partially offset by a \$3.2 million loss recorded in connection with certain asset disposals and partner settlement agreements within our Renewable Energy segment and a \$1.1 million loss on the disposal of miscellaneous assets within our US wireless operations.

Loss on damaged assets and other Hurricane-related charges. During the year ended December 31, 2018, we incurred \$0.8 million in expenses associated with the procurement of continued building maintenance, security services, the supply of alternative power and related professional fees.

During the year ended December 31, 2017, we recorded a net pre-tax loss within our consolidated statement of operations of \$4.0 million. This loss consisted of \$35.4 million for the write off of damaged assets, net of insurance recoveries of \$34.6 million received in February 2018. This loss also included \$3.2 million of additional operating expenses that we specifically incurred to address the impact of the Hurricanes.

Interest income. Interest income increased to \$1.8 million from \$1.6 million for the years ended December 31, 2018 and 2017, respectively. The increase was primarily related to an increase in the return on our cash, cash equivalents and marketable securities as compared to the previous year.

Interest expense. Interest expense decreased by \$0.8 million, or 9.1%, to \$8.0 million from \$8.8 million primarily as a result of the US Solar Transaction which resulted in the acquirer's assumption of \$57.3 million of our long-term debt.

Loss on deconsolidation of subsidiary. During the year ended December 31, 2017, we recorded a \$0.5 million loss on the deconsolidation of a portion our US wireline operations upon the completion of the Sovernet Transaction.

Other income (expense), net. For the year ended December 31, 2018, other income (expense) was an expense of \$1.1 million which was primarily related to \$2.4 million in losses on foreign currency transactions partially offset by \$1.3 million in income related to some of our employee benefit plans. For the year ended December 31, 2017, other income (expense) was an expense of \$1.8 million which was primarily related to a loss on our equity method investment in our Aruba operations of \$1.9 million and the net loss on foreign currency transactions of \$0.7 million, partially offset by a gain on the sale of marketable securities of \$0.8 million.

Income taxes. Our effective tax rate for the years ended December 31, 2018 and 2017 was 35.1% and (2.8)%, respectively. The effective tax rate for the year ended December 31, 2018 was primarily impacted by the following items: (i) a \$10.6 million net increase of unrecognized tax positions, (ii) a \$4.7 million net benefit to record a return to accrual adjustment, (iii) a \$1.2 million benefit to recognize a capital loss carryover due to capital gains on sale of wireless licenses, (iv) a \$1.4 million net benefit to record a valuation allowance release on an indefinite lived intangible asset, (v) a \$1.7 million provision associated with the intercompany sale of assets from the US to the US Virgin Islands, and (vi) the mix of income generated among the jurisdictions in which we operate along with the exclusion of losses in jurisdictions where we cannot benefit from those losses as required by ASC 740-270-30-36(a), primarily in the US Virgin Islands and India.

The effective tax rate for the year ended December 31, 2017 was primarily impacted by the following items: (i) a \$10.6 million benefit for the net impact of the Tax Act which includes lowering the US corporate income tax rate to 21% effective in 2018 resulting in an \$18.0 million benefit from the remeasurement of the deferred tax assets and liabilities, which was partially offset by a provision of \$7.4 million on the deemed repatriation of undistributed foreign earnings (ii) a \$3.9 million benefit for the net capital transactions related to our businesses in New England, New York, BVI and St. Maarten, (iii) a \$3.4 million benefit for an amended return refund claim filed for tax year 2013, (iv) a \$4.4 million increase (net) in unrecognized tax benefits related to current year and prior year positions, (v) a \$6.1 million provision (net) to record the change in valuation allowance and, (vi) the mix of income generated among the jurisdictions in which we operate.

Our effective tax rate is based upon 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 any transactional or one-time items in the future and the mix of income in any given year generated among the jurisdictions in which we operate. Due to the timing of the enactment and the complexity involved in applying the provisions of the Tax Act, we made reasonable estimates of the effects and recorded provisional amounts in our consolidated financial statements as of December 31, 2017. During 2018 we made adjustments to the provisional amounts, including continued refinements to our deferred taxes of a \$0.4 million provision from the \$18 million benefit recorded at year-end and a \$3.2 million provision on the deemed repatriation of undistributed foreign earnings in addition to the \$7.4 million

provision recorded at year-end. The accounting for the tax effects of the Tax Act has been completed as of December 22, 2018 as required by Staff Accounting Bulletin No. 118 (“SAB 118”). While we believe we have adequately provided for all tax positions, amounts asserted by taxing authorities could materially differ from our accrued positions as a result of uncertain and complex application of tax law and regulations. Additionally, the recognition and measurement of certain tax benefits include estimates and judgment by management. Accordingly, we could record additional provisions or benefits for US federal, state, and foreign tax matters in future periods as new information becomes available.

Net income attributable to non-controlling interests, net of tax. Net income attributable to non-controlling interests reflected an allocation of \$15.1 million and \$17.4 million of income generated by our less than wholly-owned subsidiaries for the years ended December 31, 2018 and 2017, respectively, a decrease of \$2.3 million or 13.2%. Changes in net income attributable to non-controlling interests, net of tax, within our segments, consisted of the following:

- *International Telecom.* Net income attributable to non-controlling interests, net of tax increased by \$0.6 million, or 6.5%, to \$9.8 million from \$9.2 million for the years ended December 31, 2018 and 2017, respectively, primarily as a result of increased profitability in our less than wholly owned subsidiaries within our international operations.
- *US Telecom.* Net income attributable to non-controlling interests, net of tax decreased by \$3.9 million, or 54.9%, to \$3.2 million from \$7.1 million for the years ended December 31, 2018 and 2017, respectively, primarily as a result of decreased profitability at certain less than wholly owned subsidiaries within our US wireless retail operations.
- *Renewable Energy.* Net income attributable to non-controlling interests, net of tax increased by \$1.0 million, or 90.9% to \$2.1 million from \$1.1 million for the years ended December 31, 2018 and 2017, respectively, primarily as a result of the allocation of a portion of the gain we recognized on the US Solar Transaction to the non-controlling shareholders of those operations.

Net income (loss) attributable to ATN International, Inc. stockholders. Net income (loss) attributable to ATN International, Inc. stockholders was income of \$19.8 million and \$31.5 million for the years ended December 31, 2018 and 2017, respectively.

On a per share basis, net income (loss) was income of \$1.24 and \$1.94 per diluted share for the years ended December 31, 2018 and 2017, respectively.

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 15 to the Consolidated Financial Statements in this Report.

Tax Reform

The Tax Act which was signed into law on December 22, 2017 has resulted in significant changes to the US corporate income tax system and the US Virgin Islands mirror code which replaces “United States” with “US Virgin Islands” throughout the Internal Revenue Code. The Tax Act transitions international taxation from a worldwide system to a modified territorial system and includes two base erosion prevention measures on non-US earnings, which has the effect of subjecting certain earnings of our foreign subsidiaries to US taxation as global intangible low taxed income (“GILTI”) and eliminates the deduction of certain payments made to related foreign corporations, and imposes a minimum tax if greater than regular tax under BEAT. These changes became effective beginning in 2018 but did not have an impact on us in the initial year. Based on our annual results for 2019 we are not calculating a GILTI inclusion for 2019. We do not believe we are subject to BEAT and therefore have not included any tax impacts of BEAT in our consolidated financial statements for the year ended December 31, 2019.

Status of our Assessment

In accordance with SAB 118, we have completed our determination of the accounting implications of the Tax Act as of December 22, 2019.

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 financings. 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.

We continue to explore opportunities to expand our telecommunications and our international renewable energy businesses or acquire new businesses and telecommunications 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, 2019, we had approximately \$162.4 million in cash, cash equivalents and restricted cash-on-hand. Of this amount, \$40.6 million was held by our foreign subsidiaries and is indefinitely invested outside the United States. In addition, we had approximately \$86.4 million of debt, net of unamortized deferred financing costs, as of December 31, 2019. How and when we deploy our balance sheet capacity will figure prominently in our longer-term growth prospects and stockholder returns.

Working Capital. Historically, we have internally funded our working capital needs. In July 2019, we entered into the Firstnet Agreement. Pursuant to that agreement, AT&T has the option to repay construction costs, with interest, over an eight year period. We expect to seek third party financing to fund the working capital need created by AT&T's option to extend its payment terms.

Capital expenditures. Historically, a significant use of our cash has been for capital expenditures to expand and upgrade our telecommunications networks and to expand our renewable energy operations.

For the year ended December 31, 2019 and 2018, we spent approximately \$72.7 million and \$185.9 million, respectively, on capital expenditures. The following notes our capital expenditures, by operating segment, for these periods (in thousands):

Year ended December 31,	Capital Expenditures				
	International Telecom (2)	US Telecom	Renewable Energy	Corporate and Other (1)	Consolidated
2019	\$ 42,029	\$ 17,490	\$ 6,448	\$ 6,758	\$ 72,725
2018	160,013	13,389	4,515	8,004	185,921

(1) Corporate and other items refer to corporate overhead accosts and consolidating adjustments.

(2) Includes \$0.1 million and \$80.2 million for the year ended December 31, 2019 and 2018, respectively, of expenditures used for network repairs and resiliency enhancements in the US Virgin Islands which were impacted by the Hurricanes. These expenditures were financed, in part, by the \$34.6 million of insurance proceeds we

received during the first quarter of 2018 and cash from operations.

We are continuing to invest in our telecommunication networks along with our operating and business support systems in many of our markets. Such investments include the upgrade and expansion of both our wireline and wireless telecommunications networks as well as our service delivery platforms. For 2020, we expect International Telecom capital expenditures to be approximately \$45 million to \$55 million. In the US Telecom segment, we expect capital expenditures to be approximately \$35 million to \$40 million for 2020 including \$20 million related to towers and backhaul in conjunction with the FirstNet Agreement. In the Renewable Energy segment, we expect to incur \$2 million to \$4 million of construction costs during 2020 related to building additional capacity.

We expect to fund our current capital expenditures primarily from our current cash balances and cash generated from operations but may secure additional financing to support renewable energy capital expenditures in India.

Income taxes. We have historically used cash-on-hand to make payments for income taxes. Our policy is to allocate capital where we believe we will get the best returns and to date has been to indefinitely reinvest the undistributed earnings of our foreign subsidiaries. As we continue to reinvest our remaining foreign earnings, outside of dividends from Guyana made in 2019, no additional provision for income taxes has been made on accumulated earnings of foreign subsidiaries.

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, 2019, our Board declared \$10.9 million of dividends to our stockholders which includes a \$0.17 per share dividend declared on December 12, 2019 and paid on January 6, 2020. We have declared quarterly dividends for the last 85 fiscal quarters.

Stock 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”). We repurchased \$0.2 million and \$1.6 million of our common stock under the 2016 Repurchase Plan during the year ended December 31, 2019 and 2018, respectively. As of December 31, 2019, we have \$37.5 million authorized for share repurchases under the 2016 Repurchase Plan.

Debt Service and Other Contractual Commitments Table. The following table discloses aggregate information about our debt, lease and other obligations as of December 31, 2019 and the periods in which payments are due:

Contractual Obligations	Total	Less Than 1 Year	1 – 3 Years	4 – 5 Years	More Than 5 Years
			(In thousands)		
Debt	\$ 86,426	\$ 3,750	\$ 23,275	\$ —	\$ 59,401
Pension obligations	49,667	5,066	9,926	9,506	25,169
Operating lease obligations	79,766	14,526	26,501	20,384	18,355
Total	\$ 215,859	\$ 23,342	\$ 59,702	\$ 29,890	\$ 102,925

We have omitted uncertain income tax liabilities from this table due to the inherent uncertainty regarding the timing of potential issue resolution. Specifically, either the underlying positions have not been fully developed enough under audit to quantify at this time or the years relating to the issues for certain jurisdictions are not currently under audit. At December 31, 2019, we had \$38.6 million of gross unrecognized uncertain tax benefits of which \$33.6 million is included in “Other Liabilities” and \$5.0 million is included in “Accrued Taxes” in the consolidated balance sheet.

Sources of Cash

Total liquidity. As of December 31, 2019, we had approximately \$162.4 million in cash, cash equivalents and restricted cash which represents a decrease of \$30.5 million from the December 31, 2018 balance of \$192.9 million. The decrease is primarily attributable to \$72.7 million used for capital expenditures, \$25.4 million used for certain investments, \$10.9 million used for dividends paid on our common stock, \$1.6 million used for the repurchase of our

common stock from employees in order to satisfy their tax obligations, \$7.2 million used for distributions to our minority shareholders, \$4.7 million used to repay principal on our debt, \$4.5 million to repurchase certain non-controlling ownership interests and \$1.3 million used to amend and extend our primary credit facility. These amounts were partially offset by cash provided by our operations of \$87.9 million, net of approximately \$28.5 million in tax payments primarily related to the US Solar Transaction, \$6.6 million received to complete the US Solar Transaction and \$3.1 million received from government grants.

Cash provided by operations. Cash provided by operating activities was \$87.9 million for the year ended December 31, 2019 as compared to \$115.9 million for the year ended December 31, 2018. The decrease of \$28.0 million was primarily related to a decrease of \$1.0 million within our US Telecom segment as a result of the reduction in wholesale roaming traffic and the impact of the July 2018 sale of 100 cell sites. Cash provided by operations within our renewable energy segment decreased by \$12.0 million as result of the US Solar Transaction and the \$3.3 million impairment of certain intangibles. Within corporate overhead, cash provided by operations declined by \$14.7 million, mostly due to \$28.5 million in tax payments made in 2019 which were primarily related to the US Solar Transaction. These decreases were partially offset by an increase in cash flow from operations of \$0.2 million within our International Telecom segment.

Cash used in investing activities. Cash used in investing activities was \$88.3 million and \$87.3 million for the year ended December 31, 2019 and 2018, respectively. The increase of \$1.0 million was primarily related to a \$113.3 million reduction in capital expenditures partially offset by an increase in investments of \$22.4 million, a \$2.3 million decrease in the amounts received from certain government grants and the purchase of short-term investments, net of maturities of \$6.3 million. Cash used in investing also included \$6.6 million received to complete the US Solar Transaction. Cash used in investing activities during the year ended December 31, 2018 included the proceeds from the US Solar Transaction of \$47.3 million, the receipt of insurance proceeds of \$34.6 million which were used to partially fund our capital expenditures during that period and the proceeds from the sale of assets of \$7.8 million.

Cash used in financing activities. Cash used in financing activities was \$29.9 million and \$55.2 million during the year ended December 31, 2019 and 2018, respectively. The decrease in cash used for financing activities of \$25.3 million was primarily related to an \$11.6 million decrease in the distributions made to minority shareholders, a \$5.2 million reduction in cash used to acquire non-controlling interests in our less than wholly owned subsidiaries, a \$5.1 million reduction in the repayments of our long-term debt, a \$3.0 reduction in cash used for the repurchase of our common stock from employees in order to satisfy their tax obligations and a \$1.4 million reduction in the repurchases of our common stock. These decreases were partially offset by \$1.3 million used to amend and extend our primary credit facility in 2019.

Credit facility. On April 10, 2019, we entered into the 2019 Credit Facility, with CoBank, ACB and the same syndicate of lenders as the 2014 Credit Facility, as described below. The 2019 Credit Facility provides for a \$200 million revolving credit facility that includes (i) up to \$75 million for standby or trade letters of credit and (ii) up to \$10 million under a swingline sub-facility. Approximately \$8.0 million of performance and standby letters of credit have been issued and remain outstanding and undrawn as of December 31, 2019. The 2019 Credit Facility matures on April 10, 2024.

Amounts borrowed under the 2019 Credit Facility bear interest at a rate equal to, at our option, either (i) the LIBOR plus an applicable margin ranging between 1.25% to 2.25% or (ii) a base rate plus an applicable margin ranging from 0.25% to 1.25%. Swingline loans 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 LIBOR (as defined in the 2019 Credit Facility) for an interest period of one month and (y) the LIBOR for an interest period of one week; (ii) the Federal Funds Effective Rate (as defined in the 2019 Credit Facility) plus 0.50% per annum; and (iii) the Prime Rate (as defined in the 2019 Credit Facility). The applicable margin is determined based on the Total Net Leverage Ratio (as defined in the 2019 Credit Facility). Under the terms of the 2019 Credit Facility, we must also pay a fee ranging from 0.150% to 0.375% of the average daily unused portion of the 2019 Credit Facility over each calendar quarter.

The 2019 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 limiting additional

indebtedness, liens, guaranties, mergers and consolidations, substantial asset sales, investments and loans, sale and leasebacks, transactions with affiliates and fundamental changes. Our investments in “unrestricted” subsidiaries and certain dividend payments to our stockholders are not limited unless the Total Net Leverage Ratio is equal to or greater than 1.75 to 1.0. The Total Net Leverage Ratio is measured each fiscal quarter and is required to be less than or equal to 2.75 to 1.0. In the event of a Qualifying Acquisition (as defined in the 2019 Credit Facility), the Total Net Leverage Ratio increases to 3.25 to 1.0 for the subsequent three fiscal quarters.

The 2019 Credit Facility also provides for the incurrence by us of incremental term loan facilities, when combined with increases to revolving loan commitments, in an aggregate amount not to exceed \$200 million (the “Accordion”). Amounts borrowed under the Accordion are also subject to proforma compliance with a net leverage ratio financial covenant.

As of December 31, 2019, we were in compliance with all of the financial covenants, had no outstanding borrowings and, net of the \$8.0 million of outstanding performance and standby letters of credit, had \$192.0 million of availability under the 2019 Credit Facility.

Prior to entering into the 2019 Credit Facility, we had a \$225 million revolving credit facility (the “2014 Credit Facility”) with CoBank, ACB and a syndicate of other lenders that provided for (i) up to \$10 million for standby or trade letters of credit, (ii) up to \$25 million for letters of credit that were necessary or desirable to qualify for disbursements from the FCC’s mobility fund and (iii) up to \$10 million under a swingline sub-facility. The 2014 Credit Facility had a maturity date of December 31, 2019. The 2014 Credit Facility also provided for the incurrence by us of incremental term loan facilities, when combined with increases to revolving loan commitments, in an aggregate amount not to exceed \$200 million.

Amounts borrowed under the 2014 Credit Facility bore interest at a rate equal to, at our option, either (i) the 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 bore interest at the base rate plus the applicable margin for base rate loans. The base rate was 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 2014 Credit Facility) plus 0.50% per annum; and (iii) the prime rate (as defined in the 2014 Credit Facility). The applicable margin was determined based on the ratio (as further defined in the 2014 Credit Facility) of our indebtedness to EBITDA. Under the terms of the 2014 Credit Facility, we also paid a fee ranging from 0.175% to 0.250% of the average daily unused portion of the 2014 Credit Facility over each calendar quarter.

The 2014 Credit Facility contained customary representations, warranties and covenants, including a financial covenant that imposed a maximum ratio of indebtedness to EBITDA as well as covenants limiting additional indebtedness, liens, guaranties, mergers and consolidations, substantial asset sales, investments and loans, sale and leasebacks, transactions with affiliates and fundamental changes. Our investment in “unrestricted” subsidiaries plus the aggregate amount of certain dividend payments to our stockholders was limited to \$400 million. Amounts borrowed under the Accordion were also subject to pro-forma compliance with a net leverage ratio financial covenant.

Viya Debt

We, and certain of our subsidiaries, have entered into a \$60.0 million loan agreement with Rural Telephone Finance Cooperative (“RTFC” and such debt, the “Viya Debt”). The Viya Debt agreement contains customary representations, warranties and affirmative and negative covenants (including limitations on additional debt, guaranties, sale of assets and liens) and a financial covenant that limits the maximum ratio of indebtedness to annual operating cash flow to 3.5 to 1.0 (the “Net Leverage Ratio”). This covenant is tested on an annual basis at the end of each fiscal year. Interest is paid quarterly at a fixed rate of 4.0% and principal repayment is not required until maturity on July 1, 2026. Prepayment of the Viya Debt may be subject to a fee under certain circumstances. The debt is secured by certain assets of the Company’s Viya subsidiaries and is guaranteed by us. With RTFC’s consent, we funded the restoration of Viya’s network, following the Hurricanes, through an intercompany loan arrangement with a \$75.0 million limit. We were not in compliance with the Net Leverage Ratio covenant for the year ending December 31, 2019 and received a waiver from the RTFC on February 26, 2020.

We paid a fee of \$0.9 million in 2016 to lock the interest rate at 4% per annum over the term of the Viya Debt. The fee was recorded as a reduction to the Viya Debt carrying amount and is being amortized over the life of the loan.

As of December 31, 2019, \$60.0 million of the Viya Debt remained outstanding and \$0.6 million of the rate lock fee was unamortized.

One Communications Debt

We have an outstanding loan from HSBC Bank Bermuda Limited (the “One Communications Debt”) which is scheduled to mature on May 22, 2022 and bears interest at the one-month LIBOR plus a margin ranging between 2.5% to 2.75%, paid quarterly.

The One Communications Debt contains customary representations, warranties and affirmative and negative covenants (including limitations on additional debt, guaranties, sale of assets and liens) and financial covenants, tested annually, that limit the ratio of tangible net worth to long term debt and total net debt to EBITDA and require a minimum debt service coverage ratio (as defined in the One Communications Debt agreement). We were in compliance with our covenants as of December 31, 2019.

As a condition of the One Communications Debt, we were required to enter into a hedging arrangement with a notional amount equal to at least 30% of the outstanding loan balance and a term corresponding to the term of the One Communications Debt. As such, we entered into an amortizing interest rate swap that has been designated as a cash flow hedge, which had an original notional amount of \$11.0 million, has an interest rate of 1.874%, and expires in March 2022. As of December 31, 2019, the swap has an unamortized notional amount of \$8.5 million.

We capitalized \$0.3 million of fees associated with the One Communications Debt which are being amortized over the life of the debt and are recorded as a reduction to the debt carrying amount.

As of December 31, 2019, \$27.2 million of the One Communications Debt was outstanding and \$0.2 million of the capitalized fees remained unamortized.

Ahana Debt

On November 6, 2018, we consummated the US Solar Transaction which included the transfer of the Ahana Debt (as defined below) to the purchaser.

Prior to our US Solar Transaction, our US solar operations issued \$20.6 million in aggregate principal amount of 4.427% senior notes due in 2029 (the “Series A Notes”) and \$45.2 million in aggregate principal amount of 5.327% senior notes due in 2031 (the “Series B Notes”). These operations also issued a note to Public Service Electricity and Gas which bore interest at 11.3% due in 2027 (the “PSE&G Loan” and collectively with the Series A Notes and Series B Notes, the “Ahana Debt”).

For the Series A Notes and Series B Notes, interest and principal were payable semi-annually, until their respective maturity dates, and were secured by certain US solar assets and guaranteed by certain subsidiaries.

Repayment of the PSE&G Loan could have been made in either cash or Solar Renewable Energy Credits (“SRECs”) at our discretion, with the value of the SRECs being fixed at the time of the loan’s closing. Historically, we had made all repayments of the PSE&G Loan using SRECs.

We capitalized \$2.8 million of fees associated with the Ahana Debt which were recorded as a reduction to the debt carrying amount and amortized over the life of the notes.

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 2019 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 2019 Credit Facility contains a financial covenant that imposes a maximum ratio of indebtedness to EBITDA. As of December 31, 2019, we were in compliance with all of the financial covenants of the 2019 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 the SEC requirements for the offering of securities. On May 12, 2017, the SEC declared effective our “universal” shelf registration statement. This filing registered potential future offerings of our securities.

Foreign Currency

We translate the assets and liabilities of our foreign subsidiaries from their respective functional currencies, primarily the Indian Rupee and the Guyana Dollar, to US dollars at the appropriate rates as of the balance sheet date. Changes in the carrying value of these assets and liabilities attributable to fluctuations in rates are recognized in foreign currency translation adjustment, a component of accumulated other comprehensive income on our balance sheet. Income statement accounts are translated using the monthly average exchange rates during the year. During the year ended December 31, 2019 and 2018, we recorded \$1.6 million and \$2.4 million, respectively, in losses on foreign currency transactions. We will continue to assess the impact of our exposure to both the Indian Rupee and the Guyana dollar.

Inflation

We do not believe that inflation has had a significant impact on our consolidated operations in any of the periods presented in this 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 (“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 our 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 the 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. For long lived assets other than goodwill, 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 carrying value of the reporting unit, including goodwill, exceeds the fair value of the reporting unit, an impairment charge is recorded equal to the excess, but not more than the total amount of goodwill allocated to the reporting unit.

We assess the recoverability of the value of our telecommunications licenses using either a market or income 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.

During the year ended December 31, 2019, we recorded a \$3.3 million goodwill impairment charge within our Renewable Energy segment. See Note 9 to the Consolidated Financial Statements in this Report.

We also performed our annual impairment assessment of our goodwill and telecommunications licenses as of December 31, 2018 for all of our reporting units and determined that no impairment relating to our goodwill and telecommunications licenses existed during the year ended December 31, 2018.

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 15 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 the potential ranges of probable losses. A determination of the amount of loss accruals required, if any, for these contingencies is 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 amounted to approximately \$44.1 million at December 31, 2019. We believe that some adverse outcome is probable and have accordingly accrued \$5.0 million as of December 31, 2019 for these matters.

Recent Accounting Pronouncements

See Note 2 to the Consolidated Financial Statements included in this Report.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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 US dollars at the appropriate rates as of the balance sheet date. Changes in the carrying value of these assets and liabilities attributable to fluctuations in rates are recognized in foreign currency translation adjustment, a component of accumulated other comprehensive income on our balance sheet. 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 our income statement.

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

Interest Rate Sensitivity. As of December 31, 2019, we had \$18.7 million of variable rate debt outstanding, which 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 PROCEDURES

Evaluation of Disclosure Controls and Procedures

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, 2019. 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"), mean 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, 2019, 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, 2019. 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). Based on its assessment, management concluded that, as of December 31, 2019, our internal control over financial reporting was effective based on those criteria.

Our internal control over financial reporting as of December 31, 2019 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, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

On July 1, 2016, we and certain of our subsidiaries entered into a \$60.0 million loan agreement (the "Viya Debt") with Rural Telephone Finance Cooperative ("RTFC"). The Viya Debt agreement contains customary representations, warranties and affirmative and negative covenants (including limitations on additional debt, guaranties, sale of assets and liens) and a financial covenant that limits the maximum ratio of indebtedness to annual operating cash flow to 3.5 to 1.0 (the "Net Leverage Ratio"). This covenant is tested on an annual basis at the end of each fiscal year. Interest is paid quarterly at a fixed rate of 4.0% and principal repayment is not required until maturity on July 1, 2026. Prepayment of the Viya Debt may be subject to a fee under certain circumstances. The debt is secured by certain assets of our Viya subsidiaries and is guaranteed by us. Earlier in 2018, we began funding the restoration of Viya's network

following the Hurricanes through an intercompany loan arrangement which exceeded certain limitations on Viya incurring additional debt. RTFC consented to these intercompany advances and increased the intercompany debt limit to \$50.0 million. Subsequent to the end of the second quarter end, RTFC increased the limit to \$75.0 million at our request due to an increase in the on-going restoration and resiliency costs. We were not in compliance with the Net Leverage Ratio covenant for the year ending December 31, 2019 and received a waiver from the RTFC on February 26, 2020.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information regarding our executive officers is contained in Part I of this Form 10-K under the caption “Information About Our Executive Officers”.

The following table sets forth information regarding our directors as of March 2, 2020:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Michael T. Prior	55	Chairman, President, Chief Executive Officer, and Director
Martin L. Budd	79	Director
Bernard Bulkin	77	Director
James S. Eisenstein	61	Director
Richard J. Ganong	56	Director
John C. Kennedy	55	Director
Liane J. Pelletier	62	Director
Charles J. Roesslein	71	Director

Employee Directors

Michael T. Prior is the chairman of the Board of Directors and 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 LLP 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.

Non-Employee Directors

Martin L. Budd has been a director of ours since May 2007, and is the Chair of our Compensation 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 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.

Dr. Bernard Bulkin has been a director of our since March 2016 and is the Chair of our Nominating and Corporate Governance Committee. Dr. Bulkin brings particular expertise in the field of renewable energy. He held several senior management roles 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 K3Solar Ltd., IDSolar Power Ltd, and Sustainable Power Ltd,. Dr. Bulkin has served on the boards of Severn Trent plc, Ludgate Investments Limited, 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, was a member of the FTSE Environmental Markets Advisory Committee (2010-2017) 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.

James S. Eisenstein has been a director of ours since October 2019. He is currently Chairman and Chief Executive Officer of Grupo TorreSur, a Latin American focused wireless tower company. Prior to co-founding Grupo TorreSur, Mr. Eisenstein was Chairman and Chief Executive Officer of Optasite Holding Company, Inc. from 2003 to 2008; Chief Executive Officer of Concourse Communications Group LLC in 2003 and Chief Operating Officer and, later, Chief Development Officer of American Tower Corporation from 1995 to 2003. Before co-founding American Tower, Mr. Eisenstein was a Partner and Chief Operating Officer of Amaturo Group, Ltd., the owner and operator of radio stations, from 1990 to 1995; was Deputy General Counsel of Home Shopping Network from 1988 to 1990; and an associate at Skadden, Arps, Slate, Meagher and Flom from 1986 to 1988 and at Vinson & Elkins from 1984 to 1986. He is currently a member of the Board of Directors of CTI Towers, Inc. and Chairman of the Board of Directors of Eaton Towers, Ltd. and served as a director of Nexamp, Inc. from 2011-2016. Mr. Eisenstein is a graduate of Georgetown University and holds an MBA from The Wharton School and a JD from the University of Pennsylvania Law School.

Richard J. Ganong has been a director of ours since June 2018 and is a member of our Audit Committee. Mr. Ganong has more than 25 years of experience in the financial services industry with a focus on venture capital and hedge fund investing. He was a Partner at the Tudor Investment Corporation from 1993 to 2009, an internationally recognized diversified investment management firm, and was a founding General Partner of the Tudor Venture Group which managed a series of funds providing growth capital to private companies in various information technology industries. Mr. Ganong was the Senior Vice President of Development and Alumni Relations at Bowdoin College from 2014 to 2016 and most recently founded Five Pine Partners, where he focuses on advising and investing in emerging companies in the information technology, consumer and food sectors. Mr. Ganong also is an emeritus member of the Board of Overseers at The Tuck School at Dartmouth. He is currently a member of the Board of Directors for The Maine Technology Institute, The Gulf of Maine Research Institute, and Wolfe's Neck Center for Agriculture and the Environment, all private entities. Mr. Ganong holds a Bachelor of Arts from Bowdoin College and an MBA from the Tuck School at Dartmouth.

John C. Kennedy has been a director of ours since June 2018 and is a member of our Compensation Committee. Mr. Kennedy is the founder and CEO of Platform Science, Inc., an emerging company in the connected vehicle and transportation technology space. Previously, he was the President of Qualcomm Enterprise Services and the President of Omnitrac, Inc. Mr. Kennedy is a veteran of News Corp., where he served as Executive Vice President of Operations—Digital Media, from 2009 to 2012. From 2007 to 2008 he served as Executive Vice President of Strategy and Corporate Development at Fox Interactive Media and began his career at Fox as a Senior Vice President of Corporate Development at Fox Networks Group, where he was part of the joint Fox/NBC Universal team that created the joint venture now known as "Hulu". His background includes multiple leadership and strategic roles with technology start-ups, including satellite broadband start-up Teledesic; pioneering online video site Load Media Network, where Mr. Kennedy served as Chief Executive Officer; Leap Wireless, and Wireless Facilities International. He began his business career as a venture capital associate with Idanta Partners. Mr. Kennedy retired as a Commander in the US Navy Reserves in 2016, after serving as a founding team member of DiUX, the Department of Defense's recently established Silicon Valley presence. He served on the staff of US Senator John McCain; the Aide de Camp to the vice chairman of the Joint Chiefs of Staff; and was a naval aviator in the first Gulf War. Mr. Kennedy holds a BS in Economics and Engineering from the United States Naval Academy and an MBA from the Harvard Business School, and was a Legis Fellow of the Brookings Institution.

Liane J. Pelletier has been a director of ours since June 2012, is the Independent Lead Director of our Board of Directors and a member of our Corporate Governance and Compensation Committees. 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 as Chairman of the Nominating and Corporate Governance Committee of the Board of Expeditors International (EXPD), she serves on the Audit and Compensation Committees at Frontdoor, Inc.(FTDR) and also serves on the board of the National Association of Corporate Directors (“NACD”). Ms. Pelletier is a NACD Board Leadership Fellow and has earned the CERT Certificate in Cybersecurity Oversight from the Software Engineering Institute of Carnegie Mellon.

Charles J. Roesslein has been a director of ours since April 2002 and is the Chair of our Audit Committee. 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. Mr. Roesslein holds a BS in Mechanical Engineering from the University of Missouri-Columbia and a master’s degree in Finance from the University of Missouri-Kansas City.

Additional information required by this Item 10 will be set forth in our Definitive Proxy Statement for the 2020 Annual Meeting of Stockholders (the “2020 Proxy Statement”) 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 will be set forth in our 2020 Proxy Statement 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 will be set forth in our 2020 Proxy Statement and is incorporated herein by reference.

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

Information required by this Item 13 will be set forth in our 2020 Proxy Statement and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information required by this Item 14 will be set forth in our 2020 Proxy Statement and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, 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 for the years ended December 31, 2017, 2018, and 2019 which appears on page F-60 hereof.
- (3) *Exhibits*. The exhibits listed below are filed herewith in response to this Item 15.

EXHIBIT INDEX to Form 10-K for the Year Ended December 31, 2019

- 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 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 2.1 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 (incorporated by reference to Exhibit 3.4 to the Company's Annual Report on Form 10-K (File No. 001-12593) for the year ended December 31, 2018 filed on February 28, 2019).
- 4.1** Description of ATN International, Inc. securities registered pursuant to Section 12 of the Exchange Act.
- 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).
- 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).
- 10.11 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).
- 10.12 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).
- 10.13 Agreement between the Government of the Co-Operative Republic of Guyana and Atlantic Tele-Network, Inc., dated June 18, 1990 (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 March 31, 2006 filed on May 15, 2006).
- 10.14 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).
- 10.15 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).
- 10.16 Limited Waiver of Net Leverage Ratio dated as of February 27, 2018, between ATN VI Holdings, LLC and the Rural Telephone Finance Cooperative (incorporated by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K (File No. 001-12593) filed on February 28, 2018).
- 10.17 Limited Waiver of Net Leverage Ratio dated as of February 25, 2019, between ATN VI Holdings, LLC and the Rural Telephone Finance Cooperative (incorporated by reference to Exhibit 10.19 to the Company's Annual Report on Form 10-K (File No. 001-12593) filed on February 28, 2019).
- 10.18** Limited Waiver of Net Leverage Ratio dated as of February 26, 2020, between ATN VI Holdings, LLC and the Rural Telephone Finance Cooperative.
- 10.19 Form of Severance Agreement with Non-CEO Executive Officers (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-12593) filed on March 19, 2019).
- 10.20 Form of Severance Agreement with Chief Executive Officer (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-12593) filed on March 19, 2019).

- 10.21 Third Amendment and Confirmation Agreement dated as of April 10, 2019 by and among the Company, as Borrower, CoBank, ACB, as Administrative Agent, 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 April 16, 2019).
- 10.22# Network Build and Maintenance Agreement, dated as of July 31, 2019, by and between Commnet Wireless, LLC, a wholly owned subsidiary of ATN International, Inc., and AT&T Mobility LLC (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 September 30, 2019 filed on November 8, 2019).
- 10.23 Offer Letter by and between ATN International, Inc. and Brad Martin, dated April 4, 2018. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-12593) filed on April 19, 2018).
- 10.24 Consent and Waiver between Rural Telephone Finance Cooperative, Caribbean Asset Holdings, LLC and DTR Holdings, LLC, dated May 7, 2018. (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 001-12593) filed on May 9, 2018).
- 10.25 Form of Restricted Stock Unit Agreement under the 2008 Equity Incentive Plan (Non-Employee Directors) (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (File No. 001-12593) filed on May 9, 2018).
- 10.26 Consent and Waiver between Rural Telephone Finance Cooperative, Caribbean Asset Holdings, LLC and DTR Holdings, LLC, dated August 3, 2018. (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 001-12593) filed on August 8, 2018).
- 10.27 Purchase and Sale Agreement by and between Ahana Renewables, LLC and CleanCapital Holdco 4, LLC, dated as of September 9, 2018, (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-12593) filed on September 9, 2018).
- 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 USC. 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 USC. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 101.INS Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
- 101.SCH** Inline XBRL Taxonomy Extension Schema Document
- 101.CAL** Inline XBRL Taxonomy Extension Calculation Linkbase Document
- 101.DEF** Inline XBRL Taxonomy Extension Definition Linkbase Document
- 101.LAB** Inline XBRL Taxonomy Extension Label Linkbase Document
- 101.PRE** Inline XBRL Taxonomy Extension Presentation Linkbase Document
- 104 Cover Page Interactive Data file (formatted as Inline XBRL and embedded within Exhibit 101).

* Management contract or compensatory plan or arrangement.

** Filed herewith.

*** The certifications furnished in Exhibit 32.1 and Exhibit 32.2 hereto are deemed to accompany this Report and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the company specifically incorporates it by reference.

Portions of this exhibit (indicated by asterisks) have been omitted in accordance with the rules of the Securities and Exchange Commission.

ITEM 16. FORM 10-K SUMMARY

None

SIGNATURES

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 2nd day of March, 2020.

ATN International, Inc.

By: /s/ MICHAEL T. PRIOR

Michael T. Prior
*Chairman, 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 2nd day of March, 2020.

Signature	Title
/s/ MICHAEL T. PRIOR Michael T. Prior	Chairman, President and Chief Executive Officer (Principal Executive Officer)
/s/ JUSTIN D. BENINCASA Justin D. Benincasa	Chief Financial Officer (Principal Financial and Accounting Officer)
/s/ MARTIN L. BUDD Martin L. Budd	Director
/s/ BERNARD J. BULKIN Bernard J. Bulkin	Director
/s/ JAMES S. EISENSTEIN James S. Eisenstein	Director
/s/ RICHARD J. GANONG Richard J. Ganong	Director
/s/ JOHN C. KENNEDY John C. Kennedy	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, 2019, 2018 and 2017

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Report of Independent Registered Public Accounting Firm

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

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of ATN International, Inc. and its subsidiaries (the “Company”) as of December 31, 2019 and 2018, and the related consolidated statements of income, of comprehensive income, of equity, and of cash flows for each of the three years in the period ended December 31, 2019, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019 based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Changes in Accounting Principles

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019 and the manner in which it accounts for revenues from contracts with customers in 2018.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. 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.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (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.

Critical Audit Matters

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

Goodwill Impairment Assessment for Viya Reporting Unit

As described in Notes 2 and 9 to the consolidated financial statements, the Company's consolidated goodwill balance was \$60.7 million as of December 31, 2019, and the goodwill balance associated with the Viya Reporting Unit was \$20.6 million. Management tests goodwill for impairment at each of the reporting units on an annual basis, which has been determined to be as of October 1st. If the carrying value of the reporting unit, including goodwill, exceeds the fair value of the reporting unit an impairment charge is recorded equal to the excess, but not more than the total amount of goodwill allocated to the reporting unit. Management determines the fair value of the Viya Reporting Unit using the income approach. The income approach is based on a discounted cash flow model. The discounted cash flow model requires the exercise of significant judgment, including judgments and assumptions about appropriate discount rates and revenue growth.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the Viya Reporting Unit is a critical audit matter are there was significant judgment by management when developing the fair value measurement of the reporting unit. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures to evaluate management's cash flow projections and significant assumptions, including revenue growth and the discount rate. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Company's reporting units. These procedures also included, among others, testing management's process for developing the fair value estimate; evaluating the appropriateness of the discounted cash flow model; testing the completeness and accuracy of the underlying data used in the model; and evaluating the reasonableness of significant assumptions used by

management, including revenue growth and the discount rate. Evaluating the reasonableness of management's significant assumptions related to revenue growth involved evaluating whether the assumption used by management were reasonable considering (i) the current and past performance of the reporting unit, (ii) the consistency with external market and industry data, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow model and certain significant assumptions, including the discount rate.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts

March 2, 2020

We have served as the Company's auditor since 2002.

ATN INTERNATIONAL, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 2019 and 2018

(In Thousands, Except Share Data)

	December 31, 2019	December 31, 2018
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 161,287	\$ 191,836
Restricted cash	1,071	1,071
Short-term investments	416	393
Accounts receivable, net of allowances of \$12.7 million and \$16.5 million, respectively	35,904	38,305
Inventory, materials and supplies	5,253	6,305
Prepayments and other current assets	24,792	37,855
Total current assets	<u>228,723</u>	<u>275,765</u>
Fixed Assets:		
Property, plant and equipment	1,237,555	1,188,916
Less accumulated depreciation	<u>(631,974)</u>	<u>(562,064)</u>
Net fixed assets	<u>605,581</u>	<u>626,852</u>
Telecommunication licenses, net	93,686	93,686
Goodwill	60,691	63,970
Customer relationships, net	7,441	9,323
Operating lease right-of-use assets	68,763	—
Other assets	65,841	37,708
Total assets	<u>\$ 1,130,726</u>	<u>\$ 1,107,304</u>
LIABILITIES AND EQUITY		
Current Liabilities:		
Current portion of long-term debt	\$ 3,750	\$ 4,688
Accounts payable and accrued liabilities	74,093	80,873
Dividends payable	2,721	2,720
Accrued taxes	8,517	31,795
Current portion of operating lease liabilities	11,406	—
Advance payments and deposits	19,182	20,574
Total current liabilities	<u>119,669</u>	<u>140,650</u>
Deferred income taxes	8,680	10,276
Operating lease liabilities, excluding current portion	56,164	—
Other liabilities	57,454	46,760
Long-term debt, excluding current portion	<u>82,676</u>	<u>86,294</u>
Total liabilities	<u>324,643</u>	<u>283,980</u>
Commitments and contingencies (Note 15)		
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; 17,324,858 and 17,274,215 shares issued, respectively, 16,001,937 and 16,002,699 shares outstanding, respectively	172	172
Treasury stock, at cost; 1,322,922 and 1,271,516 shares, respectively	<u>(51,129)</u>	<u>(48,547)</u>
Additional paid-in capital	188,471	181,778
Retained earnings	541,890	563,593
Accumulated other comprehensive income	<u>(3,282)</u>	<u>(1,609)</u>
Total ATN International, Inc. stockholders' equity	<u>676,122</u>	<u>695,387</u>
Non-controlling interests	<u>129,961</u>	<u>127,937</u>
Total equity	<u>806,083</u>	<u>823,324</u>
Total liabilities and equity	<u>\$ 1,130,726</u>	<u>\$ 1,107,304</u>

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

ATN INTERNATIONAL, INC. AND SUBSIDIARIES

CONSOLIDATED INCOME STATEMENTS

For the Years Ended December 31, 2019, 2018 and 2017

(In Thousands, Except Per Share Data)

	December 31,		
	2019	2018	2017
REVENUE:			
Wireless	\$ 193,488	\$ 198,824	\$ 232,501
Wireline	239,700	230,225	227,827
Renewable energy	5,534	22,158	20,865
Total revenue	<u>438,722</u>	<u>451,207</u>	<u>481,193</u>
OPERATING EXPENSES (excluding depreciation and amortization unless otherwise indicated):			
Termination and access fees	112,943	114,478	120,624
Engineering and operations	77,649	73,031	74,614
Sales, marketing and customer service	38,730	35,207	35,184
General and administrative	100,534	104,267	102,294
Transaction-related charges	244	2,642	1,009
Restructuring charges	—	515	1,169
Depreciation and amortization	89,125	85,719	86,934
Goodwill impairment	3,279	—	—
(Gain) loss on disposition of long-lived assets	2,841	(26,425)	101
Loss on damaged assets and other hurricane related charges, net of insurance recovery	—	750	3,956
Total operating expenses	<u>425,345</u>	<u>390,184</u>	<u>425,885</u>
Income from operations	<u>13,377</u>	<u>61,023</u>	<u>55,308</u>
OTHER INCOME (EXPENSE)			
Interest income	2,263	1,811	1,613
Interest expense	(5,010)	(7,973)	(8,838)
Loss on deconsolidation of subsidiary	—	—	(529)
Other expenses	(4,558)	(1,119)	(1)
Other income (expense), net	<u>(7,305)</u>	<u>(7,281)</u>	<u>(7,755)</u>
INCOME BEFORE INCOME TAXES	6,072	53,742	47,553
Income tax provisions	4,105	18,870	(1,341)
NET INCOME	<u>1,967</u>	<u>34,872</u>	<u>48,894</u>
Net income attributable to non-controlling interests, net of tax expense of \$1.3 million, \$1.5 million and \$1.0 million, respectively.	<u>(12,773)</u>	<u>(15,057)</u>	<u>(17,406)</u>
NET INCOME (LOSS) ATTRIBUTABLE TO ATN INTERNATIONAL, INC. STOCKHOLDERS	<u>\$ (10,806)</u>	<u>\$ 19,815</u>	<u>\$ 31,488</u>
NET INCOME (LOSS) PER WEIGHTED AVERAGE SHARE ATTRIBUTABLE TO ATN INTERNATIONAL, INC. STOCKHOLDERS:			
Basic	<u>(0.68)</u>	<u>1.24</u>	<u>1.95</u>
Diluted	<u>(0.68)</u>	<u>1.24</u>	<u>1.94</u>
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING:			
Basic	<u>15,983</u>	<u>15,988</u>	<u>16,138</u>
Diluted	<u>15,983</u>	<u>16,042</u>	<u>16,210</u>
DIVIDENDS PER SHARE APPLICABLE TO COMMON STOCK	<u>\$ 0.68</u>	<u>\$ 0.68</u>	<u>\$ 1.02</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, 2019, 2018, and 2017

(in thousands)

	Year Ended December 31,		
	2019	2018	2017
Net income.....	\$ 1,967	\$ 34,872	\$ 48,894
Other comprehensive income (loss):			
Foreign currency translation adjustment.....	(1,041)	(4,390)	1,265
Reclassifications of gains on sale of marketable securities to net income ..	—	—	(1,044)
Unrealized gain (loss) on derivatives	(187)	78	440
Projected pension benefit obligation, net of tax expense of \$0.1 million, \$0.6 million and \$0.7 million, respectively.....	(445)	(840)	1,357
Other comprehensive income (loss), net of tax.....	(1,673)	(5,152)	2,018
Comprehensive income	294	29,720	50,912
Less: Comprehensive income attributable to non-controlling interests.	(12,773)	(15,057)	(17,406)
Comprehensive income (loss) attributable to ATN International, Inc.	<u>\$ (12,479)</u>	<u>\$ 14,663</u>	<u>\$ 33,506</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, 2019, 2018, and 2017
(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, 2018.	\$ 172	\$ (48,547)	\$ 181,778	\$ 563,593	\$ (1,609)	\$ 695,387	\$ 127,937	\$ 823,324
Issuance of 17,000 shares of common stock upon exercise of stock options.	—	—	771	—	—	771	—	771
Purchase of 45,807 shares of common stock.	—	(2,582)	—	—	—	(2,582)	—	(2,582)
Stock-based compensation.	—	—	5,922	—	—	5,922	462	6,384
Dividends declared on common stock (\$0.68 per common share).	—	—	—	(10,897)	—	(10,897)	(7,195)	(18,092)
Repurchase of non-controlling interests.	—	—	—	—	—	—	(4,504)	(4,504)
Investments made by minority shareholders in consolidated affiliates.	—	—	—	—	—	—	488	488
<i>Comprehensive income:</i>								
Net income (loss)	—	—	—	(10,806)	—	(10,806)	12,773	1,967
Other comprehensive income	—	—	—	—	(1,673)	(1,673)	—	(1,673)
Total comprehensive income (loss)	—	—	—	—	—	—	12,773	294
Balance, December 31, 2019.	<u>\$ 172</u>	<u>\$ (51,129)</u>	<u>\$ 188,471</u>	<u>\$ 541,890</u>	<u>\$ (3,282)</u>	<u>\$ 676,122</u>	<u>\$ 129,961</u>	<u>\$ 806,083</u>
Balance, December 31, 2017.	\$ 170	\$ (36,110)	\$ 167,973	\$ 552,948	\$ 3,746	\$ 688,727	\$ 141,496	\$ 830,223
Issuance of restricted shares of common stock.	2	—	—	—	—	2	—	2
Issuance of 158,021 shares of common stock upon exercise of stock options.	—	(12,437)	6,319	—	—	6,319	—	6,319
Purchase of 171,907 shares of common stock.	—	—	—	—	—	(12,437)	—	(12,437)
Stock-based compensation.	—	—	6,420	—	—	6,420	—	6,420
Dividends declared on common stock (\$0.68 per common share).	—	—	—	(10,863)	—	(10,863)	(19,033)	(29,896)
Repurchase of non-controlling interests.	—	—	1,066	—	—	1,066	(10,729)	(9,663)
Cumulative effect adjustment due to adoption of new accounting pronouncements.	—	—	—	1,693	(203)	1,490	1,146	2,636
<i>Comprehensive income:</i>								
Net income.	—	—	—	19,815	—	19,815	15,057	34,872
Other comprehensive loss.	—	—	—	—	(5,152)	(5,152)	—	(5,152)
Total comprehensive income.	—	—	—	—	—	14,663	15,057	29,720
Balance, December 31, 2018.	<u>\$ 172</u>	<u>\$ (48,547)</u>	<u>\$ 181,778</u>	<u>\$ 563,593</u>	<u>\$ (1,609)</u>	<u>\$ 695,387</u>	<u>\$ 127,937</u>	<u>\$ 823,324</u>
Balance, December 31, 2016.	\$ 169	\$ (23,127)	\$ 160,176	\$ 538,109	\$ 1,728	\$ 677,055	\$ 132,114	\$ 809,169
Issuance of restricted shares of common stock.	1	—	—	—	—	1	—	1
Issuance of 158,021 shares of common stock upon exercise of stock options.	—	—	1,156	—	—	1,156	—	1,156
Purchase of 171,907 shares of common stock.	—	(12,983)	—	—	—	(12,983)	—	(12,983)
Stock-based compensation.	—	—	6,970	—	—	6,970	—	6,970
Dividends declared on common stock (\$1.02 per common share).	—	—	—	(16,465)	—	(16,465)	(7,318)	(23,783)
Investments made by minority shareholders.	—	—	—	—	—	—	123	123
Deconsolidation of subsidiary.	—	—	—	—	—	—	529	529
Repurchase of non-controlling interests.	—	—	(670)	—	—	(670)	(1,356)	(2,026)
Cumulative effect adjustment due to adoption of new accounting pronouncements.	—	—	341	(186)	—	155	—	155
<i>Comprehensive income:</i>								
Net income.	—	—	—	31,490	—	31,490	17,404	48,894
Other comprehensive loss.	—	—	—	—	2,018	2,018	—	2,018
Total comprehensive income.	—	—	—	—	—	33,508	17,404	50,912
Balance, December 31, 2017.	<u>\$ 170</u>	<u>\$ (36,110)</u>	<u>\$ 167,973</u>	<u>\$ 552,948</u>	<u>\$ 3,746</u>	<u>\$ 688,727</u>	<u>\$ 141,496</u>	<u>\$ 830,223</u>

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, 2019, 2018 and 2017
(In Thousands)

	Year Ended December 31,		
	2019	2018	2017
Cash flows from operating activities:			
Net income	\$ 1,967	\$ 34,872	\$ 48,894
Adjustments to reconcile net income to net cash flows provided by operating activities:			
Depreciation and amortization	89,125	85,719	86,934
Provision for doubtful accounts	5,816	5,134	3,993
Amortization of debt discount and debt issuance costs	542	763	670
Stock-based compensation	6,384	6,420	6,977
Deferred income taxes	(2,192)	(23,242)	(13,505)
Loss on equity investments	4,724	—	2,033
(Gain) loss on disposition of long-lived assets	2,841	(26,425)	101
Goodwill impairment	3,279	—	—
Loss on damaged assets from Hurricanes	—	—	35,443
Insurance recovery related to hurricane claims	—	—	(34,606)
Unrealized loss on foreign currency	362	1,342	(1,209)
Gain on sale of investments	—	—	(826)
Loss on deconsolidation of subsidiary	—	—	529
Other non-cash activity	(42)	308	424
Changes in operating assets and liabilities, excluding the effects of acquisitions and dispositions:			
Accounts receivable	(3,511)	(1,682)	(4,074)
Materials and supplies, prepayments, and other current assets	(1,613)	5,924	1,002
Prepaid income taxes	4,581	3,147	996
Accounts payable and accrued liabilities, advance payments and deposits and other current liabilities	(2,536)	(7,044)	4,649
Accrued taxes	(19,053)	29,089	(1,385)
Other assets	(5,711)	(238)	4,102
Other liabilities	2,940	1,778	4,583
Net cash provided by operating activities	<u>87,903</u>	<u>115,865</u>	<u>145,725</u>
Cash flows from investing activities:			
Capital expenditures	(72,602)	(105,769)	(133,786)
Hurricane rebuild capital expenditures	(123)	(80,152)	(8,585)
Hurricane insurance proceeds	—	34,606	—
Receipt of government grants	3,140	5,400	—
Acquisition of business, net of acquired cash of \$0.0 million	—	—	(1,183)
Purchase of spectrum licenses and other intangible assets, including deposits	—	—	(36,832)
Divestiture of businesses, net of transferred cash of \$0.0 million, \$11.5 million, and \$2.1 million, respectively	6,572	48,270	22,381
Purchases of strategic investments	(25,362)	(3,000)	(18,107)
Purchase of short-term investments	(8,028)	(138)	—
Proceeds from sale of short-term investments	8,141	6,564	3,794
Proceeds from disposition of long-lived assets	—	6,900	—
Net cash used in investing activities	<u>(88,262)</u>	<u>(87,319)</u>	<u>(172,318)</u>
Cash flows from financing activities:			
Dividends paid on common stock	(10,880)	(10,866)	(19,227)
Proceeds from new borrowings	—	—	8,571
Distributions to non-controlling interests	(7,161)	(18,780)	(6,858)
Payment of debt issuance costs	(1,340)	—	(326)
Acquisition of business, net of acquired cash of \$0.0 million	—	—	(1,178)
Principal repayments of term loan	(4,700)	(9,795)	(9,355)
Proceeds from stock option exercises	—	72	1,030
Stock-based compensation share repurchases	(1,649)	(4,622)	(2,220)
Purchases of common stock- share repurchase plan	(162)	(1,576)	(10,635)
Repurchases of non-controlling interests	(4,504)	(9,663)	(2,025)
Investments made by minority shareholders in consolidated affiliates	488	—	122
Net cash used in financing activities	<u>(29,908)</u>	<u>(55,230)</u>	<u>(42,101)</u>
Effect of foreign currency exchange rates on cash and cash equivalents	(282)	(299)	226
Net change in cash, cash equivalents, and restricted cash	(30,549)	(26,983)	(68,468)
Total cash, cash equivalents, and restricted cash, beginning of period	192,907	219,890	288,358
Total cash, cash equivalents, and restricted cash, end of period	<u>\$ 162,358</u>	<u>\$ 192,907</u>	<u>\$ 219,890</u>
Supplemental cash flow information:			
Interest paid	\$ 4,554	\$ 7,235	\$ 7,411
Taxes paid	\$ 30,411	\$ 12,486	\$ 13,685
Dividends declared, not paid	\$ 2,721	\$ 2,720	\$ 2,724
Noncash investing activity:			
Transfer from inventory, materials and supplies to property, plant and equipment	\$ —	\$ 6,708	\$ —
Purchases of property, plant and equipment included in accounts payable and accrued expenses	\$ 11,668	\$ 12,877	\$ 19,466

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

1. ORGANIZATION AND BUSINESS OPERATIONS

The Company is a holding company that, directly and through its subsidiaries, owns and operates telecommunications businesses in North America, the Caribbean and Bermuda as well as a renewable energy business in India. The Company was incorporated in Delaware in 1987, began trading publicly in 1991 and spun off more than a half of its operations to stockholders in 1998. Since that time, the Company has engaged in many strategic acquisitions and investments to help grow its operations, using the cash generated from its established operating units to re-invest in its existing businesses, to make strategic investments in additional businesses, and to return cash to the Company's investors. The Company has built, and seeks to maintain, resources to support its operating subsidiaries and to improve their customer acquisition, retention, and satisfaction while maintaining optimal operating efficiencies. The Company looks for businesses that offer growth opportunities or potential strategic benefits, but require additional capital investment in order to execute on their business plans. The Company holds controlling positions with respect to some of its investments and non-controlling positions in others. The Company investments in earlier stage businesses frequently offer a product and service development component in addition to the prospect of generating returns on its invested capital.

The Company has identified three operating segments to manage and review its operations and to facilitate investor presentations of its results. Those three operating segments are as follows:

- **International Telecom.** The Company's international wireless services include voice and data services to retail customers in Bermuda, Guyana and the US Virgin Islands. The Company's international wireline services include voice and data services in Bermuda, the Cayman Islands, Guyana and the US Virgin Islands, as well as video services in Bermuda, the Cayman Islands, and the US Virgin Islands. In addition, the Company offers managed information technology services to commercial customers and provide wholesale long-distance voice services to other telecommunications carriers in the countries in which it offer international wireline services
- **US Telecom.** In the United States, the Company offers wireless and wireline services. The Company offers wholesale wireless voice and data roaming services and lease critical network infrastructure such as towers and transport facilities to national, regional, local and selected international wireless carriers in rural markets located principally in the Southwest United States. The Company also provide consumer and enterprise mobile and fixed telecommunications services in certain areas where it offers those wholesale services and wholesale long-distance wireline voice services to telecommunications carriers.
- **Renewable Energy.** In India, the Company provides distributed generation solar power to commercial and industrial customers. Through November 6, 2018, the Company also provided distributed generation solar power in the United States in Massachusetts, California and New Jersey.

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, 2019:

Segment	Services	Markets	Tradenames
International Telecom. . . .	Wireline	Bermuda, Cayman Islands, Guyana, US Virgin Islands	Fireminds, GTT+, One, Logic, Viya
	Wireless	Bermuda, Guyana, US Virgin Islands	GTT+, One, Viya
	Video Services	Bermuda, Cayman Islands, US Virgin Islands	Logic, One, Viya
US Telecom.	Wireless	United States (rural markets)	Choice, Choice NTUA Wireless, Commnet, WestNet, Geoverse
	Wireline	United States	Essexel, Deploycom
Renewable Energy	Solar	India	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. In addition, the Company considers non-controlling investments in earlier stage businesses that it considers strategically relevant, and which may offer long-term growth potential for the Company, either individually, or as research and development businesses that can support the Company's operating subsidiaries in new product and service development and offerings. The Company provides management, technical, financial, regulatory, and marketing services to its subsidiaries and typically receives a management fee equal to a percentage of their revenues which is eliminated in consolidation. For information about the Company's financial segments and geographical information about its operating revenues and assets see Notes 1 and 17 to the Consolidated Financial Statements included in this Report.

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.

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, 2019, the Company had deposits with banks in excess of FDIC insured limits and \$32.6 million of its cash is on deposit with noninsured 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 10). As of December 31, 2019 and 2018, the Company held \$6.6 million and \$7.5 million, respectively, of its cash in Guyana dollars. While there are risks associated with the conversion of Guyana dollars to US dollars due to limited liquidity in the Guyana foreign currency markets, to date it has not prevented the Company from converting Guyana dollars into US 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 are recorded in other income. The estimated fair values of investments are based on quoted market prices as of the end of the reporting period.

Restricted Cash

The Company generally classifies cash that is legally restricted as to withdrawal or usage as restricted cash. Generally, the cash is restricted due to debt service obligations, acquisitions, or to support the Company's

telecommunications operations. In 2018, the Company disposed of \$8.4 million of restricted cash as a result of the US Solar Transaction described in Note 6.

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.

Inventory, Materials and Supplies

Inventory, materials and supplies primarily include handsets and other equipment held for sale to customers. These balances are recorded at the lower of cost or market cost being determined on the basis of specific identification and market determined using replacement.

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 internal and external costs necessary to bring an asset to the condition and location necessary for its intended use. 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 an investing cash flow in the statements of cash flows.

The Company capitalizes certain costs of developing and purchasing new information systems in accordance with internal use software guidance. These costs are depreciated over the useful life of the information system. The Company also incurs implementation costs associated with cloud computing arrangements. If these costs do not meet internal use software capitalization guidance the implementation costs are recorded as prepaid assets and expensed through operating expense over the life of the arrangement.

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 \$4.0 million and \$3.8 million as of December 31, 2019 and 2018, respectively, for estimated costs associated with asset retirement obligations.

In accordance with the authoritative guidance for 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.

The Company did not record any fixed asset impairments for the year ended December 31, 2019. See Note 5, *Impact of Hurricanes Irma and Maria*, regarding the Company's write off of certain damaged fixed assets during the year ended December 31, 2017.

Goodwill and Indefinite-Lived Intangible Assets

Goodwill is recognized in business combinations equal to 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. The assessment begins with a qualitative analysis to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying amount. If the reporting unit passes this analysis, the impairment assessment is complete and no impairment is recorded. If the reporting unit does not pass the analysis, the Company performs additional quantitative analysis by calculating the fair value of the reporting unit. If the fair value exceeds the carrying value, the test is complete and no impairment is recorded. If the carrying value of the reporting unit, including goodwill, exceeds the fair value of the reporting unit an impairment charge is recorded equal to the excess, but not more than the total amount of goodwill allocated to the reporting unit.

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.

The Company performed its annual impairment assessment of its goodwill and indefinite-lived intangible assets (telecommunications licenses) for the years ended December 31, 2019 and 2018. See Note 9 for a discussion of the Company's impairment of a portion of its 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 and subsequent capital contributions made by the minority stockholders in the Company's subsidiaries which are less than wholly-owned. Non-controlling interests acquired in a business combination are initially recorded at fair value. Subsequently, all non-controlling interest is adjusted for the minority stockholder's 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	Other	Total
Balance at December 31, 2016	\$ 1,770	\$ (910)	\$ 868	\$ 1,728
Adjust funded status of pension plans, net of tax of \$0.7 million	1,357	—	—	1,357
Foreign currency translation adjustment	—	1,265	—	1,265
Reclassifications of gains on sale of marketable securities to net income	—	—	(1,044)	(1,044)
Unrealized gain on marketable securities	—	—	440	440
Balance at December 31, 2017	\$ 3,127	\$ 355	\$ 264	\$ 3,746
Adjust funded status of pension plans, net of tax of \$0.6 million	(840)	—	—	(840)
Foreign currency translation adjustment	—	(4,390)	—	(4,390)
Adoption of ASU 2016-01	—	—	(203)	(203)
Interest rate swap	—	—	78	78
Balance at December 31, 2018	2,287	(4,035)	139	(1,609)
Adjust funded status of pension plan, net of tax of \$0.1 million	(445)	—	—	(445)
Foreign currency translation adjustment	—	(1,041)	—	(1,041)
Interest rate swap	—	—	(187)	(187)
Balance at December 31, 2019	<u>\$ 1,842</u>	<u>\$ (5,076)</u>	<u>\$ (48)</u>	<u>\$ (3,282)</u>

Amounts reclassified from accumulated other comprehensive income to net income were as follows (in thousands):

	2019	2018	2017
Pension and other postretirement benefit plans	\$ (64)	\$ 54	\$ 716
Realized gains on marketable securities	—	—	(1,044)
Total	<u>\$ (64)</u>	<u>\$ 54</u>	<u>\$ (328)</u>

Revenue Recognition

The Company earns revenue from its telecommunication and renewable energy operations. The Company recognizes revenue through the following steps:

- Identification of the contract with a customer
- Identification of the performance obligations in the contract
- Determination of the transaction price
- Allocation of the transaction price to the performance obligations in the contract
- Recognize revenue when, or as, the Company satisfies performance obligations

Revenue Recognition- Telecommunications

Wireless revenue consists of wholesale and retail revenue. Wholesale revenue is generated from providing mobile voice and data services to the customers of other wireless carriers, the provision of network switching services and certain transport services using the Company's wireless networks. The transaction price of some wholesale revenue contracts includes variable consideration in the form of volume discounts. Management uses its judgment based on projected transaction volumes to estimate the transaction price and to allocate the transaction price to the performance obligations in the contract. Revenue is recognized over time as the service is rendered to the customer. Retail revenue is generated from providing mobile voice and data services to subscribers as well as roaming services provided to other carriers' customers roaming into the Company's retail markets. This revenue is recognized over time as the service is rendered. Lastly, wireless revenue includes revenues from equipment sold to customers which is recognized when the equipment is delivered to the customer.

Management considers transactions where customers purchase subsidized or discounted equipment and mobile voice or data services to be a single contract. For these contracts, the transaction price is allocated to the equipment and mobile service based on their standalone selling prices. The standalone selling price is based on the amount the Company charges for the equipment and service to similar customers. Equipment revenue is recognized when the equipment is delivered to customers and service revenue is recognized as service is rendered.

Wireline revenue is generated from access and usage fees for internet, voice and video services charged to subscribers as well as wholesale long-distance voice services provided to telecommunication carriers at contracted rates. Revenue from these contracts is recognized over time as the service is rendered to the customer.

The Company's wireless and wireline contracts occasionally include promotional discounts such as free service periods or discounted products. If a contract contains a substantive termination penalty, the transaction price is allocated to the performance obligations based on a standalone selling price resulting in accelerated revenue recognition and the establishment of a contract asset that will be recognized over the life of the contract. If a contract includes a promotional discount but no substantive termination penalty the discount is recorded in the promotional period and no contract asset is established. The Company's customers also have the option to purchase additional telecommunication services. Generally, these options are not performance obligations and are excluded from the transaction price because they do not provide the customers with a material right.

The Company may charge upfront fees for activation and installation of some of its products and services. These fees are reviewed to determine if they represent a separate performance obligation. If they do not represent a separate performance obligation, the contract price associated with them is recognized over the life of the customer. If the fees represent a performance obligation they are recognized when delivered to the customer based on standalone selling price.

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.

The Company also enters into build and maintenance agreements with its customers. The agreements include construction and service performance obligations. The Company allocates the transaction price to each performance obligation based on the relative standalone selling price of each performance obligation in the contract. The standalone selling price is the estimated price the Company would charge for the good or service in a separate transaction with similar customers in similar circumstances.

Revenue Recognition-Renewable Energy

Revenue from the Company's Renewable Energy segment is generated from the sale of electricity through power purchase agreements ("PPAs") with various customers that generally range from 10 to 25 years. The Company recognizes revenue at contractual PPA rates over time as electricity is generated and simultaneously consumed by the customer. Prior to the sale of the US Solar Transaction discussed in Note 6, in the United States, the Company's

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

Contract Assets and Liabilities

The Company recognizes contract assets and liabilities on its balance sheet. Contract assets represent unbilled amounts typically resulting from retail wireless contracts with both a multiyear service period and a promotional discount. In these contracts the revenue recognized exceeds the amount billed to the customer. The current portion of the contract asset is recorded in prepayments and other current assets and the noncurrent portion is included in other assets on the Company’s balance sheet. Contract liabilities consist of advance payments and billings in excess of revenue recognized. Retail revenue for postpaid customers is generally billed one month in advance and recognized over the period that the corresponding service is rendered to customers. To the extent the service is not provided by the reporting date the amount is recognized as a contract liability. Prepaid service, including mobile voice and data services, sold to customers is recorded as deferred revenue prior to the commencement of services. The current portion of contract liabilities are recorded in advanced payments and deposits and the noncurrent portion is included in other liabilities on the Company’s balance sheets.

Contract Acquisition Costs

The Company pays sales commissions to its employees and agents for obtaining customer contracts. These costs are incremental because they would not have been incurred if the contract was not obtained. The Company recognizes an asset for these costs and subsequently amortizes the asset on a systematic basis consistent with the pattern of the transfer of the services to the customer. The amortization period, which is between 2 and 6 years, considers both the original contract period as well as anticipated contract renewals as appropriate. The amortization period also includes renewal commissions when those commissions are not commensurate with new commissions. The Company estimates contract renewals based on its actual renewals in recent periods. When the expected amortization period is one year or less the Company utilizes the practical expedient and expenses the costs as incurred.

Leases

The Company determines if an agreement is a lease at inception. Operating leases are included in right-of-use (“ROU”) assets, current portion of operating lease liabilities, and operating lease liabilities in the Company’s consolidated balance sheets. Finance leases are included in property and equipment in the Company’s consolidated balance sheets.

ROU assets represent the right to use an underlying asset for the lease term and lease liabilities represent the obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The present value is calculated using the Company’s incremental borrowing rate based on the information available at the commencement date, as our leases do not contain an implicit rate. The Company utilizes assumptions based on its existing borrowing facilities and other market specific data to determine its incremental borrowing rate. The operating lease ROU asset also includes any lease payments made and excludes lease incentives. The Company’s lease terms may include renewal options to extend the lease. The Company includes renewal options that are reasonably certain to be exercised in the initial lease term. When determining whether a renewal option is reasonably certain to be exercised, the Company considers several factors, including the present and anticipated future needs of its customers being serviced by the asset. Lease expense is recognized on a straight-line basis over the lease term. The Company does not separate non-lease components from lease components.

Operating 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, video programming costs, other access fees the Company pays to terminate its calls,

telecommunication spectrum fees and direct costs associated with the Company's managed services and technology business as well as within its renewable energy operations. Termination and access fees also include the cost of handsets and customer resale equipment incurred by the Company's retail businesses.

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 paid to employees directly involved in the development and operation of those businesses.

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

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, 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.

Restructuring charges. Restructuring charges are costs incurred as a result of reorganizing the Company's operations as a result of acquisition or disposition activities.

Depreciation and amortization expenses. Depreciation and amortization expenses represent the depreciation and amortization charges the Company records on its property and equipment and on certain intangible assets.

Impairment of goodwill or intangible 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. For long lived assets other than goodwill, 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 carrying value of the reporting unit, including goodwill, exceeds the fair value of the reporting unit an impairment charge is recorded equal to the excess, but not more than the total amount of goodwill allocated to the reporting unit.

(Gain) loss on disposition of long-lived assets. The Company sells or disposes assets from time to time. A gain or loss is recorded by comparing the carrying amount of the assets to the proceeds received. For the year ended December 31, 2019, the Company recorded a \$2.6 million loss on the settlement of certain partner settlement agreements.

Loss on damaged assets and other Hurricane-related charges, net of insurance recovery. During September 2017, the Company's operations and customers in the US Virgin Islands were severely impacted by Hurricanes Irma and Maria (the "Hurricanes"). Loss on damaged assets and other hurricane related charges, net of insurance recovery represents the write off of damaged assets, net of insurance recoveries and also includes additional operating expenses that were specifically incurred to address the impact of the Hurricanes.

Accounting for Grants

The Company receives funding from the US Government and its agencies under stimulus and USF and other programs. These funding programs are generally designed to fund telecommunications operations, and infrastructure expansion into rural or underserved areas. The funding programs are evaluated to determine if they represent funding related to revenue, capital expenditures, or operating activities. Funding for revenue and operating activities are recorded as revenue or contra expense in the Company's consolidated income statement as the services are provided. Funding for capital expenditures is recorded as a reduction to property, plant and equipment on the Company's consolidated balance sheets and a future reduction in depreciation expense in the consolidated income statements. Government funding related to revenue and operations are recorded as operating cash inflows and grants for capital expenditures are recorded as investing cash inflows.

The Company monitors government funding for grant requirements 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. See Note 11, *Government Grants*.

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 its 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. The Tax Cuts and Jobs Act of 2017 resulted in a one-time transition tax on the deemed repatriation of foreign earnings for federal tax purposes.

Credit Concentrations and Significant Customers

Historically, the Company has been dependent on a limited amount of customers for its wholesale roaming business. For the year ended December 31, 2019, one customer accounted for 11% of the Company's consolidated revenue. For the years ended December 31, 2018, one customer accounted for 11% of the Company's consolidated revenue. For the year ended December 31, 2017, two customers accounted for 13% and 10% of the Company's consolidated revenue.

As of December 31, 2019, one customer accounted for more than 10% of the Company's consolidated accounts receivable. As of December 31, 2018, no customer accounted for more than 10% of the Company's consolidated accounts receivable.

Foreign Currency Gains and Losses

The Company translate the assets and liabilities of its foreign subsidiaries from their respective functional currencies, primarily the Indian Rupee and the Guyana Dollar, to US dollars at the appropriate spot rates as of the balance sheet date. Changes in the carrying values of these assets and liabilities attributable to fluctuations in spot rates are recognized in foreign currency translation adjustment, a component of accumulated other comprehensive income. 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 service cost component of net periodic pension expense is presented with other employee compensation within income from operations. Other components of net periodic pension expense, such as interest cost, expected return on plan assets, and amortization of actuarial gains and losses are presented in other income. The Company recognizes a pension or other postretirement benefit plan's funded status as either an asset or liability in its consolidated balance sheet. Actuarial gains and losses are deferred, 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:

- 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, 2019 and 2018 are summarized as follows:

Description	December 31, 2019			
	Significant Other			Total
	Quoted Prices in Active Markets (Level 1)	Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	
Certificates of deposit	\$ —	\$ 380	\$ —	\$ 380
Money market funds	2,329	—	—	2,329
Short term investments	416	—	—	416
Other investments	—	—	12,700	12,700
Interest rate swap	—	(56)	—	(56)
Total assets and liabilities measured at fair value	\$ 2,745	\$ 324	\$ 12,700	\$ 15,769

Description	December 31, 2018		
	Significant Other		Total
	Quoted Prices in Active Markets (Level 1)	Observable Inputs (Level 2)	
Certificates of deposit	\$ —	\$ 380	\$ 380
Money market funds	2,266	—	2,266
Short term investments	393	—	393
Commercial paper	—	13,972	13,972
Interest rate swap	—	140	140
Total assets and liabilities measured at fair value	\$ 2,659	\$ 14,492	\$ 17,151

Certificate of Deposit

As of December 31, 2019 and December 31, 2018 this asset class consisted of a time deposit at a financial institution denominated in US 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, 2019 and December 31, 2018, this asset class consisted of a money market portfolio that comprises Federal government and US 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, 2019 and December 31, 2018, these asset classes consisted of short term foreign and US corporate bonds, equity securities, and commercial paper. Corporate bonds and commercial paper 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. The Company held equity securities with a fair value of \$0.2 million and \$0.3 million at December 31, 2019 and December 31, 2018, respectively. Net income for the year ended December 31, 2019 and 2018 includes \$0.1 million and \$0.3 million of losses, respectively, on these securities.

Other Investments

In the first quarter of 2019, the Company made an investment in an early-stage venture through the acquisition of a convertible debt instrument for \$10 million. The Company elected to fair value the investment upon acquisition and recorded \$0.2 million of income in 2019 from changes in the fair value of the investment. The investment had a fair value of \$10.2 million at December 31, 2019. The asset is classified within Level 3 of the fair value hierarchy. The Company used the income approach to fair value the investment and the inputs consisted of a discount rate calculated based on the investment attributes and the probability of potential future scenarios occurring.

In the third quarter of 2019, the Company made a \$14.4 million investment in a renewable energy partnership. The Company received an investment tax credit of \$12.0 million from its equity method investment and will receive future cash distributions from the partnership's operations. The Company elected the deferral method to account for the credit and elected the fair value option for the equity method investment. The Company recorded \$0.1 million of income in the fourth quarter of 2019 and the investment had a fair value of \$2.5 million at December 31, 2019. The asset is classified within Level 3 of the fair value hierarchy. The Company used the income approach to fair value the investment and the inputs consisted of a discount rate and future cash flows calculated based on the investment attributes.

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 the interest rate swap is measured using Level 2 inputs. During the year ended December 31, 2019, the Company recorded \$0.2 million of loss for changes in fair value of investment.

The Company holds investments in equity securities consisting of non-controlling investments in privately held companies. These investments, over which the Company does not have the ability to exercise significant influence, are without readily determinable fair values. The investments are measured at cost, less any impairment, adjusted for observable price changes of similar investments of the same issuer. Fair value is not estimated for these investments if there are no identified events or changes in circumstances that may have an effect on the fair value of the investment. The carrying value of the strategic investments was \$23.1 million at December 31, 2018. During the year ended December 31, 2019, the Company acquired \$1.2 million of additional securities and recorded losses of \$4.7 million based on observable price changes of similar investments in two of the issuers. The carrying value of the investments was \$19.6 million at December 31, 2019. These investments are included with other assets on the consolidated balance sheets.

The fair value of long-term debt is estimated using Level 2 inputs. At December 31, 2019, the fair value of long-term debt, including the current portion, was \$86.9 million and its book value was \$86.4 million. At December 31,

2018, the fair value of long-term debt, including the current portion, was \$91.6 million and its book value was \$91.0 million.

Net Income (Loss) 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>2019</u>	<u>2018</u>	<u>2017</u>
Basic weighted-average shares of common stock outstanding . .	15,983	15,988	16,138
Stock options	—	54	72
Diluted weighted-average shares of common stock outstanding .	<u>15,983</u>	<u>16,042</u>	<u>16,210</u>

For the year ended December 31, 2019, 2018, and 2017, the calculation of basic and diluted weighted average shares of common stock outstanding does not include 8,800 shares, 5,000 shares and 7,000 shares, respectively, relating to stock options as the effects of those options were anti-dilutive.

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 of non-cash, share-based compensation expense during each of 2018 and 2017. See Note 12 for assumptions used to calculate the fair value of the options granted.

The Company also issued 108,278 restricted shares of common stock in 2019; 111,474 restricted shares of common stock in 2018 and 95,095 restricted shares of common stock in 2017. These shares are being charged to income based upon their fair values over their vesting period of four years. The Company accounts for forfeitures as they occur. Non-cash equity-based compensation expense, related to the vesting of restricted shares issued was \$6.4 million, \$6.1 million and \$6.6 million in 2019, 2018, and 2017, respectively.

In connection with certain acquisitions, the Company issued shares of the acquired company to its local management and recorded \$0.2 million and \$0.3 million of stock based compensation during 2018 and 2017, 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 Accounting Standards Update (“ASU”) 2014-09, “Revenue from Contracts with Customers” (“ASU 2014-09”), and subsequently issued related updates, (collectively known as ASC 606), 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 Company adopted this standard on January 1, 2018. Refer to Note 3 to the Consolidated Financial Statements in this Report.

In April 2015, the FASB issued ASU 2015-05, “Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement,” (“ASU 2015-05”), which provides guidance about whether a cloud computing arrangement includes software and how to account for the license for software. The new guidance does not change the accounting for a customer’s accounting for service contracts. The adoption of ASU 2015-05 by the Company on January 1, 2017 did not have a material impact on the Company’s financial position, result of operations or cash flows.

In January 2016, the FASB issued ASU 2016-01, “Financial Instruments—Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities,” which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. The Company adopted this standard on January 1, 2018. Upon adoption the Company held \$20.1 million of equity investments that did not have readily determinable fair values. As a result these investments are measured at cost less impairments, adjusted for observable price changes of similar investments of the same issuer. Upon adoption, the Company held \$0.6 million of equity investments with readily determinable fair values and reclassified \$0.2 million of unrealized gains on this investment to retained earnings.

In February 2016, the FASB issued ASU 2016-02, “Leases (Topic 842)” and subsequently issued related updates,” (“ASU 2016-02”) which provide 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 became effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, with early adoption permitted. The Company adopted ASC 2016-02 on January 1, 2019 utilizing the optional transition method with a cumulative adjustment on the date of adoption and not adjusting prior periods. Refer to Note 4 of the Condensed Consolidated Financial Statements.

In March 2016, the FASB issued ASU 2016-09, “Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting,” (“ASU 2016-09”). 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. The Company adopted ASU 2016-09 on January 1, 2017. The guidance requires the recognition of the income tax effects of awards in the income statement when the awards vest or are settled, thus eliminating additional paid-in capital pools. This had no impact on the Company’s historical results. Also as a result of the adoption, the Company changed its policy election to account for forfeitures as they occur rather than on an estimated basis. The change resulted in the Company reclassifying \$0.3 million from additional paid-in capital to retained earnings for the net cumulative-effect adjustment in stock compensation expense related to prior periods.

In August 2016, the FASB issued ASU 2016-15, “Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments,” (“ASU 2016-15”) which provides further clarification on eight cash flow classification issues. The Company adopted this standard on January 1, 2018. In November 2016, the FASB issued ASU 2016-18, “Statement of Cash Flows (Topic 230): Restricted Cash,” (“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. The Company adopted this standard on January 1, 2018.

The Company's statement of cash flows reports the cash effects during a period of an entity's operations, its investing transactions, and its financing transactions. The statement of cash flows explains the change during the period in the total cash which includes cash equivalents as well as restricted cash. The Company applies the predominance principle to classify separately identifiable cash flows based on the nature of the underlying cash flows. Debt prepayment or extinguishment costs are classified as cash outflows from financing activities. Contingent consideration payments made three months or less after a business combination are classified as investing activities and those made after that time are classified as financing activities. Proceeds from the settlement of insurance claims are classified on the basis of the nature of the loss. Prior to January 1, 2018, the Company classified all payments made in a business combination as investing activities and did not include restricted cash in total cash. The adoption of ASU 2016-15 and ASU 2016-18 impacted the Company's cash flows for the years ended December 31, 2017 as indicated below (amounts in thousands):

Statement of Cash flows			
Year ended December 31, 2017			
	Reported	Change	Under previous guidance
Net cash provided by operating activities	\$ 145,725	\$ —	\$ 145,725
Net cash used in investing activities	(172,318)	5,525	(166,793)
Net cash used in financing activities	(42,101)	1,178	(40,923)
Effect of foreign currency exchange rates on total cash.	226	—	226
Net change in total cash.	\$ (68,468)	\$ 6,703	\$ (61,765)
Total cash, beginning of period	288,358	(18,637)	269,721
Total cash, end of period	\$ 219,890	\$ (11,934)	\$ 207,956

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 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 was effective for the Company on January 1, 2018. There was not a material impact to the Company's Consolidated Financial Statements upon adoption.

In January 2017, the FASB issued Accounting Standards Update 2017-04, "Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment," ("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 adopted this standard in the third quarter of 2017.

In March 2017, the FASB issued ASU 2017-07, "Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost." The new guidance requires the service cost component to be presented separately from the other components of net benefit costs. Service cost will be presented with other employee compensation cost within income from operations. The other components of net benefit cost, such as interest cost, expected return on plan assets, amortization of prior service cost and gains or losses are required to be presented in other income. The Company adopted this standard on January 1, 2018.

Prior to January 1, 2018, all components of pension expense were recognized in operating income. The adoption of the standard impacted the Company's Statement of Operations for year ending December 31, 2017 by

increasing operating expenses by \$0.2 million and increasing other income by the same amount. There was no impact on income before income taxes. The Company elected the practical expedient allowing the use of the amounts disclosed for the various components of net benefit cost in the pension and other postretirement benefit plans footnote as the basis for the retrospective application.

In August 2017, the FASB issued ASU 2017-12, “Derivatives and Hedging (Topic 815) – Targeted Improvements to Accounting for Hedging Activities,” (“ASU 2017-12”). The standard: (a) expands and refines hedge accounting for both financial and non-financial risk components, (b) aligns the recognition and presentation of the effects of hedging instruments and hedge items in the financial statements, and (c) includes certain targeted improvements to ease the application of current guidance related to the assessment of hedge effectiveness. The guidance is effective for public business entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Company adopted ASU 2017-12 on January 1, 2019. There was not a material impact to the Company’s Consolidated Financial Statements upon adoption.

In February 2018, the FASB issued ASU 2018-02 “Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.” The standard gives entities the option to reclassify to retained earnings tax effects related to items in accumulated other comprehensive income that were impacted by the 2017 Tax Cuts and Jobs Act. The guidance is effective for all entities for fiscal years beginning after December 31, 2018 and interim periods within those fiscal years. Early adoption is permitted. The guidance may be applied in the period of adoption or retrospectively to each impacted period. The Company adopted this standard on January 1, 2018 and applied it to the period of adoption. The impact of the adoption results in a \$0.8 million reclassification from accumulated other comprehensive income to retained earnings, which is offset by an equivalent valuation allowance, the net impact is zero.

In August 2018, the FASB issued ASU No. 2018-15, “Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract,” (“ASU 2018-15”). This standard requires entities that are customers in cloud computing arrangements to defer implementation costs if they would be capitalized by the entity in software licensing arrangements under the internal-use software guidance. The guidance may be applied retrospectively or prospectively to implementation costs incurred after the date of adoption. ASU 2018-15 is effective for annual and interim reporting periods beginning after December 15, 2019, with early adoption permitted. The Company prospectively adopted this standard in the fourth quarter of 2018.

In June 2016, the FASB issued ASU 2016-13, “Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments,” (“ASU 2016-13”). ASU 2016-13 requires entities to use a new forward-looking, expected loss model to estimate credit losses. It also requires additional disclosure relating to the credit quality of trade and other receivables, including information relating to management’s estimate of credit allowances. The Company will adopt ASU 2016-13 using the modified retrospective approach on its January 1, 2020 effective date and is currently assessing the quantitative impacts on the Company’s Consolidated Financial Statements.

3. REVENUE RECOGNITION

Impact of adoption

The Company adopted ASC 606 on January 1, 2018 using the modified retrospective method. The Company elected the practical expedient to apply the new guidance only to contracts that were not substantially complete at the adoption date. The cumulative effect of adopting ASC 606 resulted in a contract asset of \$1.6 million, of which \$1.2 million was recorded in prepayments and other current assets and \$0.4 million was recorded in other assets, a contract liability of \$0.2 million recorded in advance payments and deposits, contract acquisition costs of \$1.5 million of which \$0.9 million was recorded in prepayments and other current assets and \$0.6 million was recorded in other assets, and a deferred tax liability of \$0.3 million with the offset of \$1.5 million recorded to retained earnings and \$1.1 million recorded to minority interest.

Contract Assets and Liabilities

Contract assets and liabilities consisted of the following (amounts in thousands):

	December 31, 2019	December 31, 2018	\$ Change	% Change
Contract asset – current	\$ 2,413	\$ 1,900	\$ 513	27 %
Contract asset – noncurrent	905	802	103	13 %
Contract liability- current	(15,044)	(13,787)	(1,257)	(9)%
Contract liability- noncurrent	(5,450)	—	(5,450)	100 %
Net contract liability	<u>\$ (17,176)</u>	<u>\$ (11,085)</u>	<u>\$ (6,091)</u>	(55)%

The contract asset-current is included in prepayments and other current assets, the contract asset-noncurrent is included in other assets, the contract liability-current is included in advance payments and deposits, and the contract liability-noncurrent is included in other liabilities on the Company's balance sheet. The increase in the Company's net contract liability was due to the timing of customer prepayments and contract billings, and the FirstNet Transaction. During the year ended December 31, 2019, the Company recognized revenue of \$12.1 million related to its December 31, 2018 contract liability and amortized \$1.8 million of the December 31, 2018 contract asset into revenue. The Company did not recognize any revenue in the years ended December 31, 2019 and 2018 related to performance obligations that were satisfied or partially satisfied in previous periods.

Contract Acquisition Costs

The December 31, 2019 balance sheet includes current contract acquisition costs of \$1.7 million in prepayments and other current assets and long term contract acquisition costs of \$1.1 million in other assets. The December 31, 2018 balance sheet includes current contract acquisition costs of \$1.4 million in prepayments and other current assets and long term contract acquisition costs of \$1.0 million in other assets. During the years ended December 31, 2019 and 2018 the Company amortized \$1.8 million and \$1.6 million, respectively, of contract acquisition cost.

Remaining Performance Obligations

Remaining performance obligations represent the transaction price allocated to unsatisfied performance obligations of certain multiyear retail wireless contracts, which include a promotional discount, and the Company's construction and service contracts. The transaction price allocated to unsatisfied performance obligations was \$241 million and \$12 million at December 31, 2019 and December 31, 2018, respectively. The Company expects to satisfy the majority of the remaining performance obligations and recognize the transaction price within 24 months and the remainder thereafter.

The Company has certain retail, wholesale, and renewable energy contracts where transaction price is allocated to remaining performance obligations. However, the Company omits these contracts from the disclosure by applying the right to invoice, one year or less, and wholly unsatisfied performance obligation practical expedients.

Disaggregation

The Company's revenue is presented on a disaggregated basis in Note 17 based on an evaluation of disclosures outside the financial statements, information regularly reviewed by the chief operating decision maker for evaluating the financial performance of operating segments and other information that is used for performance evaluation and resource allocations. This includes revenue from wireline, wireless and renewable energy, as well as domestic versus international wireline and wireless services. This disaggregation of revenue depicts how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

4. LEASES

Impact of Adoption

The Company adopted ASC 842 on January 1, 2019, utilizing the optional transition method with a cumulative adjustment on the date of adoption. Under this approach, the guidance was applied to leases that had commenced as of January 1, 2019 with a cumulative effect adjustment as of that date and prior periods were not adjusted. Upon adoption, the Company recognized an operating lease right-of-use (“ROU”) asset of \$70.8 million, a short-term lease liability of \$8.2 million, and a long-term lease liability of \$61.2 million. The adoption had no impact on retained earnings or other components of equity.

The Company elected the package of practical expedients. Under the package of practical expedients, for existing leases, the Company does not reassess: i) whether the arrangement contains a lease; ii) lease classification and; iii) initial direct costs.

The Company has operating and financing leases for towers, land, corporate offices, retail facilities, and data transport capacity. The lease terms are generally between three and ten years, some of which include additional renewal options.

Supplemental lease information

The components of lease expense were as follows (in thousands):

	<u>Year ended December 31, 2019</u>
Operating lease cost:	
Operating lease cost	\$ 15,194
Short-term lease cost	3,426
Variable lease cost	2,803
Total operating lease cost	<u>\$ 21,423</u>
Finance lease cost:	
Amortization of right-of-use asset	\$ 2,318
Variable costs	964
Total finance lease cost	<u>\$ 3,282</u>

During the year ended December 31, 2019, the Company paid \$15.1 million related to lease liabilities. Also during the year ended December 31, 2019, the Company recorded \$9.7 million of lease liabilities arising from right-of-use assets. At December 31, 2019, finance leases with a cost of \$25.9 million and accumulated amortization of \$9.4 million were included in property, plant and equipment.

The weighted average remaining lease terms and discount rates as of December 31, 2019 are noted in the table below:

Weighted-average remaining lease term	
Operating leases	6.5 years
Financing leases	11.7 years
Weighted-average discount rate	
Operating leases	5.0%
Financing leases	n/a

Maturities of lease liabilities as of December 31, 2019 were as follows (in thousands):

	Operating Leases
2020	\$ 14,526
2021	13,714
2022	12,787
2023	10,713
2024	9,671
Thereafter	18,355
Total lease payments	79,766
Less imputed interest	(12,195)
Total	<u>\$ 67,571</u>

Maturities of lease liabilities as of December 31, 2018 were as follows (in thousands):

	Operating Leases
2019	\$ 11,801
2020	12,650
2021	11,491
2022	10,713
2023	9,990
Thereafter	27,325
Total lease payments	<u>\$ 83,970</u>

As of December 31, 2019, the Company did not have any material operating or finance leases that have not yet commenced.

5. IMPACT OF HURRICANES IRMA AND MARIA

During September 2017, the US Virgin Islands' economy, the Company's customer base and its operations were all severely impacted by Hurricanes Irma and Maria (collectively, the "Hurricanes"). The Company's wireless and wireline networks and commercial operations were severely damaged by these storms and as a result of the significant damage to the wireline network and the lack of consistent commercial power in the territory, the Company was unable to provide most of its wireline services, which comprise the majority of our revenue in this business, from mid-September 2017 and through most of 2018. During the year ended December 31, 2017, the Company recorded a net pre-tax loss within the Company's consolidated statement of operations of \$4.0 million related to the impact of the Hurricanes. This loss consisted of \$35.4 million for the write off of damaged assets, net of insurance recoveries of \$34.6 million which were received in February 2018. This loss also included \$3.2 million of additional operating expenses that were specifically incurred to address the impact of the Hurricanes.

During the year ended December 31, 2018, the Company received \$15.5 million in additional funding from the Federal Communications Commission's ("FCC") Universal Service Fund ("USF") to further subsidize its operations in the US Virgin Islands that was recorded as revenue. This level of additional funding is not expected to continue in future periods.

During the years ended December 31, 2019, 2018 and 2017, the Company spent \$0.1 million, \$80.2 million and \$8.6 million, respectively, for network restoration and resiliency enhancements that allowed the reconnection of a significant majority of affected households and businesses. The Company's wireline network restoration work is complete, however, whether the Company's revenue recovers to pre-Hurricane levels will be impacted by population movements, the degree of negative economic impact of the Hurricanes on the local economy, and the Company's subscriber base's future appetite for wireline services.

6. DISPOSITIONS AND PLATFORM INVESTMENTS

Renewable Energy

Disposition

On November 6, 2018, the Company completed the sale of its US solar business that owns and manages distributed generation solar power projects operated under the Ahana name in Massachusetts, California and New Jersey (the “US Solar Operations”) to CleanCapital Holdco 4, LLC. The transaction has a total value of approximately \$122.6 million, which includes a cash purchase price of \$65.3 million and the assumption of approximately \$57.3 million in debt (the “US Solar Transaction”). Approximately \$6.5 million of the purchase price was held in escrow for a period of twelve months after the closing to secure certain indemnification obligations. The Company received the escrow in November 2019. The table below identifies the assets and liabilities transferred (amounts in thousands):

Consideration Received	\$ 65,286
Assets and liabilities disposed	
Cash	3,049
Accounts receivable	1,248
Prepayments and other current assets	801
Property, plant and equipment	94,678
Restricted cash	8,407
Other assets	38
Current portion of long-term debt	(6,992)
Accounts payable and accrued liabilities	(938)
Accrued taxes	586
Long-term debt, excluding current portion	(48,038)
Net assets disposed	<u>52,839</u>
Consideration less net assets disposed	12,447
Transaction costs	<u>(2,133)</u>
Gain	<u>\$ 10,314</u>

The Company allocated \$1.1 million of the gain to non-controlling interests within the consolidated income statement. During the year ended December 31, 2018, the Company incurred \$2.1 million of transaction related charges pertaining to legal, accounting and consulting services associated with the transaction. The US Solar Operations do not qualify as a discontinued operation because the disposition does not represent a strategic shift that has a major effect on the Company’s operations and financial results. As a result, the historical results are included in continuing operations.

US Telecom

Disposition

On March 8, 2017, the Company completed the sale of its integrated voice and data communications and wholesale transport businesses in New England and New York for consideration of \$25.9 million (the “Sovernet Transaction”). The consideration included \$2.0 million of contingent consideration which represented the fair value of payments related to certain operational milestones of the disposed assets. The value of the contingent consideration was

up to \$4.0 million based on whether or not the operational milestones are achieved by December 31, 2017. The table below identifies the assets and liabilities transferred (amounts in thousands):

Consideration Received	<u>\$ 25,926</u>
Assets and liabilities disposed	
Cash	1,821
Accounts receivable	1,696
Inventory	639
Prepayments and other current assets	1,034
Property, plant and equipment	25,294
Other assets	288
Accounts payable and accrued liabilities	(1,718)
Advance payments and deposits	<u>(1,897)</u>
Net assets disposed	<u>27,157</u>
 Consideration less net assets disposed	 (1,231)
 Transaction costs	 <u>(1,156)</u>
 Loss	 <u>\$ (2,387)</u>

Prior to the closing of the transaction, the Company repurchased non-controlling interests from minority shareholders in a Sovernet subsidiary for \$0.7 million. The non-controlling interest had a book value of zero. Additionally, the Company recorded a loss on deconsolidation of \$0.5 million.

The Company incurred \$1.2 million of transaction related charges pertaining to legal, accounting and consulting services associated with the transaction, of which \$0.6 million were incurred during the year ended December 31, 2017 and \$0.6 million were incurred during the year ended December 31, 2016. Since the Sovernet disposition does not relate to a strategic shift in its operations, the historic results and financial position of the operations are presented within continuing operations.

Subsequent to close of the Sovernet Transaction, management continually monitored and assessed the probability of earning the contingent consideration. In September 2017, based on progress toward achieving the operational milestones, and the December 31, 2017 deadline under which to do so, management determined that earning the contingent consideration was unlikely. As a result, the fair value of the contingent consideration was reduced to zero. The amount was recorded as a loss on disposition of assets within operating income during the year ended December 31, 2017. The disposed assets did not achieve the operational milestones by the December 31 deadline.

International Telecom

Disposition

On August 18, 2017, the Company completed the sale of the Viya cable operations located in the British Virgin Islands. The company did not recognize a gain or loss on the transaction.

On January 3, 2017, the Company completed the sale of the Viya cable operations located in St. Maarten for \$4.8 million and recognized a gain of \$0.1 million on the transaction.

The results of the British Virgin Islands and St. Maarten operations are not material to the Company's historical results of operations. Since the dispositions do not relate to a strategic shift in its operations, the historical results and financial position of the operations are presented within continuing operations.

US Telecom

Platform Investments

During the second quarter of 2018, we invested in a new platform, based in the United States, to develop in-building wireless network technology that enables building owners to capitalize on the growing demand for better indoor wireless solutions. Also during the second quarter of 2018, we provided funding for another new platform, based in the United States, seeking to "build to suit" large scale fiber networks to serve the telecommunications and content provider industries in need of lower latency long haul fiber transit services.

International Telecom

Platform Investments

In 2017, we completed our investment in a technology solutions business based in Bermuda that provides a variety of cloud-based managed services and information technology solutions for enterprise hosted software applications.

7. ACCOUNTS RECEIVABLE:

As of December 31, 2019 and 2018, accounts receivable consist of the following (in thousands):

	<u>2019</u>	<u>2018</u>
Retail	\$ 13,659	\$ 13,785
Wholesale	34,969	40,982
Accounts receivable	48,628	54,767
Less: allowance for doubtful accounts	<u>(12,724)</u>	<u>(16,462)</u>
Total accounts receivable, net	<u>\$ 35,904</u>	<u>\$ 38,305</u>

8. FIXED ASSETS:

As of December 31, 2019 and 2018, property, plant and equipment consisted of the following (in thousands):

	<u>Useful Life (in Years)</u>	<u>2019</u>	<u>2018</u>
Telecommunications equipment and towers.	5 -15	\$ 979,028	\$ 914,275
Solar assets	20-23	40,043	38,692
Office and computer equipment	3 -10	82,630	77,085
Buildings	15-39	48,565	48,900
Transportation vehicles	3 -10	13,424	15,039
	Shorter of useful		
Leasehold improvements	life or lease term	2,316	2,033
Land	—	15,503	14,728
Furniture and fixtures	5 -10	<u>8,866</u>	<u>9,200</u>
Total property, plant and equipment		1,190,375	1,119,952
Construction in progress		<u>47,180</u>	<u>68,964</u>
Total property, plant and equipment		1,237,555	1,188,916
Less: Accumulated depreciation		<u>(631,974)</u>	<u>(562,064)</u>
Net fixed assets		<u>\$ 605,581</u>	<u>\$ 626,852</u>

Depreciation and amortization of fixed assets, using the straight-line method over the assets' estimated useful life, for the years ended December 31, 2019, 2018 and 2017 was \$86.9 million, \$83.0 million and \$83.3 million, respectively. Included within telecommunication equipment and towers are certain right to use assets under capital lease with a cost of \$25.9 million and \$27.7 million and net book value of and \$16.5 million and \$20.2 million, as of December 31, 2019 and 2018, respectively. The 2018 amounts above include a reclassification of \$38.6 million from construction in progress to solar assets.

For the years ended December 31, 2019 and 2018, the Company received capital expenditure grants of \$3.1 million and \$5.4 million, respectively.

The Company had \$3.6 million and \$1.2 million of capitalized implementation costs at December 31, 2019 and 2018, respectively, and \$0.2 million of implementation costs were amortized during the year ended December 31, 2019.

In 2018, the US Telecom segment sold approximately 100 cell sites for \$24.0 million. The disposed assets had a book value of \$8.8 million and the Company recorded a gain of \$15.2 million on the transaction.

9. GOODWILL AND INTANGIBLE ASSETS

Goodwill

The Company tests goodwill for impairment at each of its reporting units on an annual basis, which has been determined to be as of October 1st. The Company has historically completed our goodwill impairment assessment of its reporting units as of December 31st. To better align with the Company's annual internal planning and budgeting process, the Company changed its annual goodwill impairment assessment for all reporting units to be as of October 1st. The Company's reporting units are one level below its operating segments. 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's qualitative goodwill impairment test includes, but is not limited to, assessing macroeconomic conditions, industry and market considerations, technological changes and trends, and overall financial performance of the reporting unit. The Company's quantitative test for goodwill impairment involves a comparison of the estimated fair value of a reporting unit to its carrying amount, including goodwill. The Company determines the fair value of a reporting unit using either a market or income approach. The market approach uses prices generated by market transactions involving comparable businesses. The income approach is based on a discounted cash flow ("DCF") model. The DCF model requires the exercise of significant judgment, including judgments and assumptions about appropriate discount rates and revenue growth. 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 revenue growth and cash flows employed in the DCF model were derived from internal earnings and forecasts and external market forecasts.

During the fourth quarter of 2019, as part of the Company's strategic assessment of its reporting units and the strategic alternatives available in its operating markets, the Company recorded a goodwill impairment of \$3.3 million in the Renewable Energy segment. The impairment assessment was based on a market approach. The Company concluded that the fair value of the reporting unit exceeded its carrying amount by an amount in excess of the reporting unit's goodwill. As a result, a goodwill impairment was recorded to reduce the value of the goodwill to zero.

For its annual impairment analysis of its remaining reporting units, as of October 1, 2019, the Company performed a quantitative analysis using a DCF model and determined that the carrying amounts of its reporting units, including goodwill, did not exceed their respective fair values and therefore, no additional impairment existed. For all reporting units, except for Viya, there was significant headroom in the impairment analysis. Based on the results of this test for Viya, the fair value of this reporting unit exceeded its carrying value by approximately 12%, and accordingly a relatively small change in the underlying assumptions, including the revenue growth and the discount rate, would likely cause a change in the results of the impairment assessment and, as such, could result in an impairment of the goodwill related to Viya, for which the carrying amount is \$20.6 million.

The Company's impairment testing for 2018 and 2017 concluded that no impairments were necessary for any reporting units.

The table below discloses goodwill recorded in each of the Company's segments and accumulated impairment changes (in thousands):

	International Telecom	US Telecom	Renewable Energy	Consolidated
Balance at December 31, 2017.....	\$ 24,326	\$ 35,268	\$ 3,279	\$ 63,970
Acquisitions	—	—	—	—
Balance at December 31, 2018.....	24,326	35,268	3,279	63,970
Impairment	—	—	(3,279)	(3,279)
Balance at December 31, 2019.....	<u>\$ 24,326</u>	<u>\$ 35,268</u>	<u>\$ —</u>	<u>\$ 60,691</u>

	International Telecom	US Telecom	Renewable Energy	Consolidated
Balance at December 31, 2018				
Gross	\$ 24,326	\$ 35,268	\$ 3,279	\$ 63,970
Accumulated Impairment.....	—	—	—	—
Net	<u>24,326</u>	<u>35,268</u>	<u>3,279</u>	<u>63,970</u>
Balance at December 31, 2019				
Gross	24,326	35,268	3,279	63,970
Accumulated Impairment.....	—	—	(3,279)	(3,279)
Net	<u>\$ 24,326</u>	<u>\$ 35,268</u>	<u>\$ —</u>	<u>\$ 60,691</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 October 1st. The Company has historically completed our license impairment assessment as of December 31st. To better align with the Company's annual internal planning and budgeting process, the Company changed its annual license impairment assessment to be as of October 1st. 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's qualitative impairment test includes, but is not limited to, assessing macroeconomic conditions, industry and market considerations, technological changes and trends, overall financial performance, and legal and regulatory changes. The Company's quantitative test for impairment involves a comparison of the estimated fair value of an asset to its carrying amount. The Company determines the fair value using either a market or income approach. The market approach uses prices generated by market transactions involving comparable assets. The income approach uses a DCF model. The DCF requires the exercise of significant judgement including Level 3 valuation inputs.

The Company performed qualitative assessments for its annual impairment assessment of its indefinite lived telecommunications licenses for 2019 and determined that there were no indications of potential impairments. The Company's impairment testing for 2018 and 2017 also determined that no impairments were required for any telecommunication licenses.

The changes in the carrying amount of the Company's telecommunications licenses, by operating segment, were as follows (in thousands):

	International Telecom	US Telecom	Consolidated
Balance at December 31, 2017.....	\$ 23,347	\$ 72,605	\$ 95,952
Acquired licenses	—	485	485
Dispositions	—	(2,751)	(2,751)
Balance at December 31, 2018.....	\$ 23,347	\$ 70,339	\$ 93,686
Acquired licenses	—	—	—
Dispositions	—	—	—
Balance at December 31, 2019.....	<u>\$ 23,347</u>	<u>\$ 70,339</u>	<u>\$ 93,686</u>

The licenses acquired during 2018 are expected to be available for use into perpetuity.

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 \$1.8 million, \$2.4 million, and \$3.2 million of amortization related to customer relationships during year ended December 31, 2019, 2018, and 2017, respectfully.

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

	Future Amortization
2020	\$ 1,528
2021	1,300
2022	1,143
2023	827
2024	576
Thereafter.....	2,067
Total	<u>\$ 7,441</u>

Other Intangible Assets

The Company has other intangible assets of \$4.5 million consisting of \$3.0 million of franchise rights and \$1.5 million of tradenames in its International Telecom segment. These assets are recorded in other assets on the Company's balance sheet as of December 31, 2019.

10. LONG-TERM DEBT

On April 10, 2019, the Company entered into a Third Amendment and Confirmation Agreement (the "2019 Credit Facility"), with CoBank, ACB and the same syndicate of lenders as the 2014 Credit Facility, as defined below. The 2019 Credit Facility provides for a \$200 million revolving credit facility that includes (i) up to \$75 million for standby or trade letters of credit and (ii) up to \$10 million under a swingline sub-facility. Approximately \$8.0 million of performance and standby letters of credit have been issued and remain outstanding and undrawn as of December 31, 2019. The 2019 Credit Facility matures on April 10, 2024.

Amounts borrowed under the 2019 Credit Facility bear interest at a rate equal to, at the Company's option, either (i) the LIBOR (as defined in the 2019 Credit Facility) plus an applicable margin ranging between 1.25% to 2.25% or (ii) a base rate plus an applicable margin ranging from 0.25% to 1.25%. Swingline loans 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

LIBOR for an interest period of one month and (y) the LIBOR for an interest period of one week; (ii) the Federal Funds Effective Rate (as defined in the 2019 Credit Facility) plus 0.50% per annum; and (iii) the Prime Rate (as defined in the 2019 Credit Facility). The applicable margin is determined based on the Total Net Leverage Ratio (as defined in the 2019 Credit Facility). Under the terms of the 2019 Credit Facility, the Company must also pay a fee ranging from 0.150% to 0.375% of the average daily unused portion of the 2019 Credit Facility over each calendar quarter.

The 2019 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 limiting additional indebtedness, liens, guaranties, mergers and consolidations, substantial asset sales, investments and loans, sale and leasebacks, transactions with affiliates and fundamental changes. The Company's investments in "unrestricted" subsidiaries and certain dividend payments to the Company's stockholders are not limited unless the Total Net Leverage Ratio is equal to or greater than 1.75 to 1.0. The Total Net Leverage Ratio is measured each fiscal quarter and is required to be less than or equal to 2.75 to 1.0. In the event of a Qualifying Acquisition (as defined in the 2019 Credit Facility), the Total Net Leverage Ratio increases to 3.25 to 1.0 for the subsequent three fiscal quarters.

The 2019 Credit Facility also provides for the incurrence by the Company of incremental term loan facilities, when combined with increases to revolving loan commitments, in an aggregate amount not to exceed \$200 million (the "Accordion"). Amounts borrowed under the Accordion are also subject to proforma compliance with a net leverage ratio financial covenant.

As of December 31, 2019, the Company was in compliance with all of the financial covenants, had no outstanding borrowings and, net of the \$8.0 million of outstanding performance letters of credit, had \$192.0 million of availability under the 2019 Credit Facility.

Prior to entering into the 2019 Credit Facility, the Company had a \$225 million revolving credit facility (the "2014 Credit Facility") with CoBank, ACB and a syndicate of other lenders that provided for (i) up to \$10 million for standby or trade letters of credit, (ii) up to \$25 million for letters of credit that were necessary or desirable to qualify for disbursements from the FCC's mobility fund and (iii) up to \$10 million under a swingline sub-facility. The 2014 Credit Facility had a maturity date of December 31, 2019. The 2014 Credit Facility also provided for the incurrence by the Company of incremental term loan facilities, when combined with increases to revolving loan commitments, in an aggregate amount not to exceed \$200 million.

Amounts borrowed under the 2014 Credit Facility bore interest at a rate equal to, at the Company's option, either (i) the 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 bore interest at the base rate plus the applicable margin for base rate loans. The base rate was 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 2014 Credit Facility) plus 0.50% per annum; and (iii) the prime rate (as defined in the 2014 Credit Facility). The applicable margin was determined based on the ratio (as further defined in the 2014 Credit Facility) of the Company's indebtedness to EBITDA. Under the terms of the 2014 Credit Facility, the Company also paid a fee ranging from 0.175% to 0.250% of the average daily unused portion of the 2014 Credit Facility over each calendar quarter.

The 2014 Credit Facility contained customary representations, warranties and covenants, including a financial covenant that imposed a maximum ratio of indebtedness to EBITDA as well as covenants limiting additional indebtedness, liens, guaranties, mergers and consolidations, substantial asset sales, investments and loans, sale and leasebacks, transactions with affiliates and fundamental changes. The Company's investment in "unrestricted" subsidiaries plus the aggregate amount of certain dividend payments to the Company's stockholders was limited to \$400 million. Amounts borrowed under the Accordion were also subject to pro-forma compliance with a net leverage ratio financial covenant.

Viya Debt

The Company, and certain of its subsidiaries, have entered into a \$60.0 million loan agreement (the "Viya Debt") with Rural Telephone Finance Cooperative ("RTFC"). The Viya Debt agreement contains customary

representations, warranties and affirmative and negative covenants (including limitations on additional debt, guaranties, sale of assets and liens) and a financial covenant that limits the maximum ratio of indebtedness to annual operating cash flow to 3.5 to 1.0 (the “Net Leverage Ratio”). This covenant is tested on an annual basis at the end of each fiscal year. Interest is paid quarterly at a fixed rate of 4.0% and principal repayment is not required until maturity on July 1, 2026. Prepayment of the Viya Debt may be subject to a fee under certain circumstances. The debt is secured by certain assets of the Company’s Viya subsidiaries and is guaranteed by the Company. With RTFC’s consent, the Company funded the restoration of Viya’s network, following the Hurricanes, through an intercompany loan arrangement with a \$75.0 million limit. The Company was not in compliance with the Net Leverage Ratio covenant for the year ending December 31, 2019 and received a waiver from the RTFC on February 26, 2020.

The Company paid a fee of \$0.9 million in 2016 to lock the interest rate at 4% per annum over the term of the Viya Debt. The fee was recorded as a reduction to the Viya Debt carrying amount and is being amortized over the life of the loan.

As of December 31, 2019, \$60.0 million of the Viya Debt remained outstanding and \$0.6 million of the rate lock fee was unamortized.

One Communications Debt

The Company has an outstanding loan from HSBC Bank Bermuda Limited (the “One Communications Debt”) which is scheduled to mature on May 22, 2022 and bears interest at the one-month LIBOR plus a margin ranging between 2.5% to 2.75% paid quarterly.

The One Communications Debt contains customary representations, warranties and affirmative and negative covenants (including limitations on additional debt, guaranties, sale of assets and liens) and financial covenants, tested annually, that limit the ratio of tangible net worth to long term debt and total net debt to EBITDA and require a minimum debt service coverage ratio (as defined in the One Communications Debt agreement). The Company was in compliance with its covenants as of December 31, 2019.

As a condition of the One Communications Debt, the Company was required to enter into a hedging arrangement with a notional amount equal to at least 30% of the outstanding loan balance and a term corresponding to the term of the One Communications Debt. As such, the Company entered into an amortizing interest rate swap that has been designated as a cash flow hedge, which had an original notional amount of \$11.0 million, has an interest rate of 1.874%, and expires in March 2022. As of December 31, 2019, the swap has an unamortized notional amount of \$8.5 million.

The Company capitalized \$0.3 million of fees associated with the One Communications Debt which are being amortized over the life of the debt and are recorded as a reduction to the debt carrying amount.

As of December 31, 2019, \$27.2 million of the One Communications Debt was outstanding and \$0.2 million of the capitalized fees remained unamortized.

Ahana Debt

On November 6, 2018, the Company consummated the US Solar Transaction which included the transfer of the Ahana Debt to the purchaser. Prior to the US Solar Transaction, the Company’s US solar operations issued \$20.6 million in aggregate principal amount of 4.427% senior notes due in 2029 (the “Series A Notes”) and \$45.2 million in aggregate principal amount of 5.327% senior notes due in 2031 (the “Series B Notes”). These operations also issued a note to Public Service Electricity and Gas which bore interest at 11.3% due in 2027 (the “PSE&G Loan” and collectively with the Series A Notes and Series B Notes, the “Ahana Debt”).

For the Series A Notes and Series B Notes, interest and principal were payable semi-annually, until their respective maturity dates, and were secured by certain US solar assets and guaranteed by certain subsidiaries.

Repayment of the PSE&G Loan could have been made in either cash or SRECs at the Company's discretion, with the value of the SRECs being fixed at the time of the loan's closing. Prior to the US Solar Transaction, the Company made all repayments of the PSE&G Loan using SRECs.

The Company capitalized \$2.8 million of fees associated with the Ahana Debt which were recorded as a reduction to the debt carrying amount and amortized over the life of the notes.

11. GOVERNMENT GRANTS

Universal Service Fund

The Federal Universal Service Fund ("USF") is a subsidy program managed by the FCC. USF funds are disbursed to telecommunication providers through four programs: the High Cost Program; Low Income Program; Schools and Libraries Program ("E-Rate"); and Rural Health Care Program. The Company participates in the High Cost Program, Low Income Program, Schools and Libraries Programs, and Rural Health Care Support programs as further described below. All of these funding programs are subject to certain operational and reporting compliance requirements. The Company believes it is in compliance with all applicable requirements.

The FCC's Mobility Funds and Connect America Funds are administered through the High Cost Program. The High Cost Support program subsidizes telecommunications services in rural and remote areas. 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.

The Company received \$21.1 million of Phase I Mobility Fund support to its wholesale wireless business (the "Mobility Funds") to be used to expand voice and broadband networks in certain geographic areas in order to offer either 3G or 4G service. Of these funds, \$7.2 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 offset operating expenses from inception of the program through part of the third quarter of 2018. The Mobility Funds projects and their operating results are included within the Company's US Telecom segment. As part of the receipt of the Mobility Funds, the Company committed to comply with certain additional FCC construction and other requirements. If the requirements are not met the funds may be subject to claw back provisions. The Company currently expects to comply with all applicable requirements related to these funds.

During the years ended December 31, 2019, 2018 and 2017, the Company recorded \$16.4 million, \$16.5 million, and \$16.5 million, respectively, of revenue from High Cost Support in the Company's International Telecom segment for its US Virgin Islands operations. Also, during each year ended December 31, 2019, 2018 and 2017, the Company recorded \$1.2 million of High Cost Support revenue in its US Telecom segment. The Company is subject to certain operational, reporting and construction requirements as a result of this funding and the Company believes that it is in compliance with all of these requirements. In addition, the Company recorded revenue of \$15.5 million during the year ended December 31, 2018, from additional funding authorized by the FCC following the Hurricanes.

In August 2018, the Company was awarded \$79.9 million over 10 years under the Connect America Fund Phase II Auction. The funding began in the second quarter of 2019 and the Company is required to provide fixed broadband and voice services to certain eligible areas in the United States. The Company is subject to operational and reporting requirements under the program and the Company expects to incur additional capital expenditures to comply with these requirements. The Company determined the award is a revenue grant, and as a result the Company will record the funding as revenue upon receipt. The Company recorded \$5.3 million of revenue in the year ended December 31, 2019 from the Connect America Fund Phase II program.

The E-Rate program provides discounted telecommunication access to eligible schools and libraries. The E-Rate program (i) awards special construction funding to build network connectivity for eligible participants, and (ii) pays for discounted recurring charges for eligible broadband services. The special construction funding is used to reimburse construction costs and is distributed upon completion of a project. As of December 31, 2019, the Company was awarded

approximately \$15.8 million of E-Rate grants with construction completion obligations beginning in June 2020. Once these projects are constructed the Company is obligated to provide service to the E-Rate program participants. The Company receives funds upon construction completion and is in various stages of constructing the networks. During 2019, the Company received \$5.4 million of which \$3.1 million was a reimbursement of capital expenditures and \$2.3 million offset operating activities. The Company expects to meet all requirements associated with these grants.

The Company also receives funding to provide discounted telecommunication services to eligible customers under the E-Rate, Lifeline, and Rural Health Care Support Programs. During the years ended December 31, 2019, 2018, and 2017 the Company recorded revenue of \$6.1 million, \$8.2 million, and \$10.2 million, respectively, in the aggregate from these programs. The Company is subject to certain operational and reporting requirements under the above mentioned programs and it believes that it is in compliance with all of these requirements.

Tribal Bidding Credit

As part of the broadcast television spectrum incentive auction, the FCC implemented a tribal lands bidding credit to encourage deployment of wireless services utilizing 600 MHz spectrum on the lands of federally recognized tribes. The Company received a bidding credit of \$7.4 million under this program in 2018. A portion of these funds will be used to offset network capital costs and a portion will be used to offset the costs of supporting the networks. The Company's current estimate is that it will use \$5.4 million to offset capital costs and, consequently, reduce future depreciation expense and \$2.0 million to offset the cost of supporting the network which will reduce future operating expense. The credits are subject to certain requirements, including deploying service by January 2021 and meeting minimum coverage metrics. If the requirements are not met the funds may be subject to claw back provisions. The Company currently expects to comply with all applicable requirements related to these funds.

12. EQUITY

Common Stock

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

Treasury Stock

On September 19, 2016, the Company's Board of Directors authorized the repurchase of up to \$50.0 million of its common stock, from time to time, on the open market or in privately negotiated transactions (the "2016 Repurchase Plan"). As of December 31, 2019, the Company has \$37.5 million available to be repurchased under the 2016 Repurchase Plan.

During the years ended December 31, 2019, 2018 and 2017, the Company repurchased the following shares under the 2016 Repurchase Plan:

<u>Year ended December 31,</u>	<u>Shares Repurchased</u>	<u>Aggregate Cost (in thousands)</u>	<u>Average Repurchase Price</u>
2019.....	3,104	\$ 162	\$ 52.37
2018.....	30,427	1,577	51.82
2017.....	201,932	10,636	52.67

During the years ended December 31, 2019, 2018 and 2017, 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:

<u>Year ended December 31,</u>	<u>Shares Repurchased</u>	<u>Aggregate Cost (in thousands)</u>	<u>Average Repurchase Price</u>
2019.....	42,703	\$ 2,419	\$ 56.65
2018.....	141,180	10,859	76.76
2017.....	32,814	2,348	72.50

Stock-Based Compensation

The Company reserved 2,000,000 shares for the grant of stock options, restricted stock awards, restricted stock units, stock equivalents and awards of shares of common stock that are not subject to restrictions or forfeiture. As of December 31, 2019, the Company has approximately 723,000 shares available for grants.

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, 2019 and 2018:

<u>Year Ended December 31, 2019</u>				
	<u>Number of Options</u>	<u>Weighted Avg. Exercise Price</u>	<u>Weighted Average Remaining Contractual Term (Years)</u>	<u>Aggregate Intrinsic Value</u>
Outstanding at January 1, 2019	42,000	\$ 48.61		
Granted.....	—	—		
Forfeited.....	(7,500)	52.97		
Expired.....	(2,500)	52.97		
Exercised	(17,000)	45.39		
Outstanding at December 31, 2019	15,000	49.34	3.2	\$ 170,900
Vested and expected to vest at December 31, 2019	15,000	49.34	3.2	\$ 170,900
Exercisable at December 31, 2019.....	15,000	49.34	3.2	\$ 170,900

<u>Year Ended December 31, 2018</u>				
	<u>Number of Options</u>	<u>Weighted Avg. Exercise Price</u>	<u>Weighted Average Remaining Contractual Term (Years)</u>	<u>Aggregate Intrinsic Value</u>
Outstanding at January 1, 2018	200,021	\$ 41.76		
Granted.....	—	—		
Exercised	(158,021)	39.95		
Outstanding at December 31, 2018	42,000	48.61	4.1	\$ 823,515
Vested and expected to vest at December 31, 2018	42,000	48.61	4.1	\$ 962,840
Exercisable at December 31, 2018.....	33,250	46.76	3.0	\$ 823,515

The following table summarizes information relating to options granted and exercised during the years ended December 31, 2019, 2018 and 2017 (in thousands, except fair value of options granted data):

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Weighted-average fair value of options granted	\$ —	\$ —	\$ 13.77
Aggregate intrinsic value of options exercised	229	5,927	936
Cash proceeds received upon exercise of options	—	72	1,030
Excess tax benefits from share-based compensation	—	—	—

The aggregate intrinsic value represents the total pre-tax intrinsic value (the difference between the Company's 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 the Company's common stock.

The estimated fair value of the options granted during the year ended December 31, 2017 was determined using a Black Scholes option pricing model, based on the following weighted average assumptions:

	<u>2017</u>
Risk-free interest rate	1.79 %
Expected dividend yield	1.28 %
Expected life	4.00 years
Expected volatility	34.01 %

The Company did not grant any options during the years ended December 31, 2019 or 2018. The Company did not recognize any compensation expense related to granted options in 2019 and recognized \$0.1 of stock compensation expense during 2018 and 2017.

Restricted Stock

Restricted stock issued under the 2008 Equity Investment Plan vests over four years.

The following table summarizes restricted stock activity during the year ended December 31, 2019:

	<u>Shares</u>	<u>Weighted Avg. Fair Value</u>
Unvested as of January 1, 2019	200,653	\$ 65.21
Granted.	108,278	54.68
Forfeited.	(18,579)	57.04
Vested and issued	(86,206)	65.77
Unvested as of December 31, 2019	<u>204,146</u>	<u>\$ 60.13</u>

The following table summarizes restricted stock activity during the year ended December 31, 2018:

	<u>Shares</u>	<u>Weighted Avg. Fair Value</u>
Unvested as of January 1, 2018	214,938	\$ 68.62
Granted.	111,474	59.52
Forfeited.	(31,327)	66.53
Vested and issued	(94,432)	66.27
Unvested as of December 31, 2018	<u>200,653</u>	<u>\$ 65.21</u>

In connection with the grant of restricted shares, the Company recognized \$6.4 million, \$6.1 million and \$6.6 million of compensation expense within its income statements for the years ended December 31, 2019, 2018, and 2017, respectively. In addition, the Company recognized \$0.2 million and \$0.3 million of compensation expense within its income statement for the year ended December 31, 2018 and 2017, respectively, for shares of the Company's subsidiaries granted to the management team of those subsidiaries.

The unvested shares as of December 31, 2019 represent \$8.2 million in unamortized stock based compensation which will be recognized over a weighted average period of 2.4 years.

13. INCOME TAXES

Tax Reform

The Tax Cuts and Jobs Act of 2017 (the "Tax Act" also commonly referred to as US tax reform), which was signed into law on December 22, 2017, has resulted in significant changes to the US corporate income tax system and the US Virgin Islands mirror code which replaces "United States" with "US Virgin Islands" throughout the Internal Revenue Code. The Tax Act transitions international taxation from a worldwide system to a modified territorial system and includes two base erosion prevention measures on non-US earnings, which has the effect of subjecting certain earnings of The Company's foreign subsidiaries to US taxation as global intangible low taxed income ("GILTI") and eliminates the deduction of certain payments made to related foreign corporations, and imposes a minimum tax if greater than regular tax under the base-erosion and anti-abuse tax ("BEAT"). These changes became effective beginning in 2018 but did not have an impact on us in the initial year. Based on The Company's annual results for 2019 we are not calculating a GILTI inclusion for 2019. We do not believe we are subject to BEAT and therefore have not included any tax impacts of BEAT in The Company's consolidated financial statements for the year ended December 31, 2019.

The components of income before income taxes for the years ended December 31, 2019, 2018 and 2017 are as follows (in thousands):

	2019	2018	2017
Domestic	\$ (15,661)	\$ 28,917	\$25,232
Foreign	21,733	24,825	22,321
Total	<u>\$ 6,072</u>	<u>\$ 53,742</u>	<u>\$47,553</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, 2019, 2018, and 2017 (in thousands):

	2019	2018	2017
Tax computed at statutory US federal income tax rates	\$ 1,275	\$ 11,286	\$ 16,644
Non-controlling interest	(648)	(1,114)	(2,887)
Foreign tax rate differential	(1,820)	(2,716)	(6,621)
Over (under) provided in prior periods	(244)	(4,683)	(18)
Nondeductible expenses	3,781	1,610	929
Capitalized transactions costs	19	62	53
Change in tax reserves	3,883	10,657	4,433
State Taxes, net of federal benefit	(429)	1,674	1,075
Change in valuation allowance	(35)	1,539	6,137
Investment Tax Credit	(1,215)	—	—
Refund Claim for Domestic Production Deduction	—	235	(3,382)
Tax Cuts and Jobs Act of 2017	—	(148)	(10,639)
Capital loss	—	15	(6,990)
Deferred income tax revaluation	(513)	—	—
Other, net	51	453	(75)
Total Income Tax Expense	<u>\$ 4,105</u>	<u>\$ 18,870</u>	<u>\$ (1,341)</u>

The components of income tax expense (benefit) for the years ended December 31, 2019, 2018 and 2017 are as follows (in thousands):

	2019	2018	2017
Current:			
United States—Federal	\$ (1,559)	\$ 24,546	\$ 375
United States—State	(336)	4,506	500
Foreign	8,192	13,060	11,289
Total current income tax expense	<u>\$ 6,297</u>	<u>\$ 42,112</u>	<u>\$ 12,164</u>
Deferred:			
United States—Federal	\$ (1,805)	\$ (17,947)	\$ (10,892)
United States—State	(93)	(2,832)	950
Foreign	(294)	(2,463)	(3,563)
Total deferred income tax expense (benefit)	<u>\$ (2,192)</u>	<u>\$ (23,242)</u>	<u>\$ (13,505)</u>
Consolidated:			
United States—Federal	\$ (3,364)	\$ 6,599	\$ (10,517)
United States—State	(429)	1,674	1,450
Foreign	7,898	10,597	7,726
Total income tax expense (benefit)	<u>\$ 4,105</u>	<u>\$ 18,870</u>	<u>\$ (1,341)</u>

The significant components of deferred tax assets and liabilities are as follows as of December 31, 2019 and 2018 (in thousands):

	2019	2018
Deferred tax assets:		
Receivables reserve	\$ 1,192	\$ 3,087
Temporary differences not currently deductible for tax	13,144	9,035
Deferred compensation	760	784
Operating lease liability	15,869	—
Pension	515	635
Net operating losses	40,492	29,496
Tax Credits	1,511	645
Total deferred tax asset	<u>73,483</u>	<u>43,682</u>
Deferred tax liabilities:		
Property, plant and equipment, net	15,892	14,608
Right-of-use asset	15,869	—
Intangible assets, net	8,414	5,959
Total deferred tax liabilities	<u>40,175</u>	<u>20,567</u>
Valuation allowance	<u>(39,406)</u>	<u>(31,442)</u>
Net deferred tax liabilities	<u>\$ (6,098)</u>	<u>\$ (8,327)</u>

Deferred tax assets and liabilities are reflected in the accompanying consolidated balance sheets as follows (in thousands):

	2019	2018
Deferred tax assets:		
Current	\$ —	\$ —
Long term	2,582	1,949
Total deferred tax asset	<u>\$ 2,582</u>	<u>\$ 1,949</u>
Deferred tax liabilities:		
Current	\$ —	\$ —
Long term	(8,680)	(10,276)
Total deferred tax liabilities	<u>\$ (8,680)</u>	<u>\$ (10,276)</u>
Net deferred tax liabilities	<u>\$ (6,098)</u>	<u>\$ (8,327)</u>

The Company's effective tax rate for the years ended December 31, 2019 and 2018 was 67.6% and 35.1%, respectively. The effective tax rate for the year ended December 31, 2019 was primarily impacted by the following items: (i) a \$3.9 million net increase of unrecognized tax positions, (ii) a \$3.8 million net increase for permanently non-deductible expenses, (iii) a \$1.2 million deferred tax benefit related to an investment tax credit, and (vi) the mix of income generated among the jurisdictions in which we operate along with the exclusion of losses in jurisdictions where we cannot benefit from those losses as required by ASC 740-270-30-36(a), primarily in the US Virgin Islands and India.

The effective tax rate for the year ended December 31, 2018 was primarily impacted by the following items: (i) a \$10.6 million net increase of unrecognized tax positions, (ii) a \$4.7 million net benefit to record a return to accrual adjustment, (iii) a \$1.2 million benefit to recognize a capital loss carryover due to capital gains on sale of wireless licenses, (iv) a \$1.4 million net benefit to record a valuation allowance release on an indefinite lived intangible asset, (v) a \$1.7 million provision associated with the intercompany sale of assets from the US to the US Virgin Islands, and (vi) the mix of income generated among the jurisdictions in which we operate along with the exclusion of losses in jurisdictions where we cannot benefit from those losses as required by ASC 740-270-30-36(a), primarily in the US Virgin Islands and India.

As of December 31, 2019, the Company estimated that it had gross federal, state and foreign net operating loss ("NOL") carryforwards of \$7.3 million, \$6.1 million and \$160.2 million respectively. Of these, \$81.3 million will expire between 2025 and 2040 and \$92.3 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, 2019. 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 federal, state, and foreign deferred taxes would not be realized.

In recognition of this risk at December 31, 2019 the Company has provided a valuation allowance against certain domestic and foreign deferred tax assets of \$39.4 million. The valuation allowance primarily relates to foreign net operating losses, with the remaining amount applicable to other net deferred tax assets which the Company does not expect to be able to realize.

As of December 31, 2019, the Company had an estimated \$129 million of undistributed earnings attributable to foreign subsidiaries for which no provision for state income taxes or foreign withholding taxes have been made because it is expected that such earnings will be reinvested outside the U.S. indefinitely unless repatriation can be done substantially tax-free. The Company will generally be free of additional U.S. federal tax consequences on distributed foreign subsidiary earnings due to a dividends received deduction implemented as part of the Tax Act for earnings distributed after January 1, 2018. Additionally, due to the one-time transition tax on the deemed repatriation of post-1986 undistributed foreign subsidiary earnings, the majority of previously unremitted earnings have already been

subjected to U.S. federal income tax. The Company continues to assert indefinite reinvestment on outside basis differences in our non-U.S. subsidiaries, additionally any determination of the amount of the unrecognized deferred tax liability on outside basis differences is not practicable because of the complexity of laws and regulations, the varying tax treatment of alternative repatriation scenarios and the variation due to multiple potential assumptions relating to the timing of any future repatriation.

The Company had unrecognized tax benefits (including interest and penalty) of \$38.6 million as of December 31, 2019, \$34.7 million as of December 31, 2018 and, \$24.1 million as of December 31, 2017. The net increase of the reserve during the year ended December 31, 2019 was attributable to an increase in tax positions for prior periods of \$2.0 million, a net increase in tax positions for the current period of \$3.4 million and partially offset by a lapse in statute of a prior year position of \$1.5 million.

The following shows the activity related to unrecognized tax benefits (not including interest and penalty) during the three years ended December 31, 2019 (in thousands):

Gross unrecognized tax benefits at December 31, 2016	\$ 17,904
Increase in unrecognized tax benefits taken during a prior period	—
Increase in unrecognized tax benefits taken during the current period	3,394
Lapse in statute of limitations	(2)
Settlements	(335)
Gross unrecognized uncertain tax benefits at December 31, 2017	20,961
Increase in unrecognized tax benefits taken during a prior period	7,293
Increase in unrecognized tax benefits taken during the current period	3,408
Lapse in statute of limitations	(1,430)
Settlements	—
Gross unrecognized uncertain tax benefits at December 31, 2018	30,232
Increase in unrecognized tax benefits taken during a prior period	—
Increase in unrecognized tax benefits taken during the current period	3,383
Lapse in statute of limitations	(933)
Settlements	—
Gross unrecognized uncertain tax benefits at December 31, 2019	\$ 32,682

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 \$5.9 million as of December 31, 2019, \$4.5 million as of December 31, 2018, and \$3.1 million as of December 31, 2017.

All \$38.6 million of gross unrecognized uncertain tax benefits (including interest and penalty) would impact the effective tax rate if recognized.

The Company and its subsidiaries file income tax returns in the US and in various, state and local and foreign jurisdictions. The statute of limitations related to the consolidated US federal income tax return is closed for all tax years up to and including 2015. The federal tax audits are closed through 2014. 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.

14. RETIREMENT PLANS

The Company has noncontributory defined benefit pension plans as well as a noncontributory defined medical, dental, vision, and life benefit plan for certain employees of its International Telecom segment. The Company reviews the funded status of its pension plans and makes contributions based on that analysis. The benefits are based on the participants' compensation during their employment and the credited service years earned by participants. 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, 2019, 2018 and 2017:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Discount Rate – Pension Benefit Obligation.....	4.2 %	4.7 %	4.2 %
Discount Rate – Pension Benefit Cost.....	4.5 %	4.3 %	4.6 %
Discount Rate – Postretirement Benefit Obligation	3.5 %	4.5 %	3.9 %
Discount Rate – Postretirement Benefit Cost	4.5 %	3.9 %	4.3 %
Annual salary increase	6.5 %	6.5 %	6.5 %
Expected long-term return on plan assets	6.1 %	6.1 %	6.1 %

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 term average rate of salary increases.

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 2019 assumed medical health care cost trend rate is 6% trending to an ultimate rate of 4% in 2073. The 2019 and ultimate assumed dental care cost trend rate is 4%. 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 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>2019</u>		<u>2018</u>	
	<u>Accumulated postretirement benefit obligation</u>	<u>Service cost plus interest cost</u>	<u>Accumulated postretirement benefit obligation</u>	<u>Service cost plus interest cost</u>
At trend	4,900	308	4,013	308
At trend + 1%	5,242	337	4,305	338
Dollar Impact	342	29	292	30
Percentage Impact	7.0 %	9.4 %	7.3 %	9.7 %
At trend – 1%	4,597	284	3,755	282
Dollar Impact	(303)	(24)	(258)	(26)
Percentage Impact	(6.2)%	(7.8)%	(6.4)%	(8.4)%

Changes during the year in the projected benefit obligations and in the fair value of plan assets are as follows for 2019 and 2018 (in thousands):

	2019		2018	
	Pension Benefits	Postretirement Benefits	Pension Benefits	Postretirement Benefits
Projected benefit obligations:				
Balance at beginning of year:	\$ 76,900	\$ 4,012	\$ 80,355	\$ 5,307
Service cost	1,709	126	1,794	147
Interest cost	3,472	182	3,279	161
Benefits and settlements paid	(5,738)	(354)	(4,524)	(360)
Actuarial (gain) loss	5,739	933	(4,004)	(1,243)
Settlement	(105)	—	—	—
Balance at end of year	<u>\$ 81,977</u>	<u>\$ 4,899</u>	<u>\$ 76,900</u>	<u>\$ 4,012</u>
Plan net assets:				
Balance at beginning of year:	\$ 77,530	\$ —	\$ 80,892	\$ —
Actual return on plan assets	10,678	—	(730)	—
Company contributions	838	354	1,830	360
Benefits and settlements paid	(5,696)	(354)	(4,462)	(360)
Balance at end of year	<u>\$ 83,350</u>	<u>\$ —</u>	<u>\$ 77,530</u>	<u>\$ —</u>
Over/ (Under) funded status of plan	<u>\$ 1,373</u>	<u>\$ (4,899)</u>	<u>\$ 630</u>	<u>\$ (4,012)</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):

	2019			2018		
	GTT Pension Benefit	Viya Pension Benefit	Postretirement Benefits	GTT Pension Benefit	Viya Pension Benefit	Postretirement Benefits
Projected benefit obligation	\$ 15,594	\$ 66,383	\$ 4,899	\$ 14,712	\$ 62,188	\$ 4,012
Plan Net Assets	<u>15,054</u>	<u>68,296</u>	<u>—</u>	<u>14,105</u>	<u>63,425</u>	<u>—</u>
Over/ (Under) funded status of plan	<u>\$ (540)</u>	<u>\$ 1,913</u>	<u>\$ (4,899)</u>	<u>\$ (607)</u>	<u>\$ 1,237</u>	<u>\$ (4,012)</u>

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 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.

The fair values for the pension plan's net assets, by asset category, at December 31, 2019 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	\$ 4,982	\$ 4,982	\$ —	\$ —
Common stock	26,702	22,451	4,251	—
Mutual funds - fixed income.	12,970	12,970	—	—
Mutual funds - equities	10,921	10,921	—	—
Fixed income securities.	26,307	1,178	25,129	—
Other.	1,468	1,031	—	437
Total	<u>\$ 83,350</u>	<u>\$ 53,533</u>	<u>\$ 29,380</u>	<u>\$ 437</u>

The fair values for the pension plan's net assets, by asset category, at December 31, 2018 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	\$ 5,173	\$ 5,173	\$ —	\$ —
Common stock	23,052	18,760	4,292	—
Mutual funds - fixed income.	16,444	—	16,444	—
Mutual funds - equities	13,099	4,748	8,351	—
Fixed income securities.	18,095	—	18,095	—
Other.	1,667	1,177	—	490
Total	<u>\$ 77,530</u>	<u>\$ 29,858</u>	<u>\$ 47,182</u>	<u>\$ 490</u>

The plan's weighted-average asset allocations at December 31, 2019 and 2018, by asset category are as follows:

	<u>2019</u>	<u>2018</u>
Cash, cash equivalents, money markets and other	6 %	7 %
Common stock	32	30
Mutual funds - fixed income	16	21
Mutual funds - equities	13	17
Fixed income securities	32	23
Other.	1	2
Total	<u>100 %</u>	<u>100 %</u>

Amounts recognized on the Company's consolidated balance sheets consist of (in thousands):

	<u>As of December 31,</u>			
	<u>2019</u>		<u>2018</u>	
	<u>Pension benefits</u>	<u>Postretirement benefits</u>	<u>Pension benefits</u>	<u>Postretirement benefits</u>
Accrued and current liabilities	\$ —	\$ 340	\$ —	\$ 271
Other Liabilities	540	4,559	744	3,742
Other Assets.	1,913	—	1,375	—
Accumulated other comprehensive income, net of tax.	1,484	359	938	1,350

Amounts recognized in accumulated other comprehensive loss consist of (in thousands):

	As of December 31,			
	2019		2018	
	Pension benefits	Postretirement benefits	Pension benefits	Postretirement benefits
Net actuarial gain	\$ 540	\$ 359	\$ 30	\$ 1,350
Accumulated other comprehensive income, pre-tax	<u>540</u>	<u>359</u>	<u>30</u>	<u>1,350</u>
Accumulated other comprehensive income, net of tax	1,484	359	938	1,350

Components of the plan's net periodic pension cost are as follows for the years ended December 31, 2019, 2018 and 2017 (in thousands):

	2019		2018		2017	
	Pension benefits	Postretirement benefits	Pension benefits	Postretirement benefits	Pension benefits	Postretirement benefits
Service cost	\$ 1,709	\$ 126	\$ 1,794	\$ 147	\$ 1,676	\$ 183
Interest cost	3,472	182	3,279	161	3,388	206
Expected return on plan assets	(4,571)	—	(4,835)	—	(4,470)	—
Amortization of actuarial (gain) loss	29	(58)	121	(67)	716	—
Settlement	(35)	—	—	—	—	—
Net periodic pension cost	<u>\$ 604</u>	<u>\$ 250</u>	<u>\$ 359</u>	<u>\$ 241</u>	<u>\$ 1,310</u>	<u>\$ 389</u>

The Company is currently evaluating whether it will make any contributions to its pension and postretirement benefit plans during the year ending December 31, 2020.

The following estimated 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	Postretirement Benefits
2020	\$ 4,719	\$ 347
2021	4,476	320
2022	4,813	317
2023	4,339	263
2024	4,594	310
2025-2029	23,474	1,695
Total	<u>\$ 46,415</u>	<u>\$ 3,252</u>

15. 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.

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. The legislation does not 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, including the issuance of competing licenses. The Company cannot predict the manner in which or when the legislation will be implemented by the Minister of Telecommunications.

In January 2019 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 such discussions will satisfactorily address the Company's 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 the Company believes unlikely, 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 NFMU's continued opinion that the final calculation for 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 another communications provider that outlined a recommended methodology for the calculation of these fees. The NFMU stated that it would prepare its own recommendation for consideration by the Minister of Telecommunications, who would decide 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 by the NFMU to the Minister.

In November 2007, Caribbean Telecommunications Limited ("CTL") filed a complaint in the US 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. In November 2009 and again in April 2013, CTL filed and then abandoned a similar claim against GTT and the Public Utility Commission in the High Court of Guyana. CTL once more filed a similar claim against the Company in December 2017, seeking damages of \$25 million; however, this matter was dismissed in May 2018. CTL made an untimely filing for an appeal thereafter, which the court subsequently denied. The Company continues to believe this claim is without merit and intends to vigorously defend against it.

On May 8, 2009, a GTT competitor, 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. On May 13, 2009, GTT petitioned to intervene in the suit in order to oppose Digicel's claims and GTT's petition was granted on May 18, 2009. GTT filed an answer to the charge on June 22, 2009. The case remains 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 defend vigorously against such 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 injunctive relief to stop the illegal bypass activity and money damages. 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 been consolidated with Digicel's constitutional challenge described above, which is scheduled to proceed to trial in 2020. GTT intends to prosecute these matters vigorously.

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. The Company maintains that any liability GTT might be found to have with respect to the disputed tax assessments, totaling \$44.1 million, would be offset in part by the 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, 2019 for these matters.

Other Obligations

The Company has obligations under non-cancellable contracts for network facilities and transport services, agreements for software licensing, as well as certain agreements to purchase goods or services. Future minimum payments required under these commitments are as follows at December 31, 2019 (in thousands):

2020.....	\$ 13,629
2021.....	11,004
2022.....	4,064
2023.....	785
2024.....	258
Thereafter	<u>1,742</u>
Total obligations under operating leases	<u>\$ 31,482</u>

16. RELATED-PARTY TRANSACTIONS

In October 2014, the Company's US 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 former 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 pays 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. The Company's 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 the Company's Related Person Transaction Policy.

17. SEGMENT REPORTING

The Company has the following three reportable and operating segments: i) US Telecom, ii) International Telecom, and iii) Renewable Energy.

The following tables provide information for each operating segment (in thousands):

For the Year Ended December 31, 2019					
	International Telecom	US Telecom	Renewable Energy	Corporate and Other (1)	Consolidated
Revenue					
Wireless.....	\$ 88,054	\$ 105,434	\$ —	\$ —	\$ 193,488
Wireline.....	236,486	3,214	—	—	239,700
Renewable Energy	—	—	5,534	—	5,534
Total Revenue	324,540	108,648	5,534	—	438,722
Depreciation and amortization	55,993	23,119	3,305	6,708	89,125
Non-cash stock-based compensation ..	405	—	87	5,892	6,384
Operating income (loss)	46,921	8,064	(7,243)	(34,365)	13,377
For the Year Ended December 31, 2018					
	International Telecom	US Telecom	Renewable Energy	Corporate and Other (1)	Consolidated
Revenue					
Wireless.....	\$ 89,946	\$ 108,878	\$ —	\$ —	\$ 198,824
Wireline.....	223,623	6,602	—	—	230,225
Renewable Energy	—	—	22,158	—	22,158
Total Revenue	313,569	115,480	22,158	—	451,207
Depreciation and amortization	48,889	24,615	6,589	5,626	85,719
Non-cash stock-based compensation ..	88	—	105	6,227	6,420
Operating income (loss)	45,022	36,813	13,440	(34,252)	61,023
For the Year Ended December 31, 2017					
	International Telecom	US Telecom	Renewable Energy	Corporate and Other (1)	Consolidated
Revenue					
Wireless.....	\$ 89,473	\$ 143,028	\$ —	\$ —	\$ 232,501
Wireline.....	215,132	12,695	—	—	227,827
Renewable Energy	—	—	20,865	—	20,865
Total Revenue	304,605	155,723	20,865	—	481,193
Depreciation and amortization	50,007	25,601	6,668	4,658	86,934
Non-cash stock-based compensation ..	188	—	114	6,675	6,977
Operating income (loss)	28,308	55,317	5,179	(33,496)	55,308

	International Telecom	US Telecom	Renewable Energy	Corporate and Other (1)	Consolidated
December 31, 2019					
Cash, Cash equivalents, and Investments	\$ 43,125	\$ 38,240	\$ 25,054	\$ 55,284	\$ 161,703
Total current assets	91,497	54,207	27,534	55,485	228,723
Fixed assets, net	466,523	69,184	48,421	21,453	605,581
Goodwill	25,421	35,270	—	—	60,691
Total assets	647,228	222,356	76,723	184,419	1,130,726
Total current liabilities	77,644	24,905	2,745	14,375	119,669
Total debt	86,426	—	—	—	86,426
December 31, 2018					
Cash, Cash equivalents, and Investments	\$ 32,390	\$ 19,118	\$ 62,678	\$ 78,043	\$ 192,229
Total current assets	75,304	36,801	80,553	83,107	275,765
Fixed assets, net	482,770	78,102	45,599	20,381	626,852
Goodwill	25,421	35,269	3,280	—	63,970
Total assets	622,454	172,634	130,427	181,789	1,107,304
Total current liabilities	82,575	15,783	3,465	38,827	140,650
Total debt	90,970	—	12	—	90,982

Capital Expenditures

Year ended December 31,	International Telecom (2)	US Telecom	Renewable Energy	Corporate and Other (1)	Consolidated
2019	\$ 42,029	\$ 17,490	\$ 6,448	\$ 6,758	\$ 72,725
2018	160,013	13,389	4,515	8,004	185,921

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

(2) Includes \$82.1 million of expenditures in the year ended December 31, 2018 used to rebuild the Company's damaged networks in the US Virgin Islands which was impacted by the Hurricanes. These expenditures were financed, in part, by the \$34.6 million of insurance proceeds the Company received during the first quarter of 2018.

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):

	2019		2018		2017	
	Revenues	Long-Lived Assets	Revenues	Long-Lived Assets	Revenues	Long-Lived Assets
US	\$ 123,508	\$ 297,084	\$ 132,288	\$ 234,514	\$ 173,632	\$ 358,032
Guyana	105,290	145,079	102,056	151,084	93,524	129,909
US Virgin Islands	83,795	235,384	79,785	216,173	83,194	137,018
Bermuda	104,760	128,208	103,281	137,992	127,244	165,243
Other Foreign Countries	21,369	96,247	33,797	91,775	3,599	71,282
	<u>\$ 438,722</u>	<u>\$ 902,002</u>	<u>\$ 451,207</u>	<u>\$ 831,538</u>	<u>\$ 481,193</u>	<u>\$ 861,484</u>

18. QUARTERLY FINANCIAL DATA (UNAUDITED)

Following is a summary of the Company's quarterly results of operations for the years ended December 31, 2019 and 2018 (in thousands):

	2019 Consolidated for the Three Months Ended			
	March 31	June 30	September 30	December 31
Total revenue	\$ 103,300	\$ 107,721	\$ 115,616	\$ 112,085
Operating expenses	101,186	104,967	105,368	113,824
Income (loss) from operations	2,114	2,754	10,248	(1,739)
Other income (expense), net	(166)	(1,001)	(3,570)	(2,568)
Income (loss) from continuing operations before income taxes	1,948	1,753	6,678	(4,307)
Income taxes	1,213	(274)	1,834	1,332
Net income (loss)	735	2,027	4,844	(5,639)
Net income attributable to non-controlling interests, net of tax	(2,316)	(2,883)	(3,459)	(4,115)
Net income (loss) attributable to ATN International, Inc. stockholders	\$ (1,581)	\$ (856)	\$ 1,385	\$ (9,754)
Net income (loss) per weighted average share attributable to ATN International, Inc. stockholders				
Basic	\$ (0.10)	\$ (0.05)	\$ 0.09	\$ (0.62)
Diluted	\$ (0.10)	\$ (0.05)	\$ 0.09	\$ (0.62)

	2018 Consolidated for the Three Months Ended			
	March 31	June 30	September 30	December 31
Total revenue	\$ 104,475	\$ 117,788	\$ 121,138	\$ 107,806
Operating expenses	100,266	102,035	90,395	97,488
Income from operations	4,209	15,753	30,743	10,318
Other income (expense), net	(2,591)	(2,885)	(2,823)	1,018
Income from continuing operations before income taxes	1,618	12,868	27,920	11,336
Income taxes	3,921	2,088	7,010	5,851
Net income (loss)	(2,303)	10,780	20,910	5,485
Net income attributable to non-controlling interests, net of tax	(3,252)	(3,564)	(3,887)	(4,354)
Net income (loss) attributable to ATN International, Inc. stockholders	\$ (5,555)	\$ 7,216	\$ 17,023	\$ 1,131
Net income (loss) per weighted average share attributable to ATN International, Inc. stockholders				
Basic	\$ (0.35)	\$ 0.45	\$ 1.07	\$ 0.07
Diluted	\$ (0.35)	\$ 0.45	\$ 1.07	\$ 0.07

SCHEDULE II

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, 2017					
Description:					
Valuation allowance on foreign tax credit carryforwards .	\$ —	\$ —	\$ 8,226	\$ —	\$ 8,226
Valuation allowance on capital loss carryforwards	—	—	1,881	—	1,881
Valuation allowance on foreign net operating losses and other deferred taxes	41,908	—	839	17,025	25,722
Valuation allowance on state net operating losses	553	—	—	553	—
Allowance for doubtful accounts.	13,149	—	3,993	2,119	15,023
	<u>\$ 55,610</u>	<u>\$ —</u>	<u>\$ 14,939</u>	<u>\$ 19,697</u>	<u>\$ 50,852</u>
YEAR ENDED, December 31, 2018					
Description:					
Valuation allowance on foreign tax credit carryforwards .	\$ 8,226	\$ —	\$ (8,226)	\$ —	\$ —
Valuation allowance on capital loss carryforwards	1,881	—	(1,881)	—	—
Valuation allowance on foreign net operating losses and other deferred taxes	25,722	—	5,877	157	31,442
Allowance for doubtful accounts.	15,023	—	5,134	3,695	16,462
	<u>\$ 50,852</u>	<u>\$ —</u>	<u>\$ 904</u>	<u>\$ 3,852</u>	<u>\$ 47,904</u>
YEAR ENDED, December 31, 2019					
Description:					
Valuation allowance on foreign tax credit carryforwards .	\$ —	\$ —	\$ —	\$ —	\$ —
Valuation allowance on capital loss carryforwards	—	—	—	—	—
Valuation allowance on foreign net operating losses and other deferred taxes	31,442	—	10,811	2,847	39,406
Allowance for doubtful accounts.	16,462	—	5,816	9,554	12,724
	<u>\$ 47,904</u>	<u>\$ —</u>	<u>\$ 16,627</u>	<u>\$ 12,401</u>	<u>\$ 52,130</u>