QUANTA SERVICES INC
Form 10-K
February 28, 2019

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

(Mark
One)

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2018

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 001-13831

Quanta Services, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**74-2851603**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

2800 Post Oak Boulevard, Suite 2600
Houston, Texas 77056
(Address of principal executive offices, including zip code)
(713) 629-7600
(Registrant's telephone number, including area code)

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

Title of Each Class	**Name of Exchange on Which Registered**
Common Stock, $0.00001 par value	New York Stock Exchange

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

Title of Each Class

None

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

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

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 þ No o

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). Yes þ No o

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

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 þ	Accelerated filer o
Non-accelerated filer o	Smaller reporting company o
	Emerging growth company o

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. o

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

As of June 29, 2018 (the last business day of the Registrant's most recently completed second fiscal quarter), the aggregate market value of the Common Stock of the Registrant held by non-affiliates of the Registrant, based on the last sale price of the Common Stock reported by the New York Stock Exchange on such date, was $4.9 billion.

As of February 21, 2019, the number of outstanding shares of Common Stock of the Registrant was 141,356,413. As of the same date, 36,183 exchangeable shares of a Canadian subsidiary of the Registrant were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement for the2019 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

QUANTA SERVICES, INC.
ANNUAL REPORT ON FORM 10-K
For the Year Ended December 31, 2018
INDEX

PART I

ITEM 1. *Business*

General

Quanta Services, Inc. (Quanta) is a leading provider of specialty contracting services, delivering comprehensive infrastructure solutions for the electric power, energy and communications industries in the United States, Canada, Australia, Latin America and select other international markets. The services we provide include the design, installation, upgrade, repair and maintenance of infrastructure within each of the industries we serve, such as electric power transmission and distribution networks; substation facilities; pipeline transmission and distribution systems and facilities; refinery, petrochemical and industrial facilities; and telecommunications and cable multi-system operator networks. We have a workforce of approximately 39,200 employees as of December 31, 2018 and serve a diverse customer base. We believe our reputation for responsiveness and performance, geographic reach, comprehensive service offerings, safety leadership and financial strength have resulted in strong relationships with numerous customers, which include many of the leading companies in the industries we serve, and have positioned us to continue to take advantage of other opportunities. Our services are typically provided pursuant to master service agreements, repair and maintenance contracts and fixed price and non-fixed price installation contracts. Quanta is organized as a corporation under the laws of the State of Delaware and was formed in 1997.

We report our results under two reportable segments: (1) Electric Power Infrastructure Services and (2) Pipeline and Industrial Infrastructure Services. This structure is generally focused on broad end-user markets for our services. As of December 31, 2018, we changed the name of our Oil and Gas Infrastructure Services segment to the Pipeline and Industrial Infrastructure Services segment. There was no change to the composition of the segment, and the name change was made to better reflect the work performed within the segment and the diversity of its service offerings. Our consolidated revenues for the year ended December 31, 2018 were $11.17 billion, of which 57% was attributable to the Electric Power Infrastructure Services segment and 43% was attributable to the Pipeline and Industrial Infrastructure Services segment.

We believe that our business strategies, along with our safety culture and financial strength, differentiate us from our competition and position us to capitalize on future capital spending by our customers. We offer comprehensive and diverse solutions on a broad geographic scale and have a solid base of long-standing customer relationships in each of the industries we serve. We also have an experienced management team, both at the executive level and within our operating units, and various proprietary technologies that enhance our service offerings. Our strategies of expanding our portfolio of service offerings for existing and potential customers, increasing our geographic and technological capabilities, promoting best practices and cross-selling services to our existing customers, as well as continuing to maintain our financial strength, place us in the position to capitalize on opportunities and trends in the industries we serve and expand our operations to select international markets. We continue to evaluate potential strategic acquisitions and investments to broaden our customer base, expand our geographic area of operations, grow our portfolio of services and increase opportunities across our operations.

Reportable Segments

The following is an overview of the types of services provided by each of our reportable segments.

Electric Power Infrastructure Services Segment

The Electric Power Infrastructure Services segment provides comprehensive network solutions to customers in the electric power industry. Services performed by the Electric Power Infrastructure Services segment generally include the design, installation, upgrade, repair and maintenance of electric power transmission and distribution infrastructure and substation facilities along with other engineering and technical services. This segment also provides emergency restoration services, including the repair of infrastructure damaged by inclement weather, the energized installation, maintenance and upgrade of electric power infrastructure utilizing unique bare hand and hot stick methods and our proprietary robotic arm technologies, and the installation of "smart grid" technologies on electric power networks. In addition, this segment provides services that support the development of renewable energy generation, including solar, wind and certain types of natural gas generation facilities, and related switchyards and transmission infrastructure. This segment also provides comprehensive communications infrastructure services to wireline and wireless telecommunications companies, cable multi-system operators and other customers within the communications industry; services in connection with the construction of electric power generation facilities; and the design, installation, maintenance and repair of commercial and industrial wiring. This segment also includes our postsecondary educational institution, which specializes in pre-apprenticeship training, apprenticeship training and specialized utility task training for electric workers, and has been recently expanded to include curriculum for the gas distribution and communications industries.

Pipeline and Industrial Infrastructure Services Segment

The Pipeline and Industrial Infrastructure Services segment provides comprehensive infrastructure solutions to customers involved in the development, transportation, storage and processing of natural gas, oil and other products. Services performed by the Pipeline and Industrial Infrastructure Services segment generally include the design, installation, repair and maintenance of pipeline transmission and distribution systems, gathering systems, production systems, storage systems and compressor and pump stations, as well as related trenching, directional boring and mechanized welding services. In addition, this segment's services include pipeline protection, integrity testing, rehabilitation and replacement, and the fabrication of pipeline support systems and related structures and facilities for natural gas utilities and midstream companies. We also provide high-pressure and critical-path turnaround services to the downstream and midstream energy markets and instrumentation and electrical services, piping, fabrication and storage tank services. To a lesser extent, this segment serves the offshore and inland water energy markets and designs, installs and maintains fueling systems and water and sewer infrastructure.

Financial Information and Geographic Areas

We operate primarily in the United States; however, we derived $2.60 billion, $2.48 billion and $1.59 billion of our revenues from foreign operations during the years ended December 31, 2018, 2017 and 2016, respectively. Of our foreign revenues, 76%, 79% and 75% were earned in Canada during the years ended December 31, 2018, 2017 and 2016, respectively. In addition, we held property and equipment of $304.0 million and $330.4 million in foreign countries, primarily Canada, as of December 31, 2018 and 2017.

Customers, Strategic Alliances and Preferred Provider Relationships

Our customers include electric power, energy and communications companies, as well as commercial, industrial and governmental entities. We have a large and diverse customer base, including many of the leading companies in the industries we serve. Our 10 largest customers accounted for 37% of our consolidated revenues during the year ended December 31, 2018. Our largest customer accounted for 7% of our consolidated revenues for the year ended December 31, 2018. Representative customers include:

- American Electric Power Company, Inc.
- ATCO Electric
- CenterPoint Energy, Inc.
- Dominion Energy, Inc.
- Duke Energy Corporation
- Enbridge Inc.
- Entergy Corporation
- Enterprise Products Partners L.P.
- EQT Midstream
- Exelon Corporation
- Eversource Energy
- FirstEnergy Corp.
- Fortis Inc.
- NextEra Energy, Inc.
- NiSource Inc.
- PG&E Corporation
- Puget Sound Energy, Inc.
- Sempra Energy
- Southern California Edison Company
- TransCanada Corporation
- Valero Energy Corporation
- Xcel Energy Inc.

Although we have a centralized marketing and business development strategy, management at each of our operating units is responsible for developing and maintaining successful long-term relationships with customers. Our operating unit management teams build upon existing customer relationships to secure additional projects and increase revenues. Many of these customer relationships are long-standing and are maintained through a partnering approach with centralized account management, which includes project evaluation and consulting, quality performance, performance measurement and direct customer contact. Additionally, operating unit management focuses on pursuing growth opportunities with prospective customers. We also encourage operating unit management to cross-sell services of our other operating units to their customers and coordinate with our other operating units to pursue projects, especially those that are larger and more complex. We believe our ability to provide services that cover a broad spectrum of our customers' requirements is a significant differentiator. Our corporate-level business development group supports these activities by promoting and marketing our services for existing and prospective large national accounts, as well as projects that are capable of utilizing services from multiple operating units.

We are a preferred service provider for many of our customers, which means we have met minimum standards for a specific category of service, maintained a high level of performance and agreed to certain payment terms and negotiated rates. We strive to maintain preferred status as we believe it provides us an advantage in the award of future work for the applicable customer. Furthermore, many of our strategic relationships with customers take the form of strategic alliance or long-term maintenance agreements, which typically extend for an initial term of approximately two to five years and may include renewal options to

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extend the initial term. Strategic alliance agreements also generally state an intention to work together over a period of time and/or on specific types of projects, and many provide us with preferential bidding procedures.

Remaining Performance Obligations and Backlog

As discussed in Note 3 of the Notes to Consolidated Financial Statements in Item 8. *Financial Statements and Supplementary Data*, effective January 1, 2018, we adopted the new revenue recognition guidance issued by the FASB. Pursuant to the new guidance, we are required to disclose, as of the end of each interim and annual period, the aggregate amount of remaining performance obligations under our contracts with customers. A performance obligation is a promise in a contract with a customer to transfer a distinct good or service. As of December 31, 2018, our remaining performance obligations were $4.68 billion, 66.2% of which was expected to be recognized in the subsequent twelve months. Our remaining performance obligations represent management’s estimate of consolidated revenues that are expected to be realized from the remaining portion of firm orders under fixed price contracts not yet completed or for which work has not yet begun. For purposes of calculating remaining performance obligations, we include all estimated revenues attributable to consolidated joint ventures and variable interest entities (VIEs), revenues from funded and unfunded portions of government contracts to the extent they are reasonably expected to be realized, and revenues from change orders and claims to the extent management believes additional contract revenues will be earned and are deemed probable of collection.

We have also historically disclosed our backlog, and while backlog is not a term recognized under generally accepted accounting principles in the United States (GAAP), it is a common measurement used in our industry. We also believe this non-GAAP measure enables us to more effectively forecast our future results and better identify future operating trends that may not otherwise be apparent. Our remaining performance obligations, as described above, are a component of our backlog calculation, which also includes estimated orders under master service agreements (MSAs), including estimated renewals, and non-fixed price contracts expected to be completed within one year. Our methodology for determining backlog may not be comparable to the methodologies used by other companies. Generally, our customers are not contractually committed to specific volumes of services under our MSAs, and most of our contracts may be terminated, typically upon 30 to 90 days’ notice, even if we are not in default under the contract. We determine the estimated amount of backlog for work under MSAs by using recurring historical trends for current MSAs, factoring in seasonal demand and projected customer needs based upon ongoing communications with the customer. In addition, many of our MSAs are subject to renewal, and these potential renewals are considered in determining the estimated amount of backlog. As of December 31, 2018 and 2017, MSAs accounted for 53% and 44% of our estimated 12-month backlog and 60% and 52% of total backlog. There can be no assurance as to our customers’ actual requirements or that our estimates are accurate.

Revenue estimates included in our remaining performance obligations and backlog can be subject to change as a result of, among other things: project acceleration; cancellations or delays due to various factors, including but not limited to commercial issues, regulatory requirements and adverse weather conditions; and final acceptance of change orders by our customers. These factors can also cause revenue amounts to be realized in periods and at levels different than originally projected.

The following table reconciles total remaining performance obligations to our backlog (a non-GAAP measure) by reportable segment as of December 31, 2018, along with estimates of amounts expected to be realized within 12 months of December 31, 2018 (in thousands):

	December 31, 2018	
	12 Month	Total
Electric Power Infrastructure Services		
Remaining performance obligations	$2,093,461	$3,045,553
Estimated orders under MSAs and short-term, non-fixed price contracts	2,467,654	5,499,887
Backlog	4,561,115	8,545,440
Pipeline and Industrial Infrastructure Services		
Remaining performance obligations	1,003,543	1,635,918
Estimated orders under MSAs and short-term, non-fixed price contracts	1,411,329	2,161,275
Backlog	2,414,872	3,797,193
Total		
Remaining performance obligations	3,097,004	4,681,471
Estimated orders under MSAs and short-term, non-fixed price contracts	3,878,983	7,661,162
Backlog	$6,975,987	$12,342,633

The following table presents our total backlog (a non-GAAP measure) by reportable segment as of December 31, 2018 and 2017, along with an estimate of the backlog amounts expected to be realized within 12 months of each balance sheet date (in thousands):

	Backlog as of December 31, 2018		Backlog as of December 31, 2017	
	12 Month	Total	12 Month	Total
Electric Power Infrastructure Services	$4,561,115	$8,545,440	$4,032,379	$7,359,237
Pipeline and Industrial Infrastructure Services	2,414,872	3,797,193	2,413,817	3,818,470
Total	$6,975,987	$12,342,633	$6,446,196	$11,177,707

Competition

The markets in which we operate are highly competitive. We compete with other contractors in most of the geographic markets in which we operate, and several of our competitors are large companies that have significant financial, technical and marketing resources. In addition, there are relatively few barriers to entry into some of the industries in which we operate and, as a result, any organization that has adequate financial resources and access to technical expertise may become a competitor. A significant portion of our revenues is currently derived from unit price or fixed price agreements, and price is often an important factor in the award of such agreements. Accordingly, we could be underbid by our competitors in an effort by them to procure such business. We believe that as demand for our services increases, customers often consider other factors in choosing a service provider, including technical expertise and experience, safety ratings, financial and operational resources, geographic presence, industry reputation and dependability, which we expect to benefit larger contractors such as us. In addition, competition may lessen as industry resources, such as labor supplies, approach capacity. There can be no assurance, however, that our competitors will not develop the expertise, experience and resources to provide services that are superior in both price and quality to our services, or that we will be able to maintain or enhance our competitive position. We also face competition from the in-house service organizations of our existing or prospective customers, including electric power, energy and engineering companies, which employ personnel who perform some of the same types of services we provide. Although these companies currently outsource a significant portion of these services, in particular services relating to larger energy transmission infrastructure projects, there can be no assurance that they will continue to do so in the future or that they will not acquire additional in-house capabilities.

Employees

As of December 31, 2018, we had approximately 39,200 employees, consisting of approximately 8,400 salaried employees, including executive officers, professional and administrative staff, project managers and engineers, job superintendents and field

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personnel, and approximately 30,800 hourly employees, the number of which fluctuates depending upon the number and size of the projects that are ongoing and planned at any particular time. Approximately 38% of our employees at December 31, 2018 were covered by collective bargaining agreements, which require the payment of specified wages, the observance of certain workplace rules and the payment of certain amounts to multiemployer pension plans and employee benefit trusts. These collective bargaining agreements have varying terms and expiration dates, and the majority contain provisions that prohibit work stoppages or strikes, even during specified negotiation periods relating to agreement renewals, and provide for binding arbitration dispute resolution in the event of prolonged disagreement.
We provide health, welfare and benefit plans for employees who are not covered by collective bargaining agreements. We also have a 401(k) plan pursuant to which eligible U.S. employees who are not provided retirement benefits through a collective bargaining agreement may make contributions through a payroll deduction. We make matching cash contributions of 100% of each employee's contribution up to 3% of that employee's salary and 50% of each employee's contribution between 3% and 6% of such employee's salary, up to the maximum amount permitted by law.
Our industry is experiencing a shortage of journeyman linemen and specialty craft labor in certain geographic areas. In response to the shortage and to attract qualified employees, we support and utilize various training and educational programs and have developed additional company-wide and project-specific employee training and educational programs, as described in further detail below.

Training, Quality Assurance and Safety

Performance of our services requires the use of equipment and exposure to hazardous conditions. Although we are committed to a policy of operating safely and prudently, we have been and will continue to be subject to claims by employees, customers and third parties for property damage and personal injury. In response to these inherent hazards and as part of our commitment to employee safety, our operating units have established safety programs, policies and procedures and training requirements for our employees both before they begin work and on an ongoing basis. Additionally, we have implemented an enterprise-wide Automated External Defibrillator (AED) program, which provides AEDs to all of our crews and training to enhance life safety response measures. We have also continued to invest in our internal education and training capabilities, including the expansion of our training facility to add training for beginning linemen, lead and cable splicing and directional drilling to our existing energized electric power and pipeline integrity training. This facility provides classroom and on-the-job training programs and allows us to train employees in a controlled environment without the challenges of limited structure access and utility constraints. Additionally, during 2018, we acquired Northwest Lineman College, which specializes in pre-apprenticeship training, apprenticeship training and specialized utility task training for electric workers, and has been recently expanded to include curriculum for the gas distribution and communications industries.
Our operating units performing more sophisticated and technical jobs utilize, when applicable, training programs provided by the International Brotherhood of Electrical Workers/National Electrical Contractors Associations (IBEW/NECA) Apprenticeship Program, training programs sponsored by the four trade unions administered by the Pipe Line Contractors Association (PLCA), apprenticeship training programs sponsored by the Canadian Union of Skilled Workers (CUSW) or our equivalent programs. Under the IBEW/NECA Apprenticeship Program, all journeyman linemen are required to complete classroom education and on-the-job training, as well as extensive testing and certification. Certain of our operating units have established apprenticeship training programs approved by the U.S. Department of Labor that prescribe equivalent training requirements for employees who are not otherwise subject to the requirements of the IBEW/NECA Apprenticeship Program. Similarly, the CUSW offers apprenticeship training for construction and maintenance electricians and powerline technicians that requires classroom education and on-the-job training. In addition, the Laborers International Union of North America, the International Brotherhood of Teamsters, the United Association of Plumbers and Pipefitters and the International Union of Operating Engineers have training programs specifically designed for developing and improving the skills of their members who work in the pipeline construction industry. Our operating units also share best practices for training and educational programs and safety policies.

Materials

Our customers typically supply most or all of the materials required for each job. However, for some of our contracts, we may procure all or part of the materials required. As we continue to expand our comprehensive engineering, procurement and construction offerings, the cost of materials may become a proportionately larger component of our consolidated cost of services. We do not anticipate experiencing any significant procurement difficulties, as we purchase our required materials from a variety of sources; however, tariffs or other changes in U.S. trade relations could result in increased costs for these materials.

Regulation

Our operations are subject to various federal, state, local and international laws and regulations including:

- licensing, permitting and inspection requirements applicable to contractors, electricians and engineers;

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- regulations relating to worker safety and environmental protection;
- permitting and inspection requirements applicable to construction projects;
- wage and hour regulations;
- regulations relating to transportation of equipment and materials, including licensing and permitting requirements;
- building and electrical codes; and
- special bidding, procurement and other requirements on government projects.

We believe that we are in compliance with all material licensing and regulatory requirements that are necessary to conduct our operations. Our failure to comply with applicable regulations could result in substantial fines or revocation of our operating licenses, as well as give rise to termination or cancellation rights under our contracts or disqualify us from future bidding opportunities.

Environmental Matters and Climate Change Impacts

We are committed to the protection of the environment and train our employees to perform their duties accordingly. We are subject to numerous federal, state, local and international environmental laws and regulations governing our operations, including the handling, transportation and disposal of non-hazardous and hazardous substances and wastes, as well as emissions and discharges into the environment, including discharges to air, surface water, groundwater and soil. We also are subject to laws and regulations that impose liability and cleanup responsibility for releases of hazardous substances into the environment. Under certain of these laws and regulations, liability can be imposed for cleanup of previously owned or operated properties or currently owned properties at which hazardous substances or wastes were discharged or disposed of by a former owner or operator, regardless of whether we directly caused the contamination or violated any law at the time of discharge or disposal. The presence of contamination from such substances or wastes could also interfere with ongoing operations or adversely affect our ability to sell or lease the property or use it as collateral for financing. In addition, we could be held liable for significant penalties and damages under certain environmental laws and regulations or be subject to revocation of certain licenses or permits, which could materially and adversely affect our business, results of operations and cash flows. Our contracts with customers may also impose liability on us for environmental issues that arise through the performance of our services. From time to time, we may incur costs and obligations for correcting environmental noncompliance matters and for remediation at or relating to certain of our properties. We believe that we are in substantial compliance with our environmental obligations and that any such obligations will not have a material adverse effect on our business or financial performance.

The potential impact of climate change on our operations is uncertain. Climate change may result in, among other things, changes in rainfall and storm patterns and intensity and increased temperature and sea levels. As discussed elsewhere in this Annual Report on Form 10-K (Annual Report), including in Item 1A. *Risk Factors*, our operating results are significantly influenced by weather, and significant changes in historical weather patterns could significantly impact our future operating results. For example, if climate change results in drier weather and more accommodating temperatures over a greater period of time, we may be able to increase our productivity, which could positively impact our revenues and gross margins. Conversely, if climate change results in a greater amount of rainfall, snow, ice or other less accommodating weather conditions, we could experience reduced productivity, which could negatively impact our revenues and gross margins. Further, while an increase in severe weather events, such as hurricanes, tropical storms, blizzards and ice storms, can create a greater amount of emergency restoration service work, it often also can result in delays or other negative consequences for our existing projects, which could negatively impact our financial results. Climate change may also affect the conditions in which we operate, and in some cases, expose us to potentially increased liabilities associated with those environmental conditions. For example, severe drought in the western United States has increased the risk of wildfires, which in turn has potentially exposed electrical operators and contractors to increased risk of liability.

Concerns about climate change could also result in potential new regulations, regulatory actions or requirements to fund energy efficiency activities, any of which could negatively affect our customers and decrease demand for our services, in particular our pipeline construction services, or result in increased costs associated with our operations. For example, any decrease in demand for fossil fuels could negatively impact demand for certain of our pipeline and industrial services. We also maintain a large fleet and a significant amount of construction machinery, all of which could be impacted by new regulations related to greenhouse gas emissions from such sources.

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Risk Management and Insurance

We are insured for employer's liability, workers' compensation, auto liability and general liability claims. Under these programs, the deductible for employer's liability is $1.0 million per occurrence, the deductible for workers' compensation is $5.0 million per occurrence, and the deductibles for auto liability and general liability are $10.0 million per occurrence. We manage and maintain a portion of our casualty risk through our wholly-owned captive insurance company, which insures all claims up to the amount of the applicable deductible of our third-party insurance programs. In connection with our casualty insurance programs, we are required to issue letters of credit to secure our obligations. We also have employee health care benefit plans for most employees not subject to collective bargaining agreements, of which the primary plan is subject to a deductible of $0.5 million per claimant per year.

Losses under all of these insurance programs are accrued based upon our estimate of the ultimate liability for claims reported and an estimate of claims incurred but not reported, with assistance from third-party actuaries. These insurance liabilities are difficult to assess and estimate due to unknown factors, including the severity of an injury, the extent of damage, the determination of our liability in proportion to other parties and the number of incidents not reported. The accruals are based upon known facts and historical trends, and management believes such accruals are adequate.

We renew our insurance policies on an annual basis, and therefore deductibles and levels of insurance coverage may change in future periods. In addition, insurers may cancel our coverage or determine to exclude certain items from coverage, or we may elect not to obtain certain types or incremental levels of insurance based on the potential benefits considered relative to the cost of such insurance. In any such event, our overall risk exposure would increase, which could negatively affect our results of operations, financial condition and cash flows.

Seasonality and Cyclicality

Our revenues and results of operations can be subject to seasonal and other variations. These variations are influenced by weather, customer spending patterns, bidding seasons, receipt of required regulatory approvals, permits and rights of way, project timing and schedules, and holidays. Please read the section entitled *Seasonality; Fluctuations of Results; Economic Conditions* included in Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*.

Website Access and Other Information

Our website address is *www.quantaservices.com*. Interested parties may obtain free electronic copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and any amendments to these reports through our website under the heading *Investors & Media/Financial Info/SEC Filings* or through the website of the Securities and Exchange Commission (the SEC) at *www.sec.gov*. These reports are available on our website as soon as reasonably practicable after we electronically file them with, or furnish them to, the SEC. We will also make available to any stockholder, without charge, copies of our Annual Report on Form 10-K as filed with the SEC. For copies of this or any other Quanta publication, stockholders may submit a request in writing to Quanta Services, Inc., Attn: Corporate Secretary, 2800 Post Oak Blvd., Suite 2600, Houston, TX 77056, or by phone at 713-629-7600.

Investors and others should note that we announce material financial information and make other public disclosures of information regarding Quanta through SEC filings, press releases, public conference calls, and our website. We also utilize social media to communicate this information, and it is possible that the information we post on social media could be deemed material. Accordingly, we encourage investors, the media and others interested in our company to follow Quanta, and review the information we post, on the social media channels listed on our website in the *Investors & Media/Social Media* section.

This Annual Report, our website and our social media channels contain information provided by other sources that we believe is reliable. We cannot provide assurance that the information obtained from other sources is accurate or complete. No information on our website or our social media channels is incorporated by reference herein.

ITEM 1A. *Risk Factors*

Our business is subject to a variety of risks and uncertainties, including, but not limited to, the risks and uncertainties described below. The matters described below are not the only risks and uncertainties facing our company. Additional risks and uncertainties not known to us or not described below also may impair our business operations. If any of the following risks actually occur, our business, financial condition, results of operations and cash flows could be negatively affected, and we may not be able to achieve our goals or expectations. This Annual Report also includes statements reflecting assumptions, expectations, projections, intentions or beliefs about future events that are intended as "forward-looking statements" under the Private Securities Litigation Reform Act of 1995 and should be read in conjunction with the section entitled *Uncertainty of Forward-Looking Statements and Information* included in Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations.*

Our operating results may vary significantly from quarter to quarter.

Our business can be highly cyclical and subject to seasonal and other variations that can result in significant differences in operating results from quarter to quarter. For example, we typically experience lower gross and operating margins during winter months due to lower demand for our services and more difficult operating conditions in the Northern Hemisphere. Additionally, our quarterly results may be materially and/or adversely affected by:

- the timing and volume of work we perform and our performance with respect to ongoing projects;
- project delays, reductions in scope or cancellations, including as a result of permitting, regulatory or environmental processes, project performance, customer capital constraints, claimed force majeure events, protests or other political activity, or legal challenges;
- adverse weather conditions and significant weather events;
- variations in the size, scope and margins of projects we perform and the mix of our customers, contracts and business during any particular quarter;
- increases in construction, design, engineering or procurement costs;
- fluctuations in regional, national or global economic, political and market conditions, including as a result of tariffs or changes in U.S. trade relationships with other countries, which could result in decreased demand for our services;
- pricing pressures resulting from competition;
- the budgetary spending patterns of customers and federal, state and local governments;
- disruptions in our customers’ strategic plans, which could occur as a result of, among other things, emerging technologies, financial difficulties of our customers or changing environmental conditions;
- the magnitude of work performed under change orders and the timing of their recognition;
- liabilities and costs experienced in our operations that are not covered by, or that are in excess of, our third-party insurance, including significant liabilities that may arise from the inherently hazardous conditions of our operations (e.g., explosions, fires) and which could be exacerbated by the geographies in which we operate;
- disputes with customers or delays relating to billing and payment under our contracts and change orders, and our ability to successfully negotiate and obtain payment or reimbursement under our contracts and change orders;
- the resolution of, or unexpected or increased costs associated with, pending or threatened litigation, indemnity obligations or other claims asserted against us;
- liabilities associated with multiemployer pension plans in which our employees participate, including with respect to any withdrawal therefrom;
- significant fluctuations in foreign currency exchange rates;
- changes in accounting pronouncements that require us to account for items differently;
- payment risk associated with the financial condition of our customers, including those customers affected by the volatility of natural gas and oil prices or that have filed for bankruptcy protection;
- the termination or expiration of existing customer agreements;
- changes in bonding and lien requirements applicable to existing and new customer agreements;
- implementation of various information technology systems, which could temporarily disrupt day-to-day operations;

- the decision by our Board of Directors to pay a dividend and market expectations with respect to the payment and amount of any dividends;
- the recognition of tax impacts related to changes in tax laws or uncertain tax positions;
- the timing and magnitude of costs we incur to support growth internally or through acquisitions or otherwise;
- the timing and integration of acquisitions and the magnitude of the related acquisition and integration costs; and
- estimates and assumptions in determining our financial results, remaining performance obligations and backlog, including the timing and significance of impairments of long-lived assets, equity or other investments, receivables, goodwill or other intangible assets.

Accordingly, our operating results in any particular quarter may not be indicative of the results that can be expected for any other quarter or for the entire year.

Negative economic and market conditions, including low oil and natural gas prices, may adversely impact our customers' future spending as well as payment for our services and, as a result, our operations and growth.

Stagnant or declining economic conditions can adversely impact the demand for our services and result in the delay, reduction or cancellation of certain projects. In addition, economic and market conditions specifically affecting the industries we serve could adversely affect our business, financial condition, results of operations and cash flows. A number of factors, including financing conditions and potential bankruptcies in the industries we serve or a prolonged economic downturn or recession, could adversely affect our customers and their ability or willingness to fund capital expenditures in the future or pay for past services. Consolidation, competition, capital constraints or negative economic conditions in the electric power, energy or communications industries may also result in reduced spending by, or the loss of, one or more of our customers.

Our Pipeline and Industrial Infrastructure Services segment is exposed to risks associated with the oil and gas industry. These risks, which are not subject to our control, include the volatility and cyclical nature of natural gas and oil prices and the resulting effect on demand for the services we provide, and a slowdown in the development or discovery of natural gas and/or oil reserves. Specifically, lower natural gas and oil prices can result in decreased spending by our customers in our Pipeline and Industrial Infrastructure Services segment. Declines in prices, or perceived risk thereof, may result in our customers reducing or delaying capital spending on larger pipeline projects, gas gathering and compressor systems and related infrastructure, resulting in less demand for our services. If the profitability of our Pipeline and Industrial Infrastructure Services segment were to decline, our overall financial position, results of operations and cash flows could also be adversely affected. Additionally, declines in natural gas and oil prices, and a resulting decline in the development of resource plays and oil and natural gas production, could negatively impact our Electric Power Infrastructure Services segment. For example, the low price of oil has had an adverse impact on the Canadian economy, which has impacted demand for some of our electric power services in Canada.

Further, many of our customers finance their projects through the incurrence of debt or the issuance of equity. During depressed markets, our customers may be unable to access capital markets or otherwise obtain financing for budgeted capital expenditures. A reduction in cash flow or the lack of availability of debt or equity financing for our customers could result in a reduction in our customers' spending for our services and may also impact the ability of our customers to pay amounts owed to us, which could have a material adverse effect on our business, financial condition, results of operations, cash flows and our ability to grow.

A variety of issues outside of our control could affect the timing of and our performance on projects, which may result in additional costs to us, reductions or delays in revenues or the payment of liquidated damages.

Our business is dependent in part upon projects that can be cyclical in nature and are subject to risks of delay or cancellation. The timing of or failure to obtain contracts, delays in awards of, start dates for or completion of projects and the cancellations of projects could result in significant periodic fluctuations in our business, financial condition, results of operations and cash flows.

Many projects involve challenging engineering, permitting, procurement and construction phases that may occur over extended time periods, sometimes several years. We may also encounter difficulties as a result of delays in design, engineering information or materials to be completed or procured by us, the customer or a third party; delays or difficulties in equipment and material delivery; schedule changes; delays due to our or our customers' failure to timely obtain permits or rights of way or meet other regulatory requirements or permitting conditions; weather-related delays;

protests, legal challenges or other political activity; and other factors. Furthermore, regulatory requirements for a project may change during the course of our work, which can result in the suspension of work as permits are reissued or updated. Projects where we provide engineering, procurement and construction services present additional performance risks due to the amount of work and complexity involved. The bidding processes for these projects can also be longer, often taking six to nine months, and regulatory and permitting delays on these projects tend to be more challenging and cause more timing uncertainty.

In addition, we contract with third-party suppliers and subcontractors to assist us with the completion of contracts. Any delay or failure by suppliers or by subcontractors in the completion of their portion of the project may result in delays in the overall progress of the project or cause us to incur additional costs. A failure by us to properly manage and invest in our equipment fleet could also negatively impact project performance and our financial condition, results of operations and cash flows. We also may encounter project delays due to local opposition to a project, which may include injunctive actions or other legal proceedings or public protests or other political activity.

Many of these difficulties and delays are beyond our control and could negatively impact our ability to complete the project in accordance with the original delivery schedule or achieve our anticipated margin on the project. Delays and additional costs may be substantial and not recoverable from third parties, and in some cases, we may be required to compensate the customer for such delays. In certain circumstances, we guarantee project completion or performance by a scheduled date. Failure to meet any of our schedules or performance requirements could also result in additional costs or penalties, including liquidated damages, and such amounts could exceed expected project profit. In extreme cases, the above-mentioned factors could cause project cancellations, and we may not be able to replace such projects with similar projects or at all. Such delays or cancellations may impact our reputation or relationships with customers, adversely affecting our ability to secure new contracts, and could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our business is labor intensive, and we may be unable to attract and retain qualified employees, or incur significant costs in the event we are unable to efficiently manage our workforce.

Our ability to maintain our productivity and profitability is limited by our ability to employ, train and retain the necessary skilled personnel. We may not be able to maintain an adequately skilled labor force necessary to operate efficiently and to support our growth strategy. For instance, we may experience shortages of qualified journeyman linemen, who are integral to the provision of transmission and distribution services under our Electric Power Infrastructure Services segment. The commencement of new, large-scale infrastructure projects or increased demand for infrastructure improvements, as well as the aging electric utility workforce, may also further reduce the pool of skilled workers available to us. In addition, in our Pipeline and Industrial Infrastructure Services segment, there is limited availability of experienced supervisors and foremen that can oversee larger diameter pipeline projects. A shortage in the supply of these skilled personnel, as well as equipment operators and welders, creates competitive hiring markets and may result in increased labor expenses. Additionally, if we are unable to hire employees with the requisite skills, we may also be forced to incur significant education and training expenses. Labor shortages or increased labor costs could impair our ability to maintain our business or grow our revenues or profitability. Furthermore, the uncertainty of contract award timing and project delays can also present difficulties in managing our workforce size. Inability to efficiently manage our workforce may require us to incur costs resulting from excess staff, reductions in staff, or redundancies that could have a material adverse impact on our business, financial condition, results of operations and cash flows.

The loss of one or a few customers could have a material adverse effect on us.

A few customers have in the past and may in the future account for a significant portion of our revenues in any one year or over a period of several consecutive years. Although we have long-standing relationships with many of our significant customers, a significant customer may unilaterally reduce or discontinue business with us at any time or merge or be acquired by a company that decides to reduce or discontinue business with us. A significant customer could also file for bankruptcy protection or cease operations, which could result in reduced or discontinued business with us. The loss of business from a significant customer could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our failure to adequately recover on contract change orders or claims brought by us against customers related to payment terms and costs could materially and adversely affect our financial position, results of operations and cash flows.

We have in the past brought, and may in the future bring, claims against our customers related to, among other things, the payment terms of our contracts and change orders relating to our contracts. These types of claims occur due to, among other things, customer- or third party-caused delays or changes in project scope, which may result in additional costs, which may or may not be recovered until the claim is resolved. Under these circumstances, we generally negotiate with the customer for additional compensation; however, we are subject to the risk that we may be unable to obtain, through negotiation, arbitration, litigation or otherwise, adequate amounts to compensate us for the additional work or expenses incurred. Litigation or arbitration with respect to payment terms under contracts and change orders is generally lengthy and costly and may adversely affect our relationship with existing or potential customers, and it is often difficult to predict the timing or amount of any claim resolution. A failure to obtain adequate and prompt compensation for these matters could require us to record a reduction to revenues and gross profit recognized in prior periods under the percentage-of-completion accounting method. Any such adjustments could be substantial. We may also be required to invest significant working capital to fund cost overruns while the resolution of a claim is pending, which could adversely affect our business, financial condition, results of operations and cash flows.

Regulatory requirements affecting any of the industries we serve may result in delays or cancellations of projects or less demand for our services.

Because the vast majority of our revenue is derived from a few industries, the federal, state and local regulations affecting those industries, including, among other things, environmental, safety, and permitting requirements, have a material effect on our business, and increased regulatory requirements could adversely affect our business, financial condition, results of operations and cash flows. In recent years, our customers have faced heightened regulatory requirements and increased regulatory enforcement, which have resulted in delays and reductions in scope and cancellations of projects. Increased regulatory requirements have also decreased demand for our services in the past, and may do so in the future, potentially impacting our business, financial condition, results of operations, cash flows and our ability to grow. Additionally, certain regulatory requirements applicable to our customers are also required of us when we contract with such customers, and our inability to meet those requirements could also result in decreased demand for our services.

Our failure to accurately estimate project costs or successfully execute a project could result in reduced profits or losses that could adversely affect our business, financial condition, results of operations and cash flows.

We currently generate some of our revenues under fixed price contracts, including contracts for projects where we provide engineering, procurement and construction (EPC) services, and we expect to continue generating varying amounts of revenues under these types of contracts on various projects, such as electric power transmission line and mainline pipeline projects. Under these contracts, we assume risks related to project estimates and execution, and project revenues, profitability and costs can vary, sometimes substantially, from our original projections due to a variety of factors, including:

- unforeseen circumstances or project modifications not included in our cost estimates or covered by our contract for which we cannot obtain adequate compensation, including concealed or unknown environmental, geological or geographical conditions;
- failure to accurately estimate project costs or accurately establish the scope of our services covered by the project contract;
- unanticipated technical problems, including design or engineering issues;
- inability to achieve guaranteed performance or quality standards with regard to engineering, construction or project management obligations;
- failure to properly make judgments in accordance with applicable professional standards, including engineering standards;
- changes in the cost of equipment, commodities, materials or labor;
- unanticipated costs or claims due to delays or failure to perform by customers, partners, subcontractors, suppliers or other third parties;
- contract termination or suspension and our inability to obtain reimbursement;
- delays or productivity issues caused by weather conditions or severe weather events;
- delays and additional costs associated with obtaining required permits or approvals;
- changes in laws or regulations;
- delays and additional costs attributable to legal challenges and protests and other political activity; and
- quality issues, including those requiring rework or replacement.

Additionally, we may be required to pay liquidated damages under certain of our contracts if we fail to meet schedule or performance requirements. These factors and events may result in reputational harm or cause actual revenues and gross profits for a project to differ from what we originally estimated, resulting in reduced profitability or losses on projects. Such differences could be material and could have a significant impact on our business, financial condition, results of operations and cash flows.

Changes in estimates related to revenues and costs associated with our contracts with customers could result in a reduction or an elimination of previously reported revenues and reduction of profits or the recognition of losses.

For fixed price contracts and certain unit-based contracts, we recognize revenue as performance obligations are satisfied over time and earnings or losses recognized on individual contracts are based on estimates of contract revenues, costs and profitability, as discussed in further detail in Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies* and Note 2 of the Notes to Consolidated Financial Statements included in Item 8. *Financial Statements and Supplementary Data*. Changes in contract estimates are recognized on a cumulative catch-up basis in the period in which the revisions to the estimates are made, and such changes can result in the recognition of revenue and profit in a current period for performance obligations satisfied in prior periods or the reversal of previously recognized revenue and the recognition of a loss. The impacts of a change in estimate are measured as the differences between the revenue and gross profit recognized in the prior period and the revenue and gross profit which would have been recognized had the revised estimate been used as the basis of recognition in the prior period. Contract losses are recognized in full when losses are determined to be probable and can be reasonably estimated.

Variable consideration amounts, including performance incentives, early pay discounts and penalties, may also cause changes in contract estimates. Contract consideration is adjusted for variable consideration when it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur once the uncertainty related to the variable consideration is resolved. The timing for recognition of these variable consideration amounts is uncertain, and therefore could have a significant impact on our financial condition, results of operations and cash flows.

In addition, we recognize amounts associated with change orders and/or claims as revenue when it is probable that the contract price will be adjusted and the amount of any such adjustment can be reasonably estimated. As a result, costs incurred related to change orders and/or claims may be recognized in periods prior to the recognition of the related revenue. Actual collection of claims could differ from estimated amounts and could result in a reduction or elimination of previously recognized revenues and earnings. In certain circumstances, it is possible that such adjustments could be significant and could result in a reduction or an elimination of previously reported revenues and a reduction in profits or recognition of losses on the associated contract.

Our revenues and profitability may be exposed to potential risk if a contract is terminated or canceled, our customers encounter financial difficulties or file bankruptcy or disputes arise with our customers.

Our contracts often require us to satisfy or achieve certain milestones in order to receive payment for the work performed, or in the case of cost-reimbursable contracts, provide support for billings in advance of receiving payment. As a result, we may incur significant costs or perform significant amounts of work prior to receipt of payment. If any of our customers do not proceed with the completion of projects, terminate or cancel a contract with us or default on their payment obligations, or if disputes arise with our customers with respect to the adequacy of billing support, we may face difficulties in collecting payment of amounts due to us for costs previously incurred. We have in the past brought, and may in the future bring, claims against our customers related to the payment terms of our contracts. A failure to promptly recover on these types of claims could have a negative impact on our financial condition, results of operations and cash flows. Additionally, any such claims may harm our future relationships with our customers.

Slowing economic conditions in the industries we serve, economic downturns or bankruptcies could also impair the financial condition of one or more of our customers and hinder their ability to pay us on a timely basis. Further, to the extent a customer files bankruptcy, certain payments made to us prior to the filing of the bankruptcy petition may be avoided and returned to the customer's bankruptcy estate. For example, on January 29, 2019, PG&E Corporation and Pacific Gas and Electric Company (collectively PG&E), filed for bankruptcy protection under Chapter 11 of the U.S. Bankruptcy Code, as amended, which could negatively impact, and is expected to delay, the collection of receivables owed to Quanta as of the filing date. See Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations — Concentrations of Credit Risk* for additional information. Additionally, many of our customers for larger projects are project-specific entities that do not have significant assets other than their interests in the project and may be more likely to encounter financial difficulties relating to their businesses. It may be difficult to collect amounts owed to us by customers experiencing financial difficulties or in bankruptcy, and accounts receivable from such customers may become uncollectible and ultimately have to be written off, which could have an adverse effect on our future financial condition, results of operations and cash flows.

Our operating results could be negatively affected by weather conditions and the nature of our work environment.
We perform substantially all of our services outdoors. Extraordinary or force majeure events, such as natural or man-made disasters, or other factors beyond our control could negatively impact our and our customers' ability to operate or increase our costs to operate. As an example, adverse weather conditions or events, such as extreme heat or cold, rainfall, snowfall, wind, an early thaw in Canada and the northern parts of the U.S., and hurricanes or other storms, may affect our productivity or may temporarily prevent us from performing services. The effect of weather delays on projects that are under fixed price arrangements may be greater if we are unable to adjust the project schedule for such delays, as the additional costs incurred as a result of the delays may not be reimbursed by our customers. Furthermore, our work is performed under a variety of conditions, including but not limited to, difficult terrain and difficult site conditions where delivery of materials and availability of labor are impacted or where there is exposure to harsh and hazardous conditions. A reduction in our productivity and efficiency in any given period or our inability to meet guaranteed schedules may adversely affect our financial condition, results of operations and cash flows.

Our business is subject to operational hazards, and we may not be insured against all potential liabilities.
Our business is subject to significant operational hazards due to the nature of services we provide and the conditions in which we operate. These hazards include electricity, fires, explosions, leaks, collisions, mechanical failures, offshore operation risks, and damage from severe weather conditions. Furthermore, certain of our customers operate energy-related infrastructure assets in locations and environments that increase the likelihood and/or severity of these operational hazards. In particular, we perform a significant amount of services for customers that operate electrical power and natural gas infrastructure assets in California and other locations that have recently experienced, and have a higher risk of, wildfires, some of which have exposed operators to significant additional costs and expenses and potentially significant additional liabilities. We also often operate in densely populated urban areas, which could increase the impact of any of these hazards or other accidents we experience.

As a result of these and other hazards, our operations could expose us to or result in liabilities, and because our services in certain instances may be integral to the operation and performance of our customers' infrastructure, such liabilities could arise even if our operations are not the cause of the harm. These liabilities could include, among other things, claims associated with personal injury, including severe injury or loss of life, and significant damage to property, equipment and the environment, and could lead to suspension of operations and/or material legal costs and liabilities. Insurance coverage may not be available to us or may be insufficient to cover the cost of these liabilities. If we are not fully insured or indemnified against such liabilities or a counterparty fails to meet its indemnification obligations to us, it could materially and adversely affect our business, financial condition, results of operations and cash flows. Further, any such liabilities or accidents could adversely affect our reputation or safety record, which could impact demand for our services or our ability to bid for certain work.

During the ordinary course of our business, we may become subject to lawsuits or indemnity claims, which could materially and adversely affect our business and results of operations.
We have in the past been, and may in the future be, named as a defendant in lawsuits, claims and other legal proceedings that arise in the ordinary course of our business. These actions may seek, among other things, compensation for alleged personal injury (including claims for loss of life), workers' compensation, employment discrimination, sexual harassment, workplace misconduct and other employment-related damages, compensation for breach of contract or property damage, environmental liabilities, multiemployer pension plan withdrawal liabilities, punitive damages, consequential damages, and civil penalties or other losses or injunctive or declaratory relief. In addition, we generally indemnify our customers for claims related to the services we provide and actions we take under our contracts, and, in some instances, we may be allocated risk through our contract terms for actions by our customers, subcontractors or other third parties. Because our services in certain instances may be integral to the operation and performance of our customers' infrastructure, we have been and may become subject to lawsuits or claims for any failure of the systems that we work on, even if our services are not the cause of such failures, and we could be subject to civil and criminal liabilities, which could be material. Insurance coverage may not be available or may be insufficient for these lawsuits, claims or legal proceedings. The outcome of any allegations, lawsuits, claims or legal proceedings, as well as any public reaction thereto, could result in significant costs and diversion of management's attention from our business. Payments of significant amounts, even if reserved, could materially and

adversely affect our business, reputation, financial condition, results of operations and cash flows. For details on our existing litigation, claims and other legal proceedings, refer to Note 14 of the Notes to Consolidated Financial Statements in Item 8. *Financial Statements and Supplementary Data.*

Unavailability or cancellation of third-party insurance coverage would increase our overall risk exposure, as well as disrupt our operations, and estimates of losses covered by our insurance policies could prove incorrect.

We maintain insurance coverage from third-party insurers as part of our overall risk management strategy and because some of our contracts require us to maintain specific insurance coverage limits. We are insured for employer’s liability, workers’ compensation, auto liability and general liability claims, but such insurance is subject to deductibles and limits and may be canceled or may not cover all of our losses. We manage and maintain a portion of our casualty risk through our wholly-owned captive insurance company, which insures all claims up to the amount of the applicable deductible of our third-party insurance programs. In connection with our casualty insurance programs, we are required to issue letters of credit to secure our obligations. We also have employee health care benefit plans for most employees not subject to collective bargaining agreements. For additional information on our current deductibles, see Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations — Contractual Obligations — Insurance*. Our insurance policies include various coverage requirements, including the requirement to give appropriate notice. If we fail to comply with these requirements, our coverage could be denied.

Additionally, there can be no assurance that our insurance coverages will be sufficient or effective under all circumstances or against all claims and liabilities asserted against us. We also renew our insurance policies on an annual basis, and therefore deductibles and levels of coverage offered by third parties may change in future periods. There can be no assurance that any of our existing third party insurance coverage will be renewed upon the expiration of the coverage period or that future coverage will be affordable at the required limits. In addition, our third-party insurers could fail, suddenly cancel our coverage or otherwise be unable to provide us with adequate insurance coverage. For example, should our insurers determine to exclude coverage for wildfires in the future, due to the increased risk of such events in certain geographies or otherwise, we could be exposed to significant liabilities and a potential disruption of our operations. If our risk exposure increases as a result of adverse changes in our insurance coverage, we could be subject to increased claims and liabilities that could negatively affect our business, financial condition, results of operations and cash flows.

Losses under all of our insurance programs are accrued based upon our estimate of the ultimate liability for claims reported and an estimate of claims incurred but not reported, with assistance from third-party actuaries. These insurance liabilities are difficult to assess and estimate due to unknown factors, including the severity of an injury, the extent of damage, the determination of our liability in proportion to other parties and the number of incidents not reported. The accruals are based upon known facts and historical trends, and management believes such accruals are adequate. If we were to experience insurance claims or costs significantly above our estimates, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

We may be unsuccessful at generating internal growth, which could adversely affect our financial condition, results of operations and cash flows.

Our ability to generate internal growth will be affected by, among other factors, our ability to:

- expand the range of services we offer to customers to address their evolving infrastructure needs;
- attract new customers;
- increase the number of projects performed for existing customers;
- hire and retain qualified employees;
- expand geographically, including internationally; and
- address the challenges presented by stringent regulatory, environmental and permitting requirements and difficult economic or market conditions that may affect us or our customers.

In addition, our customers may cancel, delay or reduce the number or size of projects available to us for a variety of reasons, including capital constraints or inability to meet regulatory requirements. Many of the factors affecting our ability to generate internal growth are beyond our control, and we cannot be certain that our strategies for achieving internal growth will be successful. Inability to successfully generate internal growth may adversely affect our financial condition, results of operations and cash flows.

Our business is highly competitive, and competitive pressures could affect our business, financial condition, results of operations and cash flows.

The specialty contracting business is served by numerous small, owner-operated private companies, some public companies and several large regional companies. Relatively few barriers prevent entry into some areas of our business, and as a result, any organization that has adequate financial resources and access to technical expertise may become one of our competitors.

In addition, some of our competitors have significant financial, technical and marketing resources. We cannot be certain that our competitors do not have or will not develop the expertise, experience and resources to provide services that are superior in both price and quality to our services. Similarly, we cannot be certain that we will be able to maintain or enhance our competitive position within the specialty contracting business or maintain our current customer base. Certain of our competitors may have lower overhead cost structures, and therefore may be able to provide the required services at lower rates than us. We also face competition from in-house service organizations of our existing or prospective customers. Service providers in the industries we serve are capable of performing, or acquiring businesses that perform, some of the same types of services we provide, and we cannot be certain that our existing or prospective customers will continue to outsource these services in the future.

Furthermore, a substantial portion of our revenues is directly or indirectly dependent upon obtaining new contracts. The timing of project awards is unpredictable and often involves complex and lengthy negotiations and bidding processes. These processes could be impacted by a wide variety of factors, including price, governmental approvals, financing contingencies, commodity prices, environmental conditions and overall market and economic conditions. The competitive environment we operate in could also affect the timing of contract awards and the commencement or progress of work under awarded contracts. For example, based on rapidly changing competition dynamics, we have experienced, and may in the future experience, more competitive pricing in certain markets, such as the smaller scale transmission and distribution electric power market. Our bids also may not be successful due to, among other things, a potential customer's perception of our ability to perform the work or the technological advantages held by our competitors. Additionally, changing competitive pressures could present difficulties in matching workforce size with available contract awards. As a result, the competitive environment we operate in could have a material adverse effect on our business, financial condition, results of operations and cash flows and could cause our results of operations and cash flows to fluctuate significantly from quarter to quarter.

Technological advancements that compete with our customers' businesses or alter the services our customers require may also result in reduced demand for our services. For example, changes in technology, particularly with respect to efficient battery storage or the emergence of new, developing or alternative sources of power generation, may result in less demand for existing sources of power generation and for natural gas and oil, which could result in less demand for the services we provide.

Many of our contracts may be canceled or suspended on short notice or may not be renewed upon completion or expiration, and we may be unsuccessful in replacing our contracts in such events, which may adversely affect our financial condition, results of operations and cash flows.

We could experience a decrease in our revenues, net income and liquidity if any of the following occur:

- our customers cancel or suspend a significant number of contracts or contracts having significant value;
- we fail to renew a significant number of our existing contracts;
- we complete a significant number of non-recurring projects and cannot replace them with similar projects; or
- we fail to reduce operating and overhead expenses consistent with any decrease in our revenues.

Many of our customers may cancel or suspend our contracts on short notice, typically 30 to 90 days, even if we are not in default under the contract. Certain of our customers assign work to us on a project-by-project basis under master service agreements. Under these agreements, our customers generally have no obligation to assign a specific amount of work to us. Our operations could decline significantly if the anticipated volume of work is not assigned to us, which will be more likely if customer spending decreases due to, for example, unfavorable economic conditions. Many of our contracts, including our master service agreements, are opened to public bid at the expiration of their terms. There can be no assurance that we will be the successful bidder on our existing contracts that are subject to re-bid in the future.

The nature of our business exposes us to potential liability for warranty, engineering and other claims, which could materially and adversely affect our business and results of operations.

Under our contracts with customers, we typically provide warranties for the services and materials we provide, guaranteeing the work performed against, among other things, defects in workmanship, and may agree to indemnify our customers for losses related to our services. The length of the warranty periods we agree to vary and may extend for several years. As much of the work we perform is inspected by our customers for any defects in construction prior to acceptance of the project, the warranty claims that we have historically received have not been substantial. Additionally, materials used in construction are often provided by the customer or are warranted against defects by the supplier. However, certain projects may have longer warranty periods and include facility performance warranties that may be broader than the warranties we generally provide. In these circumstances, if warranty claims occur, we are generally required to re-perform the services and/or repair or replace the warranted item and any other facilities impacted thereby, at our sole expense, and we could also be responsible for other damages if we are not able to adequately satisfy our warranty obligations. In addition, we may be required under contractual arrangements with our customers to warrant any defects or failures in materials we provide. While we generally require the materials suppliers to provide us warranties that are consistent with those we provide to our customers, if any of these suppliers default on their warranty obligations to us, we may incur costs to repair or replace the defective materials. Costs incurred as a result of warranty claims could adversely affect our business, financial condition, results of operations and cash flows.

Furthermore, our business involves professional judgments regarding the planning, design, development, construction, operations and management of electric power transmission, communications and pipeline infrastructure. Because our projects are often technically complex, our failure to make judgments and recommendations in accordance with applicable professional standards, including engineering standards, could result in damages. A significantly adverse or catastrophic event at a project site or completed project resulting from the services we performed could result in significant professional or product liability, personal injury (including claims for loss of life) or property damage claims or other claims against us, as well as reputational harm. These liabilities could exceed our insurance limits or could impact our ability to obtain third-party insurance in the future. In addition, customers, subcontractors or suppliers who have agreed to indemnify us against any such liabilities or losses might refuse or be unable to pay us. An uninsured claim, either in part or in whole, if successful and of a material magnitude, could have a substantial impact on our business, financial condition, results of operations and cash flows.

Our failure to adequately protect critical data, sensitive information and technology systems could materially affect our business, financial condition, results of operations and cash flows or result in harm to our reputation.

We rely on computer, information, and communications technology and systems to manage our operations and other business processes and to protect sensitive company information. We also collect and retain information about our customers, stockholders, vendors and employees, all of which expect that we will adequately protect such information. Breaches of our data security systems, which could result from cyber-attacks, the accidental release of sensitive information by an employee, or acts of terrorism against us, our customers and/or our vendors, could cause service disruption or, in extreme circumstances, infiltration into, damage to or loss of control of our customers' energy infrastructure systems. Strategic targets, such as the energy-related assets on which we may work, may be at greater risk of cyber-attacks or acts of terrorism than other targets. Any such breach could subject us to significant liabilities, cause damage to our reputation or customer relationships, or result in regulatory investigations or other actions by governmental authorities. Additionally, cyber-attacks and other disruptions to our data security systems and processes may occur and could result from, for example, theft, storms or other natural phenomena, information technology solution failures, network disruptions, and phishing and similar cyber-frauds. These could result in compromises of our payment systems, monetary losses, delays in the processing of transactions or the reporting of financial results, the unintentional disclosure or misappropriation of confidential or proprietary company information (including for the purpose of transacting in our stock), or the inadvertent release of customer, stockholder, vendor or employee data. Network security and internal control measures have been implemented to address such attacks and disruptions. However, there can be no assurance that such attacks or disruptions will not occur, and any such attack or disruption could go unnoticed for some period of time.

Furthermore, the continuing and evolving threat of cyber-attacks has resulted in increased legislative and regulatory focus on these issues. For example, new legislation and regulatory requirements, as well as contractual commitments, may affect how we must store, use, transfer and process the confidential information of our employees, customers, vendors and stockholders. To the extent we face new or changing legislative, regulatory or contractual requirements concerning cyber-security or data privacy and protection, we may be required to expend significant additional resources to meet such requirements.

Changes in government spending and legislative actions and initiatives relating to renewable energy and electric power may adversely affect demand for our services.

Demand for our services may not result from renewable energy initiatives. While many states currently have mandates in place that require specified percentages of power to be generated from renewable sources, those mandates could be reduced or made optional, thereby reducing, delaying or eliminating renewable energy development. Additionally, renewable energy is generally more expensive to produce than energy from traditional sources and may require additional power generation sources as backup. The locations of renewable energy projects are often remote and are not viable unless new or expanded transmission infrastructure to transport the power to demand centers is economically feasible. Furthermore, funding for renewable energy initiatives is uncertain and in the past has been constrained by the availability of credit. These factors could result in fewer renewable energy projects than anticipated and a delay in the construction of these projects and related infrastructure, which could negatively impact our business.

Other current and potential legislative or regulatory initiatives may not result in increased demand for our services. Examples include legislation or regulations that require utilities to meet reliability standards, ease siting and right-of-way issues for the construction of transmission lines, and encourage installation of new electric power transmission and renewable energy generation facilities. It is not certain whether existing legislation will create sufficient incentives for new projects, when or if proposed legislative initiatives will be enacted or whether any potentially beneficial provisions will be included in the final legislation.

There are also a number of legislative and regulatory proposals and global, non-binding agreements that address greenhouse gas emissions, which are in various phases of discussion or implementation. The outcome of these pending federal and state proposals and possible future proposals could negatively affect the operations of our customers through costs of compliance or restraints on projects, which could reduce their demand for our services.

Remaining performance obligations and backlog may not be realized or may not result in profits.
Our remaining performance obligations and backlog are difficult to determine with certainty. Customers often have no obligation under our contracts to assign or release work to us, and many contracts may be terminated on short notice. Reductions in remaining performance obligations and backlog due to cancellation or reduction in scope of one or more contracts or projects by a customer or for other reasons could significantly reduce the revenues and profit we actually receive from contracts. In the event of a project cancellation or reduction in scope, we may be reimbursed for certain costs but would not have a contractual right to the total revenues reflected in our remaining performance obligations and backlog. The remaining performance obligations and backlog we obtain in connection with companies we acquire may not be as large as we believed and may not result in the revenues or profits we expected at the time of acquisition. In addition, projects that are delayed may remain in remaining performance obligations and backlog for extended periods of time. All of these uncertainties are heightened by negative economic conditions and their impact on our customers' spending, as well as the effects of regulatory requirements and weather conditions. Consequently, our estimates of remaining performance obligations and backlog may not be accurate, and we may not be able to realize our estimated remaining performance obligations and backlog.
Furthermore, backlog is not a term recognized under GAAP, and our methodology for determining backlog may not be comparable to the methodologies used by other companies. For a discussion of how we calculate backlog for our business, please see *Backlog* in Item 1. *Business*.
Our financial results are based upon estimates and assumptions that may differ from actual results.
In preparing our consolidated financial statements in conformity with GAAP, several estimates and assumptions are used by management to report the assets, liabilities, revenues and expenses recognized during the periods presented and to determine the contingent assets and liabilities known to exist as of the date of the financial statements. These estimates and assumptions are necessary because certain information used in the preparation of our financial statements is dependent on future events, cannot be calculated with a high degree of precision from available data or cannot be readily calculated based on generally accepted methodologies. In some cases, these estimates are particularly difficult to determine, and we must exercise significant judgment. Estimates are used primarily in our assessment of the allowance for doubtful accounts, valuation of inventory, useful lives of assets, fair value assumptions in analyzing goodwill, other intangibles and long-lived asset impairments, equity and other investments, loan receivables, purchase price allocations, acquisition-related contingent consideration liabilities, liabilities for insurance and other claims and guarantees, multiemployer pension plan withdrawal liabilities, revenue recognition for construction contracts inclusive of contractual change orders and claims, share-based compensation, operating results of reportable segments, provision (benefit) for income taxes and the calculation of uncertain tax positions. Actual results for all estimates could differ materially from the estimates and assumptions that we use, which could have a material adverse effect on our financial condition, results of operations and cash flows.
Our inability to successfully execute our acquisition strategy may have an adverse impact on our growth strategy.
Our business strategy includes expanding our presence in the industries we serve through strategic acquisitions of companies that complement or enhance our business. The number of acquisition targets that meet our criteria may be limited. We may also face competition for acquisition opportunities, and other potential acquirers may offer more favorable terms or have greater financial resources available for potential acquisitions. This competition may further limit our acquisition opportunities and our ability to grow through acquisitions or could raise the prices of acquisitions and make them less accretive, or possibly not accretive, to us. Failure to consummate future acquisitions could negatively affect our growth strategies. Additionally, the acquisitions we complete may involve significant cash expenditures, the incurrence or assumption of debt or burdensome regulatory requirements, and any acquisition may ultimately have a negative impact on our business, financial condition, results of operations and cash flows.
We may be unsuccessful at integrating businesses that either we have acquired or that we may acquire in the future, which may reduce the anticipated benefit from acquired businesses.
As a part of our business strategy, we have acquired, and may seek to acquire in the future, companies that complement or enhance our business. The success of this strategy will depend on our ability to realize the anticipated benefits from the acquired businesses, such as the expansion of our existing operations, elimination of redundant costs and capitalizing on cross-selling opportunities. To realize these benefits, however, we must successfully integrate the operations of the acquired businesses with our existing operations. Integrating our acquired businesses involves a

number of special risks, including:

- failure of an acquired business to achieve the results we expect;
- diversion of our management’s attention from operational and other matters;

- difficulties integrating the operations and personnel of an acquired business;
- additional financial reporting and accounting challenges associated with integrating an acquired business;
- inability to retain key personnel of an acquired business;
- risks associated with unanticipated events or liabilities associated with the operations of an acquired business;
- loss of business due to customer overlap or other factors;
- risks and liabilities arising from the prior operations of an acquired business, such as performance, operational, safety, workforce or other compliance or tax issues, some of which we may not have discovered during our due diligence and may not be covered by indemnification obligations; and
- potential disruptions of our business.

We cannot be sure that we will be able to successfully complete the integration process without substantial costs, delays, disruptions or other operational or financial problems. If we do not implement proper overall business controls, our decentralized operating strategy could result in inconsistent operating and financial practices at the companies we acquire. Additionally, failure to successfully integrate acquired businesses could adversely impact our business, financial condition, results of operations and cash flows.

Our investments expose us to risks and may result in conflicts of interest that could adversely impact our business or result in reputational harm.

We have entered into strategic relationships and investment arrangements with various partners, including customers and infrastructure investors, through which we have invested and intend to invest in infrastructure assets. We expect this activity to continue in the future, both through direct investments by us and investments through the partnership structure we formed with select infrastructure investors. For additional information on our recent investments, see Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations — Recent Acquisitions, Investments and Divestitures*.

These types of investments may expose us to increased risks, including poor performance by the infrastructure projects in which we have invested due to, among other things, difficult market or economic conditions or slowdowns (which may occur across one or more industries, sectors or geographies) or changes to the supply or demand and fluctuations in the price of commodities. That negative performance could result in lower investment returns for us and our customers and infrastructure investors, as well as a decline in value or total loss of our investments and the possible sale of our investments at values below our initial projections, including at a loss, all of which could adversely affect our business, financial condition, results of operations and cash flows. Additionally, poor performance by our investments, in particular investments through our capital partnership structure, could result in reputational harm to Quanta that impairs our ability to raise or participate in raising new funds for future investment opportunities, which in turn could adversely affect our ability to secure certain future projects. Further, our relationship with a customer that partners with us in a poorly performing investment could become impaired, which may negatively impact our ability to continue providing services to that customer.

Conflicts of interest may also exist or arise for us in relation to our investment partners as a result of our capital partnership structure or the structure of our other investment arrangements. For example, in these structures, Quanta may be the contractor for a project as well as an equity investor and the manager of investments in that project. In those instances, conflicts of interest may exist for such things as contractor pricing and the handling of contractor change orders and other claims. While we have taken certain actions that we believe minimize or address these and other anticipated conflicts of interest, including through internal management practices and the terms of our agreements with investment partners, our failure to properly manage such conflicts of interest could expose us to liability or harm our relationships with investment partners, which could impact our business, financial condition, results of operations and cash flows or cause reputational harm to Quanta.

Our results of operations could be adversely affected as a result of asset impairments.

Our results of operations and financial condition could be adversely affected by impairments to goodwill, other intangible assets, receivables, long-lived assets or investments. For example, when we acquire a business, we record goodwill in an amount equal to the amount we paid for the business minus the fair value of the net tangible assets and other intangible assets of the acquired business. Goodwill and other intangible assets that have indefinite useful lives cannot be amortized, but instead must be tested at least annually for impairment. For additional description on this impairment testing, please read Item 7. *Management's*

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Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies. We have recorded impairments in the past, and any future impairments, including impairments of goodwill, intangible assets, long-lived assets or investments, could have a material adverse effect on our financial condition and results of operations for the period in which the impairment is recognized. For example, during the fourth quarter of 2018, we recorded a $49.4 million asset impairment charge related to the winding down of certain oil-influenced operations and assets.

In addition, we enter into various types of investment arrangements in the normal course of business, each having unique terms and conditions. These investments may include equity interests we hold in business entities, including general or limited partnerships, contractual joint ventures or other forms of equity or profit participation. These investments may also include our participation in different finance structures such as the extension of loans to project specific entities, the acquisition of convertible notes issued by project specific entities or other strategic financing arrangements. Our equity method investments are carried at original cost and are included in “Other assets, net” in our consolidated balance sheet and are adjusted for our proportionate share of the investees’ net income (loss) and distributions. Equity investments are reviewed for impairment by assessing whether there has been a decline in the fair value of the investment below the carrying amount and whether that decline is considered to be other than temporary. In making this determination, factors such as the ability to recover the carrying amount of the investment and the inability of the investee to sustain future earnings capacity are evaluated in determining whether an impairment has occurred and should be recognized.

We extend credit to customers for purchases of our services and may enter into longer-term deferred payment arrangements or provide other financing or investment arrangements with certain of our customers, which subjects us to potential credit or investment risk that could, if realized, adversely affect our financial condition, results of operations and cash flows.

We grant credit, generally without collateral, to our customers, which include electric power utilities, energy companies, communications providers, governmental entities, general contractors, and builders, owners and managers of renewable energy facilities and commercial and industrial properties located primarily in the United States, Canada, Australia and Latin America. We may also agree to allow our customers to defer payment on projects until certain milestones have been met or until the projects are substantially completed, and customers typically withhold some portion of amounts due to us as retainage. In addition, we may provide other forms of financing to our customers or make investments in our customers’ projects, typically in situations where we also provide services in connection with the projects. Our payment arrangements subject us to potential credit risk related to changes in business and economic factors affecting our customers, including material changes in our customers’ revenues or cash flows. These changes may also reduce the value of any financing or equity investment arrangements we have with our customers. Many of our customers have been negatively impacted by uncertain economic conditions in recent years, and certain customers have experienced financial difficulties (including bankruptcy), which could impact our ability to collect amounts owed to us, delay the collection of receivables from them or impair the value of our investments in them. Further, to the extent a customer files bankruptcy, certain payments made to us prior to the filing of the bankruptcy petition may be avoided and returned to the customer’s bankruptcy estate.

If we are unable to collect amounts owed to us, or retain amounts paid to us, our cash flows would be reduced, and we could experience losses if those amounts exceed current allowances. We would also recognize losses with respect to any investments that are impaired as a result of our customers’ financial difficulties or bankruptcies. The risk of loss may increase for projects where we provide services and make a financing or equity investment. Losses experienced could materially and adversely affect our financial condition, results of operations and cash flows.

The loss of key personnel could disrupt our business.

We depend on the continued efforts of our executive officers and senior management, including the management at each of our operating units. Although we typically enter into employment agreements with our executive officers and other key employees for initial terms of one to three years and subsequent one-year renewal options, we cannot be certain that any individual will continue in such capacity for any particular period of time. The loss of key management personnel, as well as our inability to attract, develop and retain qualified employees that can succeed key personnel, could negatively impact our ability to manage our business.

Our business growth could outpace the capability of our decentralized management infrastructure.

We cannot be certain that our management infrastructure will be adequate to support our operations as they expand. For example, the ability to internally communicate, coordinate and execute business strategies, plans and tactics may be negatively impacted by our increasing size and complexity. A decentralized structure places significant control and decision-making powers in the hands of our operating unit management. This contributes to the risk that we may be slower or less able to identify or react to problems affecting key business matters than we would in a more centralized environment. The lack of timely access to information may impact the quality of decision making by management. Our decentralized organization creates the possibility that our operating subsidiaries assume excessive risk without appropriate guidance from our centralized legal, accounting, tax, treasury and insurance functions as to the potential overall impact. Future growth could also impose significant additional responsibilities on members of our senior management, including the need to recruit and integrate new senior level managers and executives. We cannot be certain that we will be able to recruit and retain such additional managers and executives. To the extent that we are unable to manage our growth effectively, or are unable to attract and retain additional qualified management, we may not be able to expand our operations or execute our business plan.

We may be required to contribute cash to meet our underfunded obligations in certain multiemployer pension plans.

Our collective bargaining agreements generally require us to participate with other companies in multiemployer pension plans. To the extent those plans are underfunded, the Employee Retirement Income Security Act of 1974, as amended by the Multiemployer Pension Plan Amendments Act of 1980, may subject us to substantial liabilities under those plans if we withdraw from them or they are terminated or experience a mass withdrawal. For example, we have been involved in several litigation matters associated with our withdrawal from the Central States, Southeast and Southwest Areas Pension Plan, certain of which were settled in 2017.

In addition, the Pension Protection Act of 2006 added special funding and operational rules generally applicable to plan years beginning after 2007 for multiemployer plans that are classified as “endangered,” “seriously endangered” or “critical” status based on multiple factors (including, for example, the plan’s funded percentage, cash flow position and whether it is projected to experience a minimum funding deficiency). Plans in these classifications must adopt measures to improve their funded status through a funding improvement or rehabilitation plan, as applicable, which may require additional contributions from employers (which may take the form of a surcharge on benefit contributions) and/or modifications to retiree benefits. Certain plans to which we contribute or may contribute in the future are in “endangered,” “seriously endangered” or “critical” status. The amount of additional funds, if any, that we may be obligated to contribute to these plans in the future cannot be estimated due to uncertainty of the future levels of work that require the specific use of union employees covered by these plans, as well as the future contribution levels and possible surcharges on contributions applicable to these plans.

Our unionized workforce and related obligations could adversely affect our operations.

As of December 31, 2018, approximately 38% of our employees were covered by collective bargaining agreements. Although the majority of the collective bargaining agreements prohibit strikes and work stoppages, certain of our unionized employees have participated in strikes and work stoppages in the past, and we cannot be certain that strikes or work stoppages will not occur in the future. Strikes or work stoppages could adversely impact relationships with our customers and could cause us to lose business and experience a decline in revenues. Our ability to complete future acquisitions also could be adversely affected because of our union status for a variety of reasons. For instance, our union agreements may be incompatible with the union agreements of a business we want to acquire, and some businesses may not want to become affiliated with a union-based company. Additionally, we may increase our exposure to withdrawal liabilities for underfunded multiemployer pension plans to which an acquired company historically contributed or presently contributes.

Approximately 62% of our employees are not unionized. Certain of our customers require or prefer a non-union workforce, and they may reduce the amount of work assigned to us if our non-union labor crews become unionized, which could negatively affect our business, financial condition, results of operations and cash flows.

We may incur liabilities or suffer negative financial or reputational impacts relating to occupational health and safety matters.

Our operations are inherently dangerous and subject to extensive laws and regulations relating to the maintenance of safe conditions in the workplace. While we have invested, and will continue to invest, substantial resources in our occupational health and safety programs, our industry involves a high degree of operational risk, and there can be no assurance that we will avoid significant liability exposure. Although we have taken what we believe are appropriate precautions, we have suffered fatalities in the past and may suffer additional fatalities in the future. Serious accidents, including fatalities, may subject us to substantial penalties, civil litigation or criminal prosecution. Claims for damages to persons, including claims for bodily injury or loss of life, could result in substantial costs and liabilities. In addition, if our safety record were to substantially deteriorate over time or we were to suffer substantial penalties or criminal prosecution for violation of health and safety regulations, our customers could cancel our contracts and elect to procure future services from other providers. Unsafe work sites also have the potential to increase employee turnover, increase the costs of projects for our clients, and raise our operating costs. Any of the foregoing could result in financial loss, which could have a material adverse impact on our business, financial condition, results of operations and cash flows.

Risks associated with operating in international markets could restrict our ability to expand globally and harm our business and prospects.

Our overall business, financial condition, results of operations and cash flows could be negatively impacted by our activities and operations outside the United States. Although our international operations are presently conducted primarily in Canada, Australia and Latin America, we also perform work in other foreign countries. It is possible the number of countries in which we operate and the amount of work we perform in foreign countries could increase over the next few years. Changes in economic conditions, including those resulting from wars, civil unrest, acts of terrorism and other conflicts, or volatility in global markets, may adversely affect demand for our services and our customers' ability to pay for our services. In addition, at times we are paid for work outside the United States in currencies other than the U.S. dollar. Such payments may exceed our local currency needs, and, in certain instances, those amounts may be subject to temporary blocking or taxes or tariffs, and we may experience difficulties if we attempt to convert such amounts to U.S. dollars.

There are also numerous other risks inherent in conducting business internationally and with respect to international markets, including, but not limited to, changes in applicable regulatory requirements, foreign currency exchange fluctuations, instability of political, economic and social conditions in foreign countries, expropriation or nationalization of our assets, unfamiliar foreign legal systems and cultural practices, and complex U.S. and foreign tax regulations and other laws and international treaties. Additionally, uncertain or changing economic and political conditions may make it difficult for our clients, our vendors, and us to accurately forecast and plan future business activities. For example, recent changes to U.S. policies related to global trade and tariffs, as well as retaliatory trade measures implemented by other countries, have resulted in uncertainty surrounding the future of the global economy. Increases in the cost of steel, aluminum or other materials as a result of tariffs or trade policies may impact customer spending. We cannot predict the outcome of these changing trade policies or other unanticipated political conditions, nor can we predict the timing, strength or duration of any economic recovery or downturn worldwide or in our customers' markets. These risks could restrict our ability to provide services to international customers, operate our international business profitably or fund our strategic objectives, which could negatively impact our overall business, financial condition, results of operations and cash flows.

We could be adversely affected by our failure to comply with the laws applicable to our foreign activities, including the U.S. Foreign Corrupt Practices Act and other similar worldwide anti-bribery laws.

Applicable U.S. and non-U.S. anti-corruption laws, including but not limited to the U.S. Foreign Corrupt Practices Act (FCPA), prohibit us from, among other things, corruptly making payments to non-U.S. officials for the purpose of obtaining or retaining business. We pursue opportunities in certain parts of the world that experience government corruption, and in certain circumstances, compliance with these laws may conflict with longstanding local customs and practices. Our policies mandate compliance with all applicable anti-corruption laws. We have policies and procedures designed to ensure that our employees and intermediaries who work for us outside the United States comply with these laws, and we otherwise require such employees and intermediaries to comply with these laws. However, there can be no assurance that such policies, procedures and other requirements will protect us from liability under the FCPA or other similar laws for actions or inadvertences taken by our employees or intermediaries. Liability for such actions or inadvertences could result in severe criminal or civil fines, penalties, forfeitures, disgorgements or other sanctions. This in turn could have a material adverse effect on our reputation, business, financial condition, results of operations, and cash flows. In addition, detecting, investigating and resolving actual or alleged violations of such laws is expensive and could consume significant time and attention of our senior management, in-country management, and other personnel.

Fluctuating foreign currency exchange rates may have a greater impact on our financial results as we expand into international markets.

For the year ended December 31, 2018, we derived $2.60 billion, or 23.2%, of our consolidated revenues from foreign operations, the substantial majority of which was earned in Canada, Australia and Latin America. The functional currencies for our foreign operations are typically the currency of the country in which the foreign operating unit is located. Accordingly, our financial performance is subject to fluctuation due to changes in foreign currency exchange rates relative to the U.S. dollar. As the U.S. dollar strengthens against foreign currencies, our translation of foreign currency denominated revenues or expenses will result in lower U.S. dollar denominated revenues and expenses.

Conversely, if the U.S. dollar weakens against foreign currencies, the translation of these foreign currency denominated revenues or expenses will result in increased U.S. dollar denominated revenues and expenses. For example, during the year ended December 31, 2018, foreign revenues decreased by approximately $18 million in comparison with the year ended December 31, 2017 as a result of less favorable foreign currency exchange rates due primarily to the U.S. dollar strengthening against the Canadian and Australian dollars. Also, during the year ended December 31, 2017, foreign revenues increased by approximately $53 million in comparison with the year ended December 31, 2016 as a result of more favorable foreign currency exchange rates due primarily to the U.S. dollar weakening against the Canadian and Australian dollars.

We intend to expand the volume of services that we provide internationally. As a result, our reported financial condition, results of operations and cash flows may be further exposed to the effects that fluctuating exchange rates have on the process of translating the financial statements of our international operations and the remeasurement of transactions which are not denominated in the reporting units' functional currencies.

Compliance with and changes in tax laws could adversely affect our performance.

We are subject to extensive tax liabilities imposed by multiple jurisdictions, including income taxes, indirect taxes (excise/duty, sales/use, gross receipts, and value-added taxes), payroll taxes, franchise taxes, withholding taxes, and ad valorem taxes. New tax laws, treaties and regulations and changes in existing tax laws, treaties and regulations are continuously being enacted or proposed and could result in significant changes to the tax rate on our earnings, which could have a material impact on our earnings and cash flows from operations. For example, the Tax Cuts and Jobs Act of 2017 (the Tax Act), enacted in December 2017, made numerous changes to U.S. federal corporate tax laws that are anticipated to impact our effective tax rate in future periods. In addition, significant judgment is required in determining our worldwide provision for income taxes. In the ordinary course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. We are regularly under audit by tax authorities, and our tax estimates and tax positions could be materially affected by many factors, including the final outcome of tax audits and related litigation, the introduction of new tax accounting standards, legislation, regulations and related interpretations, our global mix of earnings, our ability to realize deferred tax assets and changes in uncertain tax positions. A significant increase in our tax rate could have a material adverse effect on our profitability and liquidity.

Our participation in joint ventures exposes us to liability and/or harm to our reputation for failures of our partners.

As part of our business, we have entered into joint venture arrangements and likely will continue to do so. The purpose of these joint ventures is typically to combine skills and resources to allow for the bidding and performance of particular projects. Success on these jointly performed projects can be adversely affected by the performance of our joint venture partners, over whom we may have little or no control. Differences in opinions or views between us and our joint venture partners could result in delayed decision-making or failure to agree on material issues that could adversely affect the business and operations of our joint ventures. Additionally, the failure by a joint venture partner to comply with applicable laws, regulations or client requirements could negatively impact our business.

We and our joint venture partners are generally jointly and severally liable for all liabilities and obligations of our joint ventures. If a joint venture partner fails to perform or is financially unable to bear its portion of required capital contributions or other obligations, including liabilities stemming from claims or lawsuits, we could be required to make additional investments, provide additional services or pay more than our proportionate share of a liability to make up for our partner's shortfall. Further, if our partners experience cost overruns or project performance issues that we are unable to adequately address, the customer may terminate the project, which could result in legal liability to us, harm our reputation and reduce our profit or increase our loss on a project.

Any deterioration in the quality or reputation of our brand could have an adverse impact on our reputation, business, financial condition or results of operations.

Our brand and our reputation are among our most important assets. The success of our business and our ability to attract and retain customers depends on brand recognition and reputation. Such dependence makes our business susceptible to reputational damage and to competition from other companies. Changes in management practices, or acts or omissions that adversely affect our business, including any crime, scandal, litigation, negative publicity, catastrophic fires or similar events or accidents and injuries can have a substantial negative impact on the operations of our business, and can cause a loss of consumer confidence. The considerable expansion in the use of social media over recent years has compounded the potential scope of the negative publicity that could be generated by such incidents. We could also face legal claims and adverse publicity from a variety of events or conditions, many of which are beyond our control. If the reputation or perceived quality of our brand declines, our reputation, business, financial condition or results of operations could be adversely affected.

We are in the process of implementing information technology (IT) solutions, which could temporarily disrupt day-to-day operations at certain operating units.

We continue to implement comprehensive IT solutions that we believe will allow for the interface between functions such as accounting and finance, human resources, operations, and fleet management. Continued development and implementation of the IT solutions will require substantial financial and personnel resources. While the IT solutions are intended to improve and enhance our information systems, implementation of new information systems at each operating unit exposes us to the risks of start-up of the new system and integration of that system with our existing systems and processes, including possible disruption of our financial reporting. There is no guarantee that we will realize economic or other intended benefits from continued development and implementation of the IT solutions. Additionally, the IT solutions may not be developed or implemented as timely or as accurately as planned. Failure to properly implement the IT solutions could result in substantial disruptions to our business, including coordinating and processing our normal business activities, testing and recording of certain data necessary to provide oversight over our disclosure controls and procedures and effective internal controls over our financial reporting, and other unforeseen problems.

Our dependence on suppliers, subcontractors and equipment manufacturers could expose us to risk of loss in our operations.

On certain projects, we rely on suppliers to obtain the necessary materials and subcontractors to perform portions of our services. We also rely on equipment manufacturers to provide us with the equipment required to conduct our operations. Limitations on the availability of suppliers, subcontractors or equipment manufacturers could negatively impact our operations, particularly in the event we rely on a single or small number of providers. The risk of a lack of available suppliers, subcontractors or equipment manufacturers may be heightened as a result of market and economic conditions. To the extent we cannot engage subcontractors or acquire equipment or materials, our operations could be negatively impacted. Additionally, successful completion of our contracts may depend on whether our subcontractors successfully fulfill their contractual obligations. If our subcontractors fail to perform their contractual obligations as a result of financial or other difficulties, or if our subcontractors fail to meet the expected completion dates or quality standards or fail to comply with applicable laws, we may be required to incur additional costs or provide additional services in order to make up such shortfall.

An increase in the prices of certain materials used in our business could adversely affect our business.

For certain contracts, including where we have assumed responsibility for procuring materials for a project, we are exposed to market risk of increases in certain commodity prices of materials, such as copper and steel, which are used as components of supplies or materials utilized in all of our operations. In addition, our customers' capital budgets may be impacted by the prices of certain materials. These prices could be materially impacted by general market conditions and other factors, including U.S. trade relationships with other countries or the imposition of tariffs. We are also exposed to increases in energy prices, including as they relate to gasoline prices for our rolling-stock fleet of approximately 45,000 units. While we believe we can increase our prices to adjust for some price increases in commodities, there can be no assurance that price increases of commodities, if they were to occur, would be recoverable. Additionally, some of our fixed price contracts do not allow us to adjust our prices and, as a result, increases in material or fuel costs could reduce our profitability with respect to such projects.

We may not have access in the future to sufficient funding to finance desired growth and operations.

If we cannot secure future funds or financing on acceptable terms, we may be unable to support our future operations or growth strategy. We use cash for acquisitions, investments and internal growth projects, and the timing and size of these efforts cannot be readily predicted and may be substantial. The use of cash on hand, cash from operations and cash from our senior secured credit facility to fund these efforts limits our financial flexibility and may increase our need to seek capital through additional debt or equity financings. We also rely on financing companies to fund the leasing of certain of our trucks and trailers, support vehicles and specialty construction equipment. Credit market conditions may cause certain of these financing companies to restrict or withhold access to capital for us to fund the leasing of additional equipment. A widespread lack of available capital to fund the leasing of equipment could negatively impact our future operations.

The credit agreement for our senior secured credit facility contains significant restrictions, including financial covenants and other restrictions on our ability to borrow amounts under the agreement and limitations on our ability to incur additional debt or conduct certain types of preferred equity financings. Our ability to increase the current commitments under our senior secured credit facility is also dependent upon additional commitments from our lenders. Furthermore, if we are permitted to seek additional debt or equity financings, we cannot be certain they will be available to us on acceptable terms or at all, as banks are often restrictive in their lending practices, and additional debt financing may include covenants that further limit our operational and financial flexibility. If we are unable to borrow under our senior secured credit facility or secure other financing or if our lenders become unable or unwilling to fund their commitments to us, we may not be able to access the capital needed to fund our growth and operations. For additional information on the terms of our senior secured credit facility, please read Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations — Debt Instruments — Credit Facility.*

Additionally, the market price of our common stock has fluctuated, and may continue to fluctuate, significantly in response to various factors, including events beyond our control, which could impact our ability to utilize capital markets to obtain funds. A variety of events may cause the market price of our common stock to fluctuate significantly, including overall market conditions or volatility, a shortfall in our operating results from those anticipated, negative financial results or other unfavorable information relating to our market peers or the other risks described in this Annual Report.

Our variable rate indebtedness subjects us to interest rate risk, which could cause our debt service obligations to increase significantly.

Borrowings under our credit facility are at variable rates of interest and expose us to interest rate risk. If interest rates increase, our debt service obligations on the variable rate indebtedness will increase even if the amount borrowed remains the same, and our net income and cash flows, including cash available for servicing our indebtedness, will correspondingly decrease. Our weighted average interest rate on our variable rate debt for the year ended December 31, 2018 was 3.6%. The annual effect on our pretax earnings of a hypothetical 50 basis point increase or decrease in variable interest rates would be approximately $5.4 million based on our December 31, 2018 balance of variable rate debt.

Additionally, to address the transition in the financial markets away from the London Interest Bank Offered Rate (LIBOR) by the end of 2021, our senior secured credit facility agreement includes provisions related to the replacement of LIBOR with a LIBOR Successor Rate (as defined in the credit agreement for such facility). Changing to an alternative interest rate may lead to additional volatility in interest rates and could cause our debt service obligations to increase significantly. If no LIBOR Successor Rate has been determined at the time certain circumstances are present, the lenders' obligation to make or maintain loans based on a Eurocurrency rate could be suspended, and loans in U.S. dollars would default to the Base Rate (as described in Note 8 to our Notes to Consolidated Financial Statements in Item 8. *Financial Statements and Supplementary Data*) rather than a rate using the Eurocurrency Rate. If this were to occur, our available liquidity and cash flows could be negatively impacted.

We may be unable to compete for or work on certain projects if we are not able to obtain surety bonds, letters of credit or bank guarantees.

A portion of our business depends on our ability to provide surety bonds, letters of credit, bank guarantees or other financial assurances. Current or future market conditions, including losses incurred in the construction industry or as a result of large corporate bankruptcies, as well as changes in our sureties' assessment of our operating and financial risk, could cause our surety providers and lenders to decline to issue or renew, or substantially reduce the amount of, bid or performance bonds for our work and could increase our costs associated with collateral. These actions could be taken on short notice. If our surety providers or lenders were to limit or eliminate our access to bonding, letters of credit or guarantees, our alternatives would include seeking capacity from other sureties and lenders or finding more business that does not require bonds or that allows for other forms of collateral for project performance, such as cash. We may be unable to secure these alternatives in a timely manner, on acceptable terms, or at all, which could affect our ability to bid for or work on future projects requiring financial assurances.

We have also granted security interests in certain assets to collateralize our obligations to our sureties and lenders. Furthermore, under standard terms in the surety market, sureties issue or continue bonds on a project-by-project basis and can decline to issue bonds at any time or require the posting of additional collateral as a condition to issuing or renewing bonds. If we were to experience an interruption or reduction in the availability of bonding capacity as a result of these or other reasons, we may be unable to compete for or work on certain projects that require bonding.

Our failure to comply with environmental laws could result in significant liabilities and increased environmental regulations could result in increased costs.

Our operations are subject to various environmental laws and regulations, including those dealing with the handling and disposal of waste products, PCBs, fuel storage, water quality and air quality. We perform work in many different types of underground environments. If the field location maps supplied to us are not accurate, or if objects are present in the soil that are not indicated on the field location maps, our underground work could strike objects in the soil, some of which may contain pollutants. These objects may also rupture, resulting in the discharge of pollutants. In such circumstances, we may be liable for fines and damages, and we may be unable to obtain reimbursement from the parties providing the incorrect information. We perform work in and around environmentally sensitive areas such as rivers, lakes and wetlands. In addition, we perform directional drilling operations below certain environmentally sensitive terrains and water bodies. Due to the inconsistent nature of the terrain and water bodies, it is possible that such directional drilling may cause a surface fracture, resulting in the release of subsurface materials. These subsurface materials may contain contaminants in excess of amounts permitted by law, potentially exposing us to remediation costs and fines. We also own and lease several facilities at which we store our equipment. Some of these facilities contain fuel storage tanks that are above or below ground. If these tanks were to leak, we could be responsible for the cost of remediation as well as potential fines.

Moreover, new laws and regulations, stricter enforcement of existing laws and regulations, the discovery of previously unknown contamination or leaks, or the imposition of new clean-up requirements could require us to incur significant costs or become the basis for new or increased liabilities that could negatively impact our business, financial condition, results of operations and cash flows. In certain instances, we have obtained indemnification or covenants from third parties (including predecessors or lessors) for such clean-up and other obligations and liabilities. However, such third-party indemnities or covenants may not cover all of our costs and the indemnitors may not pay amounts owed to us, and such unanticipated obligations or liabilities, or future obligations and liabilities, may have a material adverse effect on our business, financial condition, results of operations and cash flows. Further, we cannot be certain that we will be able to identify or be indemnified for all potential environmental liabilities relating to any acquired business.

Concerns about climate change could also potentially result in new regulations, regulatory actions or requirements to fund energy efficiency activities, any of which could negatively affect our customers and decrease demand for their services, result in increased costs associated with our operations, or impact the prices we charge our customers. For example, if new regulations are adopted regulating greenhouse gas emissions from mobile sources such as cars and trucks, we could experience a significant increase in environmental compliance costs in light of our large rolling-stock fleet. In addition, if our operations are perceived to result in high greenhouse gas emissions, our reputation could suffer.

Certain regulatory requirements applicable to us and our subsidiaries could result in significant compliance costs and liabilities.

We are subject to various regulatory regimes and requirements that could result in significant compliance costs and liabilities. As a public company, we are subject to the corporate governance and financial reporting requirements of The Sarbanes-Oxley Act of 2002, including requirements for management to report on our internal controls over financial reporting and for our independent registered public accounting firm to express an opinion on the operating effectiveness of our internal control over financial reporting. Our internal control over financial reporting was effective as of December 31, 2018; however, there can be no assurance that our internal control over financial reporting will be determined to be effective in future years. Failure to maintain effective internal controls or to identify significant internal control deficiencies in acquired businesses (both prior acquisitions and future acquisitions) could result in a decrease in the market value of our publicly traded securities, a reduced ability to obtain debt and equity financing, a loss of customers, fines or penalties, and/or additional expenditures to meet the requirements or remedy any deficiencies.

One of our subsidiaries has registered as an investment adviser with the SEC under the U.S. Investment Advisers Act of 1940, as amended (the Advisers Act). The Advisers Act and the rules promulgated thereunder impose substantive and material restrictions and requirements on the operations of this subsidiary, including certain fiduciary duties that apply to its relationships with its advisory clients. The SEC has broad administrative powers to institute proceedings and impose sanctions for violations of the Advisers Act, ranging from fines and censures to termination of an adviser's registration. This subsidiary is also subject to periodic SEC examinations and other requirements, including, among other things, maintaining an effective compliance program, recordkeeping and reporting requirements, disclosure requirements and complying with anti-fraud prohibitions. The failure of our subsidiary to comply with the requirements of the Advisers Act could result in fines, suspensions of individual employees or other sanctions against our subsidiary that could have a material adverse effect on us. Even if an investigation or proceeding does not result in a fine or sanction or if a fine or sanction imposed against our subsidiary or its employees were small in monetary amount, the adverse publicity relating to an investigation, proceeding or imposition of these fines or sanctions could harm our reputation and have a material adverse effect on us.

Our wholly-owned captive insurance company is a registered insurance broker with the Texas Department of Insurance, and therefore is subject to various rules and regulations and required to meet certain capital requirements, which can result in additional use of our resources.

We own and operate a postsecondary educational institution that provides pre-apprenticeship training as well as programs for experienced lineman. In order to operate, each of the institution's campuses must be authorized by the state education agency where the campus is located, and the level of regulatory oversight varies substantially by state and can be extensive. If any of our campuses fail to comply with state licensing requirements, they may be unable to offer their programs and forced to close, which could result in harm to our reputation or negatively impact our ability to train skilled personnel that can be utilized to support our industry. Additionally, because our institution operates in a highly regulated industry, it is subject to compliance reviews and lawsuits or claims by government agencies and third parties. If the results of these reviews or proceedings are unfavorable to us, we may be required to pay significant monetary damages or be subject to fines, limitations on the operations of the institution, injunctions or other penalties. The postsecondary educational institution is also accredited by the Accrediting Commission of Career Schools and Colleges. Accreditation is a non-governmental process through which a commission examines the academic quality of the instructional programs and is generally viewed as confirmation that the programs meet generally accepted academic standards and practices. If an institution fails to comply with accrediting commission requirements, the institution and/or its campuses are subject to loss of accreditation or may be placed on probation or a special monitoring or reporting status, which could ultimately result in loss of accreditation. Campus closure or loss of accreditation could result in reputational harm or student-initiated litigation or negatively impact our ability to train skilled personnel that can be utilized to support our business.

If our intellectual property rights are unenforceable or become obsolete, or if new intellectual property rights held by a third party become the only or preferred way to perform services we offer, our competitive position could be adversely impacted.

We utilize a variety of intellectual property rights while performing our services. We view our portfolio of proprietary energized services tools and techniques and other process and design technologies as our competitive strengths, which we believe differentiate our service offerings. We may not be able to successfully preserve these intellectual property rights in the future, and these rights could be invalidated, circumvented or challenged. In addition, the laws of some foreign countries in which our services may be sold do not protect intellectual property rights to the same extent as the laws of the United States. If we are unable to protect and maintain our intellectual property rights, or if intellectual property challenges or infringement proceedings succeed against us, our ability to differentiate our service offerings could be reduced. Further, if our intellectual property rights or work processes become obsolete, we may not be able to differentiate our service offerings and some of our competitors may be able to offer more attractive services to our customers, which could materially and adversely affect our business, financial condition, results of operations and cash flows. We may also license certain technologies from third parties, and there is a risk that our relationships with such licensors may terminate or expire or may be interrupted or harmed.

We may incur additional healthcare costs arising from federal healthcare reform legislation.

In March 2010, the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act of 2010 (collectively ACA) were signed into law in the United States. The status of the ACA and any repeal or replacement thereof, is currently uncertain. Changes to laws governing health insurance could have a substantial impact on our financial results. We continue to monitor developments under ACA, including any potential repeal or replacement thereof, and assess the extent to which any such change could result in long-term material cost increases for us.

Opportunities within the government arena could subject us to increased governmental regulation and costs.

Most government contracts are awarded through a regulated competitive bidding process, which can often be more time consuming than the bidding process for non-governmental projects. Additionally, involvement with government contracts could require a significant amount of costs to be incurred before any revenues are realized. As a government contractor, we are also subject to a number of procurement rules and other public sector regulations, any deemed violation of which could lead to fines or penalties or a loss of business. Government agencies routinely audit and investigate government contractors. Government agencies may review a contractor’s performance under its contracts, cost structure and compliance with applicable laws, regulations and standards. If a government agency determines that costs were improperly allocated to specific contracts, such costs will not be reimbursed or a refund of previously reimbursed costs may be required. If a government agency alleges or proves improper activity, civil and criminal penalties could be imposed and serious reputational harm could result. Many government contracts must be appropriated each year. If appropriations are not made in subsequent years, we would not realize all of the potential revenues from any awarded contracts.

Our sale or issuance of additional common stock or other equity-related securities could dilute each stockholder’s ownership interest or adversely affect the market price of our common stock.

We grow our business organically as well as through acquisitions. We often fund a significant portion of the consideration paid in connection with our acquisitions with the issuance of additional equity securities, including shares of our common stock and securities that are convertible into shares of our common stock.

We may issue additional equity securities in the future, including in connection with future acquisitions or other issuances of our common stock or convertible securities or otherwise. Our Restated Certificate of Incorporation provides that we may issue up to 600,000,000 shares of common stock, of which 141,103,900 shares were outstanding as of December 31, 2018. Additionally, former owners of certain acquired businesses own exchangeable shares, 486,112 of which were outstanding as of December 31, 2018 and included in the calculation of basic and diluted weighted average shares outstanding. These shares are exchangeable for shares of Quanta common stock on a one-for-one basis. Any additional issuances of common stock or exchangeable shares could have the effect of diluting our earnings per share and our existing stockholders’ individual ownership percentages and could lead to volatility in the market price of our common stock. We cannot predict the effect that future issuances of our common stock or other equity-related securities would have on the market price of our common stock.

There can be no assurance that we will declare or pay future dividends on our common stock.

Our Board of Directors declared an initial dividend on December 6, 2018, which was paid on January 16, 2019. The declaration, amount and timing of future dividends are subject to capital availability and determinations by our Board of Directors that cash dividends are in the best interest of our stockholders and are in compliance with all respective laws and applicable agreements. Our ability to declare and pay dividends will depend upon, among other factors, our financial condition, results of operations, cash flows, current and anticipated expansion plans, requirements under Delaware law and other factors that our Board of Directors may deem relevant. A reduction in or elimination of our dividend payments could have a material negative effect on our stock price.

Certain provisions of our corporate governing documents could make an acquisition of our company more difficult.

The following provisions of our charter documents, as currently in effect, and Delaware law could discourage potential proposals to acquire us, delay or prevent a change in control of us or limit the price that investors may be willing to pay in the future for shares of our common stock:

- our certificate of incorporation permits our Board of Directors to issue "blank check" preferred stock and to adopt amendments to our bylaws;
- our bylaws contain restrictions regarding the right of stockholders to nominate directors and to submit proposals to be considered at stockholder meetings;
- our certificate of incorporation and bylaws restrict the right of stockholders to call a special meeting of stockholders and to act by written consent; and
- we are subject to provisions of Delaware law which restrict us from engaging in any of a broad range of business transactions with an "interested stockholder" for a period of three years following the date such stockholder became classified as an interested stockholder.

ITEM 1B. *Unresolved Staff Comments*

None.

ITEM 2. *Properties*

Facilities

We lease our corporate headquarters in Houston, Texas and own and lease other facilities throughout the United States, Canada and other foreign locations where we conduct business. Our facilities are utilized for operations in both of our reportable segments and include offices, equipment yards, warehouses, storage, maintenance shops and training and educational facilities. As of December 31, 2018, we owned 60 of our facilities and leased the remainder. We believe that our existing facilities are sufficient for our current needs.

Equipment

We operate a fleet of owned and leased trucks and trailers, support vehicles and specialty construction equipment, such as backhoes, excavators, trenchers, generators, boring machines, cranes, robotic arms, wire pullers, tensioners, marine vessels and helicopters. Our owned equipment and the leasehold interests in our leased equipment are encumbered by a security interest granted under our credit agreement. As of December 31, 2018, the total size of the rolling-stock fleet was approximately 45,000 units. Most of our fleet is serviced by our own mechanics who work at various maintenance sites and facilities. We believe that our equipment is generally well maintained and adequate for our present operations.

ITEM 3. *Legal Proceedings*

We are from time to time party to various lawsuits, claims and other legal proceedings that arise in the ordinary course of business. These actions typically seek, among other things, compensation for alleged personal injury, breach of contract and/or property damages, employment-related damages, punitive damages, civil penalties or other losses, or injunctive or declaratory relief. With respect to all such lawsuits, claims and proceedings, we record a reserve when it is probable that a loss has been incurred and the amount of loss can be reasonably estimated. In addition, we disclose matters for which management believes a material loss is at least reasonably possible. See Note 14 of the Notes to Consolidated Financial Statements in Item 8. *Financial Statements and Supplementary Data,* which are incorporated by reference in this Item 3, for additional information regarding litigation, claims and other legal proceedings.

ITEM 4. *Mine Safety Disclosures*

Not applicable.

PART II

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

Our common stock is listed on the New York Stock Exchange (NYSE) under the symbol “PWR.”

On February 21, 2019, there were 650 holders of record of our common stock and three holders of record of exchangeable shares of Canadian subsidiaries of Quanta. There is no established trading market for the exchangeable shares; however, the exchangeable shares may be exchanged at the option of the holder for Quanta common stock on a one-for-one basis. See Note 10 of the Notes to Consolidated Financial Statements in Item 8. *Financial Statements and Supplementary Data* for additional discussion of our equity securities.

Unregistered Sales of Securities During the Fourth Quarter of 2018

None. However, subsequent to December 31, 2018, we issued 449,929 shares of our common stock to the former owner of an acquired business in exchange, on a one-for-one basis, for exchangeable shares in a Canadian subsidiary of Quanta that were held by the former owner. The former owner originally received the exchangeable shares as partial consideration for the sale of the acquired business. The shares of common stock issued in this transaction were issued in reliance upon the exemption from registration provided by Section 4(a)(2) of the Securities Act of 1933, as amended, as the shares were issued to the owner of business acquired in a privately negotiated transaction not involving any public offering or solicitation.

In connection with the aforementioned acquisition, the former owner also received one share of Quanta Series G Preferred Stock, which provided the former owner voting rights in Quanta common stock equivalent to the number of outstanding exchangeable shares held by the former owner. Upon completion of the exchange described above, no exchangeable shares associated with the preferred share remained outstanding. Accordingly, the share of Quanta Series G preferred stock was redeemed, deemed retired and canceled and may not be reissued.

Issuer Purchases of Equity Securities During the Fourth Quarter of 2018

The following table contains information about our purchases of equity securities during the three months ended December 31, 2018.

Period	**Total Number of Shares Purchased**	**Average Price Paid per Share**	**Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs**	**Maximum Number (or Approximate Dollar Value) of Shares That May Yet be Purchased Under the Plans or Programs**(1)
October 1 - 31, 2018				
Open Market Stock Repurchases (1)	2,706,951	$31.86	2,706,951	$446,088,029
Tax Withholdings (2)	10,098	$33.61	—	
November 1 - 30, 2018				
Open Market Stock Repurchases (1)	—	$—	—	$446,088,029
Tax Withholdings (2)	6,868	$34.71	—	
December 1 - 31, 2018				
Open Market Stock Repurchases (1)	4,945,214	$29.80	4,945,214	$298,709,474
Tax Withholdings (2)	—	$—	—	
Total	7,669,131		7,652,165	$298,709,474

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(1) Includes shares repurchased as of the trade date of such repurchases. On May 25, 2017, we issued a press release announcing that our Board of Directors approved a stock repurchase program that authorized us to purchase, from time to time through June 30, 2020, up to $300.0 million of our outstanding common stock (the 2017 Repurchase Program). Additionally, on September 4, 2018, we issued a press release announcing that our Board of Directors approved a stock repurchase program that authorizes us to purchase, from time to time through June 30, 2021, up to $500.0 million of our outstanding common stock (the 2018 Repurchase Program). Repurchases under these programs can be made in open market and privately negotiated transactions, at our discretion, based on market and business conditions, applicable contractual and legal requirements and other factors. These programs do not obligate us to acquire any specific amount of common stock and may be modified or terminated by our Board of Directors at any time at its sole discretion and without notice. As of December 31, 2018, we had repurchased 8.6 million shares of our common stock under the 2017 Repurchase Program at a cost of $300.0 million and 6.7 million shares of our common stock under the 2018 Repurchase Program at a cost of $201.3 million. As a result, the 2017 Repurchase Program was completed and $298.7 million remained available under the 2018 Repurchase Program as of December 31, 2018.

(2) Includes shares purchased from employees to satisfy tax withholding obligations in connection with the vesting of restricted stock unit and performance unit awards or the settlement of previously vested and deferred restricted stock unit and performance unit awards.

Dividends

We did not declare any cash dividends on our common stock during the year ended December 31, 2017. During the fourth quarter of 2018, we declared a cash dividend of $0.04 per share of our common stock, which was paid on January 16, 2019 to stockholders of record as of January 2, 2019. The declaration, payment and amount of future cash dividends, if any, will be at the discretion of our Board of Directors after taking into account various factors, including our financial condition, results of operations, cash flows from operations, current and anticipated capital requirements and expansion plans, the income tax laws then in effect and the requirements of Delaware law. In addition, as discussed in *Liquidity and Capital Resources — Debt Instruments — Senior Secured Credit Facility* in Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*, the credit agreement for our senior secured credit facility restricts the payment of cash dividends unless certain conditions are met.

Performance Graph

The following Performance Graph and related information shall not be deemed "soliciting material" or to be "filed" with the Securities and Exchange Commission, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that we specifically incorporate it by reference into such filing.

The following graph compares, for the period from December 31, 2013 to December 31, 2018, the cumulative stockholder return on our common stock with the cumulative total return of the S&P 500 Index (the S&P 500), the S&P MidCap 400 Index (the S&P 400) and two peer groups selected by our management that include public companies within our industries. The companies in the peer groups were selected to represent a broad group of publicly held corporations with operations similar to ours. The current peer group (the 2018 Peer Group) includes AECOM, EMCOR Group Inc., Fluor Corporation, Jacobs Engineering Group Inc., KBR, Inc., MasTec, Inc., McDermott International, Inc.; MYR Group Inc. and Primoris Services Corporation. The peer group used in the prior year (the 2017 Peer Group) was the same, except that McDermott International, Inc. replaced Chicago Bridge & Iron Company N.V. as a result of the combination of the two companies.

The graph below assumes an investment of $100 (with reinvestment of all dividends) in our common stock, the 2018 Peer Group, the 2017 Peer Group, the S&P 500 and the S&P MidCap 400 on December 31, 2013 and tracks their relative performance through December 31, 2018. The returns of each company in the Peer Group are weighted based on the market capitalization of that company at the beginning of the measurement period. The stock price performance reflected in the following graph is not necessarily indicative of future stock price performance.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN

Among Quanta Services, Inc., the 2018 Peer Group, the 2017 Peer Group, the S&P 500, and the S&P MidCap 400

	December 31,					
	2013	2014	2015	2016	2017	2018
Quanta Services, Inc.	$100.00	$89.96	$64.16	$110.42	$123.92	$95.50
2018 Peer Group	$100.00	$74.06	$67.55	$89.16	$98.27	$73.20
2017 Peer Group	$100.00	$76.57	$69.40	$89.62	$99.85	$76.52
S&P 500	$100.00	$113.69	$115.26	$129.05	$157.22	$150.33
S&P MidCap 400	$100.00	$109.77	$107.38	$129.65	$150.71	$134.01

ITEM 6. ***Selected Financial Data***

The following historical selected financial data has been derived from our consolidated financial statements. See Note 4 of the Notes to Consolidated Financial Statements in Item 8. *Financial Statements and Supplementary Data* for information regarding certain acquisitions and the related impact on our results of operations as these acquisitions may affect the comparability of such results. Additionally, on August 4, 2015, we sold our fiber optic licensing operations. We have presented the results of operations, financial position and cash flows of such fiber optic licensing subsidiaries as discontinued operations for all applicable periods presented in this Annual Report. The historical selected financial data should be read in conjunction with our consolidated financial statements and related notes thereto included in Item 8. *Financial Statements and Supplementary Data* and *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.*

	Year Ended December 31,					
	2018	**2017**	**2016**	**2015**	**2014**	
	(In thousands, except per share information)					
Consolidated Statements of Operations Data:						
Revenues	$11,171,423	$9,466,478	$7,651,319	$7,572,436	$7,747,229	
Cost of services (including depreciation)	9,691,459	8,224,618	6,637,519	6,648,771	6,578,435	
Gross profit	1,479,964	1,241,860	1,013,800	923,665	1,168,794	
Selling, general and administrative expenses	857,574	777,920	653,338	592,863	705,477	(c)
Amortization of intangible assets	43,994	32,205	31,685	34,848	34,257	
Asset impairment charges (a)	49,375	58,057	7,964	58,451	—	
Change in fair value of contingent consideration liabilities	(11,248)	(5,171)	—	—	—	
Operating income	540,269	378,849	320,813	237,503	429,060	
Interest expense	(36,945)	(20,946)	(14,887)	(8,024)	(4,765)	
Interest income	1,555	832	2,423	1,493	3,736	
Other expense, net	(47,213)	(4,978)	(663)	(2,297)	(1,432)	
Income from continuing operations before income taxes	457,666	353,757	307,686	228,675	426,599	