Owens Corning
Form 10-K
February 21, 2018
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K
þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2017
or
r TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission File Number: 1-33100
Owens Corning
(Exact name of registrant as specified in its charter)

Delaware	43-2109021
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
One Owens Corning Parkway, Toledo, OH	43659
(Address of principal executive offices)	(Zip Code)

(419) 248-8000
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, par value $0.01 per share	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes þ No r
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes r 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 r
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes þ No r
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. r
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. (Check one):
Large accelerated filer þ Accelerated filer r Non-accelerated filer r Smaller reporting company r Emerging growth company r

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. r

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

On June 30, 2017, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of $0.01 par value common stock (the voting stock of the registrant) held by non-affiliates (assuming for purposes of this computation only that the registrant had no affiliates) was approximately $7,451,085,912.

As of February 15, 2018, 111,747,431 shares of the registrant's common stock, par value $0.01 per share, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of Owens Corning's proxy statement to be delivered to stockholders in connection with the Annual Meeting of Stockholders to be held on or about April 19, 2018 (the "2018 Proxy Statement") are incorporated by reference into Part III hereof.

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PART I

ITEM 1. BUSINESS
OVERVIEW
Owens Corning was founded in 1938. Since then, the Company has continued to grow as a market-leading innovator of glass fiber technology. Owens Corning is a world leader in composite and building materials systems, delivering a broad range of high-quality products and services. Our products range from glass fiber used to reinforce composite materials for transportation, electronics, marine, infrastructure, wind-energy and other high-performance markets to insulation and roofing for residential, commercial and industrial applications.
Unless the context indicates otherwise, the terms “Owens Corning,” “Company,” “we” and “our” in this report refer to Owens Corning and its subsidiaries. References to a particular year mean the Company’s year commencing on January 1 and ending on December 31 of that year.
SEGMENT OVERVIEW
The Company has three reportable segments: Composites, Insulation and Roofing. Our Composites, Insulation and Roofing reportable segments accounted for approximately 31%, 30% and 39% of our total reportable segment net sales, respectively, in 2017.
Note 2 to the Consolidated Financial Statements contains information regarding net sales to external customers and total assets attributable to each of Owens Corning’s reportable segments and geographic regions, earnings before interest and taxes for each of Owens Corning’s reportable segments, and information concerning the dependence of our reportable segments on foreign operations, for each of the years 2017, 2016 and 2015.
Composites
Owens Corning glass fiber materials can be found in over 40,000 end-use applications within five primary markets: building and construction, transportation, consumer, industrial, and power and energy. Such end-use applications include pipe, roofing shingles, sporting goods, consumer electronics, telecommunications cables, boats, aviation, defense, automotive, industrial containers and wind-energy. Our products are manufactured and sold worldwide. We primarily sell our products directly to parts molders and fabricators. Within the building and construction market, our Composites segment sells glass fiber and/or glass mat directly to a small number of major shingle manufacturers, including our own Roofing segment.
Our Composites segment includes vertically integrated downstream activities. The Company manufactures, fabricates and sells glass reinforcements in the form of fiber. Glass reinforcement materials are also used downstream by the Composites segment to manufacture and sell glass fiber products in the form of fabrics, non-wovens and other specialized products.
Demand for composites is driven by general global economic activity and, more specifically, by the increasing replacement of traditional materials such as aluminum, wood and steel with composites that offer lighter weight, improved strength, lack of conductivity and corrosion resistance. We estimate that over the last 35 years, on average, annual global demand for composite materials grew at about 1.6 times global industrial production growth.
We compete with composite manufacturers worldwide. According to various industry reports and Company estimates, our Composites segment is a world leader in the production of glass fiber reinforcement materials. Primary methods of competition include innovation, quality, customer service and global geographic reach. For our commodity products, price is also a method of competition. Significant competitors to the Composites segment include China Jushi Group Co., Ltd., Chongqing Polycom International Corporation Ltd (CPIC), Johns Manville, Nippon Electric Glass Co. Ltd. (NEG) and Taishan Glass Fiber Co., Ltd.
Typically, our composites plants run continuously throughout the year, and we warehouse much of our production prior to sale since we operate primarily with short delivery cycles.
Insulation
Our insulating products help customers conserve energy, provide improved acoustical performance and offer convenience of installation and use. Our products in the residential channel include thermal and acoustical batts,

loosefill insulation, foam sheathing and accessories, and are sold under well-recognized brand names and trademarks such as Owens Corning PINK® FIBERGLAS™ Insulation. Our products in the commercial and industrial channel include glass fiber pipe insulation, energy efficient flexible duct media, bonded and granulated mineral wool insulation, cellular glass insulation and foam insulation used in above- and below-grade construction applications, and are sold under well-recognized brand names and trademarks such as Thermafiber®, FOAMGLAS® and the subsequently-acquired Paroc®. We sell our insulation products primarily to insulation installers, home centers, lumberyards, retailers and distributors in the United States, Canada, Europe and Asia-Pacific. Demand for Owens Corning's insulating products is driven by new residential construction, remodeling and repair activity, commercial and industrial construction activity, increasingly stringent building codes and the growing need for energy efficiency. Demand in the segment typically follows seasonal home improvement, remodeling and renovation and residential, commercial and industrial construction industry patterns. Demand for new residential construction in North America typically follows housing starts on a three-month lagged basis, although the new residential construction cycle can elongate due to labor availability and other factors beyond our control. The peak season for home construction and remodeling in our geographic markets generally corresponds with the second and third calendar quarters. Demand for commercial and industrial applications is more heavily tied to industrial production growth in the global markets we serve.

Our Insulation segment competes primarily with manufacturers in the United States and, to a lesser extent, in other geographic regions. According to various industry reports and Company estimates, Owens Corning is North America's largest producer of residential, commercial and industrial insulation, and the second-largest producer of extruded polystyrene foam insulation. Principal methods of competition include innovation and product design, service, location, quality, price and compatibility of systems solutions. Significant competitors in this segment include CertainTeed Corporation, Dow Chemical, Johns Manville, Knauf Insulation and ROCKWOOL International.

Our Insulation segment includes a diverse portfolio of high, mid and low-temperature products with a geographic mix of United States, Canada, Europe, Asia-Pacific and Latin America, a market mix of residential, commercial, industrial and other markets, and a channel mix of retail, contractor and distribution.

Working capital practices for this segment historically have followed a seasonal cycle. Typically, our insulation plants run continuously throughout the year. This production plan, along with the seasonal nature of the segment, generally results in higher finished goods inventory balances in the first half of the year. Since sales increase during the second half of the year, our accounts receivable balances are typically higher during this period.

Roofing

Our primary products in the Roofing segment are laminate and strip asphalt roofing shingles. Other products include roofing components, synthetic packaging materials and oxidized asphalt. We have been able to meet the growing demand for longer lasting, aesthetically attractive laminate products with modest capital investment.

We sell shingles and roofing components primarily through home centers, lumberyards, retailers, distributors and contractors in the United States. Our synthetic packaging materials are used primarily in the construction industry for lumber and metal packaging. Oxidized asphalt is a significant input used in the production of our asphalt roofing shingles. We are vertically integrated and have manufacturing facilities that process asphalt for use in our roofing shingles manufacturing process. In addition, we sell processed asphalt to other shingle manufacturers, to roofing contractors for built-up roofing asphalt systems and to manufacturers in a variety of other industries, including automotive, chemical, rubber and construction. Asphalt input costs and third-party asphalt sales prices are correlated to crude oil prices. As a result, third-party asphalt sales are largely a cost-plus business.

Demand for products in our Roofing segment is generally driven by both residential repair and remodeling activity and by new residential construction. Roofing damage from major storms can significantly increase demand in this segment. As a result, sales in this segment do not always follow seasonal home improvement, remodeling and new construction industry patterns as closely as our Insulation segment.

Our Roofing segment competes primarily with manufacturers in the United States. According to various industry reports and Company estimates, Owens Corning's Roofing segment is the second largest producer of asphalt roofing shingles in the United States. Principal methods of competition include innovation and product design, proximity to customers, quality and price. Significant competitors in the Roofing segment include CertainTeed Corporation, GAF and TAMKO.

Our manufacturing operations are generally continuous in nature, and we warehouse much of our production prior to sale since we operate with relatively short delivery cycles. One of the raw materials important to this segment is sourced from a sole supplier. We have a long-term supply contract for this material, and have no reason to believe that any availability issues will exist. If this supply was to become unavailable, our production could be interrupted until such time as the supplies again became available or the Company reformulated its products. Additionally, the supply of asphalt, another significant raw material in this segment, has been constricted at times. Although this has not caused an interruption of our production in the past, prolonged asphalt shortages would restrict our ability to produce products in this segment.

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ITEM 1. BUSINESS (continued)

GENERAL

Major Customers

No one customer accounted for more than 10% of our consolidated net sales for 2017, 2016 or 2015. A significant portion of the net sales in our Insulation and Roofing segments are generated from large United States home improvement retailers.

Intellectual Property

The Company relies on a combination of intellectual property laws, as well as confidentiality procedures and contractual provisions, to protect our intellectual property, proprietary technology and our brands. Through continuous and extensive use of the color PINK since 1956, Owens Corning became the first owner of a single color trademark registration. In addition to our Owens Corning and PINK brands, the Company has registered, and applied for the registration of, U.S. and international trademarks, service marks, and domain names. Additionally, the Company has filed U.S. and international patent applications, including numerous issued patents, covering certain of our proprietary technology resulting from research and development efforts. Over time, the Company has assembled a portfolio of intellectual property rights including patents, trademarks, service marks, copyrights, domain names, know-how and trade secrets covering our products, services and manufacturing processes. Our proprietary technology is not dependent on any single or group of intellectual property rights and the Company does not expect the expiration of existing intellectual property to have a material adverse affect on the business as a whole. The Company believes the duration of our patents is adequate relative to the expected lives of our products. Although the Company protects its intellectual property and proprietary technology, any significant impairment of, or third-party claim against, our intellectual property rights could harm our business or our ability to compete.

Backlog

Our customer volume commitments are generally short-term, and the Company does not have a significant backlog of orders.

Research and Development

The Company's research and development expense during each of the last three years is presented in the table below (in millions):

Period	Research and Development Expense	
Twelve Months Ended December 31, 2017	$	85
Twelve Months Ended December 31, 2016	$	82
Twelve Months Ended December 31, 2015	$	73

Environmental Control

Owens Corning has established policies and procedures to ensure that its operations are conducted in compliance with all relevant laws and regulations and that enable the Company to meet its high standards for corporate sustainability and environmental stewardship. Our manufacturing facilities are subject to numerous foreign, federal, state and local laws and regulations relating to the presence of hazardous materials, pollution and protection of the environment, including emissions to air, discharges to water, management of hazardous materials, handling and disposal of solid wastes, and remediation of contaminated sites. All Company manufacturing facilities operate using an ISO 14001 or equivalent environmental management system. The Company's 2020 Sustainability Goals require significant global reductions in energy use, water consumption, waste to landfill, emissions of greenhouse gases, fine particulate matter and toxic air emissions. The Company is dedicated to continuous improvement in our environmental, health and safety performance and to achieving its 2020 Sustainability Goals.

The Company has not experienced a material adverse effect upon our capital expenditures or competitive position as a result of environmental control legislation and regulations. Operating costs associated with environmental compliance were approximately $32 million in 2017. The Company continues to invest in equipment and process modifications to remain in compliance with applicable environmental laws and regulations worldwide.

Our manufacturing facilities are subject to numerous national, state and local environmental protection laws and regulations. Regulatory activities of particular importance to our operations include those addressing air pollution, water pollution, waste disposal and chemical control. It is possible that new laws and regulations will specifically address climate change, toxic air emissions, ozone forming emissions and fine particulate matter. New environmental and chemical regulations could impact our ability to expand production or construct new facilities in every geographic region in which we operate. However, based on information known to the Company, including the nature of our manufacturing operations and associated air emissions, at this time we do not expect any of these new laws, regulations or activities to have a material adverse effect on our results of current operations, financial condition or long-term liquidity.

Owens Corning is involved in remedial response activities and is responsible for environmental remediation at a number of sites, including certain of its currently owned or formerly owned plants. These responsibilities arise under a number of laws, including, but not limited to, the Federal Resource Conservation and Recovery Act, and similar state or local laws pertaining to the management and remediation of hazardous materials and petroleum. The Company has also been named a potentially responsible party under the United States Federal Superfund law, or state equivalents, at a number of disposal sites. The Company became involved in these sites as a result of government action or in connection with business acquisitions. At the end of 2017, the Company was involved with a total of 20 sites worldwide, including 7 Superfund sites and 13 owned or formerly owned sites. None of the liabilities for these sites are individually significant to the Company.

Remediation activities generally involve a potential range of activities and costs related to soil and groundwater contamination. This can include pre-cleanup activities such as fact finding and investigation, risk assessment, feasibility studies, remedial action design and implementation (where actions may range from monitoring to removal of contaminants, to installation of longer-term remediation systems). A number of factors affect the cost of environmental remediation, including the number of parties involved in a particular site, the determination of the extent of contamination, the length of time the remediation may require, the complexity of environmental regulations, variability in clean-up standards, the need for legal action, and changes in remediation technology. Taking these factors into account, Owens Corning has predicted the costs of remediation reasonably estimated to be paid over a period of years. The Company accrues an amount on an undiscounted basis, consistent with the reasonable estimates of these costs when it is probable that a liability has been incurred. Actual cost may differ from these estimates for the reasons mentioned above.

During the fourth quarter of 2017, the Company recorded a $15 million environmental liability charge to Other expenses, net on the Consolidated Statements of Earnings in the Corporate, Other and Eliminations reporting category, primarily as a result of changes in estimable remediation costs at a single closed U.S. site owned by the Company. Factors contributing to this change in estimate included the complexity of environmental regulations at the site and the completion of a remedial action work plan. The Company expects this recorded amount to be paid over the next ten years, with the majority of the costs expected to be paid over the next three years. At December 31, 2017, the Company had an accrual totaling $17 million for its environmental liabilities, of which the current portion is $11 million. Changes in required remediation procedures or timing of those procedures at existing legacy sites, or discovery of contamination at additional sites, could result in material increases to the Company’s environmental obligations.

Number of Employees

As of December 31, 2017, Owens Corning had approximately 17,000 employees. Approximately 8,000 of such employees are subject to collective bargaining agreements. The Company believes that its relations with employees are good.

AVAILABILITY OF INFORMATION

Owens Corning makes available, free of charge, through its website, the Company’s Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission. These documents are available through the Investor Relations page of the Company’s website at www.owenscorning.com.

ITEM 1A. RISK FACTORS

RISKS RELATED TO OUR BUSINESS AND OUR INDUSTRY

Low levels of residential or commercial construction activity can have a material adverse impact on our business and results of operations.

A large portion of our products are used in the markets for residential and commercial construction and repair and remodeling. Demand for certain of our products is affected in part by the level of new residential construction in the United States, although typically not until a number of months after the change in the level of construction. Lower demand in the regions and markets where our products are sold could result in lower revenues and lower profitability. Historically, construction activity has been cyclical and is influenced by prevailing economic conditions, including the level of interest rates and availability of financing, inflation, employment levels, consumer spending habits, consumer confidence and other macroeconomic factors outside our control.

We face significant competition in the markets we serve and we may not be able to compete successfully.

All of the markets we serve are highly competitive. We compete with manufacturers and distributors, both within and outside the United States, in the sale of building products and composite products. Some of our competitors may have superior financial, technical, marketing and other resources than we do. In some cases, we face competition from manufacturers in countries able to produce similar products at lower costs. We also face competition from the introduction by competitors of new products or technologies that may address our customers' needs in a better manner, whether based on considerations of pricing, usability, effectiveness, sustainability, quality or other features or benefits. If we are not able to successfully commercialize our innovation efforts, we may lose market share. Price competition or overcapacity may limit our ability to raise prices for our products when necessary, may force us to reduce prices and may also result in reduced levels of demand for our products and cause us to lose market share. In addition, in order to effectively compete, we must continue to develop new products that meet changing consumer preferences and successfully develop, manufacture and market these new products. Our inability to effectively compete could result in the loss of customers and reduce the sales of our products, which could have a material adverse impact on our business, financial condition and results of operations.

Our sales may fall rapidly in response to declines in demand because we do not operate under long-term volume agreements to supply our customers and because of customer concentration in certain segments.

Many of our customer volume commitments are short-term; therefore, we do not have a significant manufacturing backlog. As a result, we do not benefit from the hedge provided by long-term volume contracts against downturns in customer demand and sales. Further, we are not able to immediately adjust our costs in response to declines in sales. In addition, although no single customer represents more than 10% of our annual sales, our ability to sell some of the products in Insulation and Roofing are dependent on a limited number of customers, who account for a significant portion of such sales. The loss of key customers for these products, a consolidation of key customers or a significant reduction in sales to those customers, could significantly reduce our revenues from these products. In addition, if key customers experience financial pressure or consolidate, they could attempt to demand more favorable contractual terms, which would place additional pressure on our margins and cash flows. Lower demand for our products, loss of key customers and material changes to contractual terms could materially and adversely impact our business, financial condition and results of operations.

Worldwide economic conditions and credit tightening could have a material adverse impact on the Company.

The Company's business may be materially and adversely impacted by changes in United States or global economic conditions, including global industrial production rates, inflation, deflation, interest rates, availability of capital, consumer spending rates, energy availability and commodity prices, trade laws, and the effects of governmental initiatives to manage economic conditions. Changes in and/or new laws, regulations and policies that may be enacted in the United States or elsewhere could also materially impact economic conditions and the Company's business and results of operations. Volatility in financial markets and the deterioration of national and global economic conditions could materially adversely impact the Company's operations, financial results and/or liquidity including as follows:

- the financial stability of our customers or suppliers may be compromised, which could result in reduced demand for our products, additional bad debts for the Company or non-performance by suppliers;
- one or more of the financial institutions syndicated under the credit agreement governing our revolving credit facility may cease to be able to fulfill their funding obligations, which could materially adversely impact our liquidity;
- it may become more costly or difficult to obtain financing or refinance the Company's debt in the future;
- the value of the Company's assets held in pension plans may decline; and/or
- the Company's assets may be impaired or subject to write-down or write-off.

Uncertainty about global economic conditions may cause consumers of our products to postpone spending in response to tighter credit, negative financial news and/or declines in income or asset values. This could have a material adverse impact on the demand for our products and on our financial condition and operating results. A deterioration of economic conditions would likely exacerbate these adverse effects and could result in a wide-ranging and prolonged impact on general business conditions, thereby negatively impacting our operations, financial results and/or liquidity.

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Our level of indebtedness could adversely impact our business, financial condition or results of operations.

Our debt level and degree of leverage could have important consequences, including the following:

- our ability to obtain additional debt or equity financing for working capital, capital expenditures, debt service requirements, acquisitions and general corporate or other purposes may be limited;
- a substantial portion of our cash flow from operations could be required for the payment of principal and interest on our indebtedness, and may not be available for other business purposes;
- certain of our borrowings are at variable rates of interest, exposing us to the risk of increased interest rates;
- if due to liquidity needs we must replace any indebtedness upon maturity, we would be exposed to the risk that we may not be able to refinance such indebtedness;
- our ability to adjust to changing market conditions may be limited and place us at a competitive disadvantage compared to our competitors that have less debt; and
- we may be vulnerable in a downturn in general economic conditions or in our business, or we may be unable to carry out important capital spending.

In addition, the credit agreement governing our senior credit facility, the indentures governing our senior notes, the receivables purchase agreement governing our receivables securitization facility and any term loan agreement in place contain various covenants that impose operating and financial restrictions on us and/or our subsidiaries. Additionally, instruments and agreements governing our future indebtedness may impose other restrictive conditions or covenants that could restrict our ability to conduct our business operations or pursue growth strategies.

Adverse weather conditions and the level of severe storms could have a material adverse impact on our results of operations.

Weather conditions and the level of severe storms can have a significant impact on the markets for residential and commercial construction, repair and improvement, which can in turn impact our business as follows:

- generally, any weather conditions that slow or limit residential or commercial construction activity can adversely impact demand for our products; and
- a portion of our annual product demand is attributable to the repair of damage caused by severe storms. In periods with below average levels of severe storms, demand for such products could be reduced.

Lower demand for our products as a result of either of these scenarios could adversely impact our business, financial condition and results of operations. Additionally, severely low temperatures may lead to significant and immediate spikes in costs of natural gas, electricity and other commodities that could negatively affect our results of operation.

Our operations require substantial capital, leading to high levels of fixed costs that will be incurred regardless of our level of business activity.

Our businesses are capital intensive, and regularly require capital expenditures to expand operations, maintain equipment, increase operating efficiency and comply with applicable laws and regulations, leading to high fixed costs, including depreciation expense. Also, increased regulatory focus could lead to additional or higher costs in the future. We are limited in our ability to reduce fixed costs quickly in response to reduced demand for our products and these fixed costs may not be fully absorbed, resulting in higher average unit costs and lower gross margins if we are not able to offset this higher unit cost with price increases. Alternatively, we may be limited in our ability to quickly respond to unanticipated increased demand for our products, which could result in an inability to satisfy demand for our products and loss of market share.

We may be exposed to increases in costs of energy, materials and transportation or reductions in availability of materials and transportation, which could reduce our margins and have a material adverse impact on our business, financial condition and results of operations.

Our business relies heavily on certain commodities and raw materials used in our manufacturing processes. Additionally, we spend a significant amount on natural gas inputs and services that are influenced by energy prices, such as asphalt, a large number of chemicals and resins and transportation costs. Price increases for these inputs could raise costs and reduce our margins if we are not able to offset them by increasing the prices of our products, improving productivity or hedging where appropriate. In particular, energy prices could increase as a result of climate change legislation or other environmental mandates. Availability of certain of the raw materials we use has, from time to time, been limited, and our sourcing of some of these raw materials from a limited number of suppliers, and in some cases a sole supplier, increases the risk of unavailability. For example, if one of the raw materials important to our business is sourced from a sole supplier, our production could be interrupted regardless of whether we have a long-term supply contract for the material. Despite our contractual supply agreements with many of our suppliers, it is possible that we could experience a lack of certain raw materials which could limit our ability to produce our products, thereby materially and adversely impacting our business, financial condition and results of operations.

Our results of operations in a given period may be impacted by price volatility in certain wind-generated energy markets in the United States.

In connection with our sustainability goals to reduce greenhouse gas and toxic air emissions, we entered into contracts in the United States, pursuant to which we have agreed to purchase wind-generated electricity from third parties. Under these contracts, we do not take physical delivery of wind-generated electricity. The generated electricity is instead sold by our counterparties to local grid operators at the prevailing market price and we obtain the associated non-tax renewable energy credits. The prevailing market pricing for wind-generated electricity can be affected by factors beyond our control and is subject to significant period over period volatility. For example, wind-generated energy output fluctuates due to climactic and other factors beyond our control and can be constrained by available transmission capacity, thereby significantly impacting pricing. Due to this potential volatility, it is possible that these contracts could have an impact on our results of operations in a given reporting period.

We are subject to risks relating to our information technology systems, and any failure to adequately protect our critical information technology systems could materially affect our operations.

We rely on information technology systems across our operations, including for management, supply chain and financial information and various other processes and transactions. Our ability to effectively manage our business depends on the security, reliability and capacity of these systems. Information technology system failures, network disruptions or breaches of security could disrupt our operations, causing delays or cancellation of customer orders or impeding the manufacture or shipment of products, processing of transactions or reporting of financial results. An attack or other problem with our systems could also result in the disclosure of proprietary information about our business or confidential information concerning our customers or employees, which could result in significant damage to our business and our reputation.

We have put in place security measures designed to protect against the misappropriation or corruption of our systems, intentional or unintentional disclosure of confidential information, or disruption of our operations. However, advanced cybersecurity threats, such as computer viruses, attempts to access information, and other security breaches, are persistent and continue to evolve making them increasingly difficult to identify and prevent. Protecting against these threats may require significant resources, and we may not be able to implement measures that will protect against all of the significant risks to our information technology systems. In addition, we rely on a number of third party service providers to execute certain business processes and maintain certain information technology systems and infrastructure, and any breach of security on their part could impair our ability to effectively operate. Moreover, our operations in certain geographic locations may be particularly vulnerable to security attacks or other problems. Any breach of our security measures could result in unauthorized access to and misappropriation of our information, corruption of data or disruption of operations or transactions, any of which could have a material adverse effect on our business.

We are subject to risks associated with our international operations.
We sell products and operate plants throughout the world. Our international sales and operations are subject to risks and uncertainties, including:

- difficulties and costs associated with complying with a wide variety of complex and changing laws, including securities laws, tax laws, employment and pension-related laws, competition laws, U.S. and foreign export and trading laws, and laws governing improper business practices, treaties and regulations;
- limitations on our ability to enforce legal rights and remedies;
- adverse domestic or international economic and political conditions, business interruption, war and civil disturbance;
- changes to tax, currency, or other laws or policies that may adversely impact our ability to repatriate cash from non-United States subsidiaries, make cross-border investments, or engage in other intercompany transactions;
- future regulatory guidance and interpretations of the recently-enacted tax legislation commonly known as the U.S. Tax Cuts and Jobs Act of 2017 (the "Tax Act"), as well as assumptions that the Company makes related to the Tax Act;
- changes to tariffs or other import or export restrictions or penalties, including modification or elimination of international agreements covering trade or investment;
- costs and availability of shipping and transportation;
- nationalization of properties by foreign governments;
- currency exchange rate fluctuations between the United States dollar and foreign currencies; and
- uncertainty with respect to any potential changes to laws, regulations and policies that could exacerbate the risks described above.

As we continue to expand our business globally, we may have difficulty anticipating and effectively managing these and other risks that our international operations may face, which may adversely impact our business, financial condition and results of operations.
In addition, we operate in many parts of the world that have experienced governmental corruption and we could be adversely affected by violations of the Foreign Corrupt Practices Act (FCPA) and similar worldwide anti-corruption laws. The FCPA and similar anti-corruption laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to officials for the purpose of obtaining or retaining business. Although we mandate compliance with these anti-corruption laws and maintain an anti-corruption compliance program, we cannot provide assurance that these measures will necessarily prevent violations of these laws by our employees or agents. If we were found to be liable for violations of anti-corruption laws, we could be liable for criminal or civil penalties or other sanctions, which could have a material adverse impact on our business, financial condition and results of operations.
The Company’s income tax net operating loss and U.S. foreign tax credit carryforwards may be limited and our results of operations may be adversely impacted.
The Company has substantial deferred tax assets related to both U.S. federal and state net operating losses (NOLs) and U.S. foreign tax credits (FTCs) for income tax purposes, which the Company expects generally are available, with some exceptions, to offset future taxable income. However, the Company’s ability to utilize or realize the current carrying value of the NOLs and FTCs may be impacted by certain events, such as changes in tax legislation or the interpretation thereof, or insufficient future taxable income prior to expiration of the NOLs and FTCs, or annual limits imposed under sections 382 and 383 of the Internal Revenue Code, or by state law, as a result of a change in control. A change in control is generally defined as a cumulative change of more than 50% in the ownership positions of certain stockholders during a rolling three year period. Changes in the ownership positions of certain stockholders could occur as the result of stock transactions by such stockholders and/or by the issuance of stock by the Company. Such limitations may cause the Company to pay income taxes earlier and in greater amounts than would be the case if the NOLs and FTCs were not subject to such limitations. Additionally, uncertainty exists with respect to future regulatory guidance and interpretations of the Tax Act, as well as assumptions that the Company makes related to the Tax Act, which could have an impact on the use of the Company's NOLs and FTCs.

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Should the Company determine that it is likely that its recorded NOL and FTC benefits are not realizable, the Company would be required to reduce the NOL and FTC tax benefit reflected on its financial statements to the net realizable amount either by a direct adjustment to the NOL and FTC tax benefit or by establishing a valuation allowance and recording a corresponding charge to current earnings. The corresponding charge to current earnings would have an adverse effect on the Company's financial condition and results of operations in the period in which it is recorded. Conversely, if the Company is required to increase its NOL and FTC tax benefit either by a direct adjustment or reversing any portion of the accounting valuation allowance against its deferred tax assets related to its NOLs and FTCs, such credit to current earnings could have a positive effect on the Company's business, financial condition and results of operations in the period in which it is recorded. As of December 31, 2017, a valuation allowance was established on the unrealizable amount of FTCs.

Our intellectual property rights may not provide meaningful commercial protection for our products or brands and third parties may assert that we violate their intellectual property rights, which could adversely impact our business, financial condition and results of operations.

Owens Corning relies on its intellectual property, including numerous patents, registered trademarks, trade secrets, confidential information, as well as its licensed intellectual property. We monitor and protect against activities that might infringe, dilute, or otherwise harm our patents, trademarks and other intellectual property and rely on the patent, trademark and other laws of the United States and other countries. However, we may be unable to prevent third parties from using our intellectual property without our authorization. To the extent we cannot protect our intellectual property, unauthorized use and misuse of our intellectual property could harm our competitive position and have a material adverse impact on our business, financial condition and results of operations. In addition, the laws of some non-United States jurisdictions provide less protection for our proprietary rights than the laws of the United States and we therefore may not be able to effectively enforce our intellectual property rights in these jurisdictions. If we are unable to maintain certain exclusive licenses, our brand recognition and sales could be adversely impacted. Current employees, contractors and suppliers have, and former employees, contractors and suppliers may have, access to trade secrets and confidential information regarding our operations which could be disclosed improperly and in breach of contract to our competitors or otherwise used to harm us.

Third parties may also claim that we are infringing upon their intellectual property rights. If we are unable to successfully defend or license such alleged infringing intellectual property or if we are required to substitute similar technology from another source, our operations could be adversely affected. Even if we believe that such intellectual property claims are without merit, defending such claims can be costly, time consuming and require significant resources. Claims of intellectual property infringement also might require us to redesign affected products, pay costly damage awards, or face injunctions prohibiting us from manufacturing, importing, marketing or selling certain of our products. Even if we have agreements to indemnify us, indemnifying parties may be unable or unwilling to do so.

Our hedging activities to address energy price fluctuations may not be successful in offsetting increases in those costs or may reduce or eliminate the benefits of any decreases in those costs.

In order to mitigate short-term variation in our operating results due to commodity price fluctuations in certain geographic markets, we may hedge a portion of our near-term exposure to the cost of energy, primarily natural gas. The results of our hedging practices could be positive, neutral or negative in any period depending on price changes of the hedged exposures.

Our hedging activities are not designed to mitigate long-term commodity price fluctuations and, therefore, will not protect us from long-term commodity price increases. In addition, in the future, our hedging positions may not correlate to our actual energy costs, which would cause acceleration in the recognition of unrealized gains and losses on our hedging positions in our operating results.

Downgrades of our credit ratings could adversely impact us.

Our credit ratings are important to our cost of capital. The major debt rating agencies routinely evaluate our debt based on a number of factors, which include financial strength and business risk as well as transparency with rating agencies and timeliness of financial reporting. A downgrade in our debt rating could result in increased interest and other expenses on our existing variable interest rate debt, and could result in increased interest and other financing expenses on future borrowings. Downgrades in our debt rating could also restrict our access to capital markets and affect the value and marketability of our outstanding notes.

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Increases in the cost of labor, union organizing activity, labor disputes and work stoppages at our facilities could delay or impede our production, reduce sales of our products and increase our costs.
The costs of labor are generally increasing, including the costs of employee benefit plans. We are subject to the risk that strikes or other types of conflicts with personnel may arise or that we may become the subject of union organizing activity at additional facilities. In particular, renewal of collective bargaining agreements typically involves negotiation, with the potential for work stoppages or increased costs at affected facilities.
We could face potential product liability and warranty claims, we may not accurately estimate costs related to such claims, and we may not have sufficient insurance coverage available to cover such claims.
Our products are used and have been used in a wide variety of residential and commercial applications. We face an inherent business risk of exposure to product liability or other claims in the event our products are alleged to be defective or that the use of our products is alleged to have resulted in harm to others or to property. We may in the future incur liability if product liability lawsuits against us are successful. Moreover, any such lawsuits, whether or not successful, could result in adverse publicity to us, which could cause our sales to decline.
In addition, consistent with industry practice, we provide warranties on many of our products and we may experience costs of warranty or breach of contract claims if our products have defects in manufacture or design or they do not meet contractual specifications. We estimate our future warranty costs based on historical trends and product sales, but we may fail to accurately estimate those costs and thereby fail to establish adequate warranty reserves for them.
We maintain insurance coverage to protect us against product liability claims, but that coverage may not be adequate to cover all claims that may arise or we may not be able to maintain adequate insurance coverage in the future at an acceptable cost. Any liability not covered by insurance or that exceeds our established reserves could materially and adversely impact our business, financial condition and results of operations.
We may be subject to liability under and may make substantial future expenditures to comply with environmental laws and regulations.
Our manufacturing facilities are subject to numerous foreign, federal, state and local laws and regulations relating to the presence of hazardous materials, pollution and the protection of the environment, including those governing emissions to air, discharges to water, use, storage and transport of hazardous materials, storage, treatment and disposal of waste, remediation of contaminated sites and protection of worker health and safety.
Liability under these laws involves inherent uncertainties. Environmental liability estimates may be affected by changing determinations of what constitutes an environmental exposure or an acceptable level of cleanup. For example, remediation activities generally involve a potential range of activities and costs related to soil and groundwater contamination. This can include pre-cleanup activities such as fact finding and investigation, risk assessment, feasibility studies, remedial action design and implementation (where actions may range from monitoring to removal of contaminants, to installation of longer-term remediation systems). Please see "Item 1 - Business - Environmental Control" for information on costs and accruals related to environmental remediation. To the extent that the required remediation procedures or timing of those procedures change, additional contamination is identified, or the financial condition of other potentially responsible parties is adversely affected, the estimate of our environmental liabilities may change. Change in required remediation procedures or timing of those procedures at existing legacy sites, or discovery of contamination at additional sites, could result in increases to our environmental obligations.
Violations of environmental, health and safety laws are subject to civil, and, in some cases, criminal sanctions. As a result of these uncertainties, we may incur unexpected interruptions to operations, fines, penalties or other reductions in income which could adversely impact our business, financial condition and results of operations. It is possible that new laws and regulations will specifically address climate change, toxic air emissions, ozone forming emissions and fine particulate matter. New environmental and chemical regulations could impact our ability to expand production or construct new facilities in every geographic region in which we operate. Continued and increased government and public emphasis on environmental issues is expected to result in increased future investments for environmental controls at ongoing operations, which will be charged against income from future operations. Present and future environmental laws and regulations applicable to our operations, and changes in their interpretation, may require

substantial capital expenditures or may require or cause us to modify or curtail our operations, which may have a material adverse impact on our business, financial condition and results of operations.

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We will not be insured against all potential losses and could be seriously harmed by natural disasters, catastrophes or sabotage.
Many of our business activities globally involve substantial investments in manufacturing facilities and many products are produced at a limited number of locations. These facilities could be materially damaged by natural disasters such as floods, tornados, hurricanes and earthquakes or by sabotage. We could incur uninsured losses and liabilities arising from such events, including damage to our reputation, and/or suffer material losses in operational capacity, which could have a material adverse impact on our business, financial condition and results of operations.
We depend on our senior management team and other skilled and experienced personnel to operate our business effectively, and the loss of any of these individuals or the failure to attract additional personnel could adversely impact our financial condition and results of operations.
We are highly dependent on the skills and experience of our senior management team and other skilled and experienced personnel. These individuals possess sales, marketing, manufacturing, logistical, financial, business strategy and administrative skills that are important to the operation of our business. We cannot assure that we will be able to retain all of our existing senior management personnel. The loss of any of these individuals or an inability to attract additional personnel could prevent us from implementing our business strategy and could adversely impact our business and our future financial condition or results of operations.
We are subject to various legal and regulatory proceedings, including litigation in the ordinary course of business, and uninsured judgments or a rise in insurance premiums may adversely impact our business, financial condition and results of operations.
In the ordinary course of business, we are subject to various legal and regulatory proceedings, which may include but are not limited to those involving antitrust, tax, environmental, intellectual property and other matters, including general commercial litigation. Any claims raised in legal and regulatory proceedings, whether with or without merit, could be time consuming and expensive to defend and could divert management's attention and resources. Additionally, the outcome of legal and regulatory proceedings may differ from our expectations because the outcomes of these proceedings are often difficult to predict reliably. Various factors and developments can lead to changes in our estimates of liabilities and related insurance receivables, where applicable, or may require us to make additional estimates, including new or modified estimates that may be appropriate due to a judicial ruling or judgment, a settlement, regulatory developments or changes in applicable law. A future adverse ruling, settlement or unfavorable development could result in charges that could have a material adverse effect on our results of operations in any particular period.
In accordance with customary practice, we maintain insurance against some, but not all, of these potential claims. In the future, we may not be able to maintain insurance at commercially acceptable premium levels. In addition, the levels of insurance we maintain may not be adequate to fully cover any and all losses or liabilities. If any significant judgment or claim is not fully insured or indemnified against, it could have a material adverse impact on our business, financial condition and results of operations.
If our efforts in acquiring and integrating other businesses, establishing joint ventures or expanding our production capacity are not successful, our business may not grow.
We have historically grown our business through acquisitions, joint ventures and the expansion of our production capacity. Our ability to grow our business through these investments depends upon our ability to identify, negotiate and finance suitable arrangements. If we cannot successfully execute on our investments or receive any required regulatory approvals on a timely basis, we may be unable to generate sufficient revenue to offset acquisition, integration or expansion costs, we may incur costs in excess of what we anticipate, and our expectations of future results of operations, including cost savings and synergies, may not be achieved. Acquisitions, joint ventures and production capacity expansions involve substantial risks, including:

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- unforeseen difficulties in operations, technologies, products, services, accounting and personnel;
- diversion of financial and management resources from existing operations;
- unforeseen difficulties related to entering geographic regions, markets or product lines where we do not have prior experience;
- risks relating to obtaining sufficient public or private financing;
- difficulty in integrating the acquired business' standards, processes, procedures and controls with our existing operations;
- potential loss of key employees;
- unanticipated competitive responses;
- potential loss of customers; and
- undisclosed or undiscovered liabilities or claims.

Our failure to address these risks or other problems encountered in connection with our past or future acquisitions and investments could cause us to fail to realize the anticipated benefits of such acquisitions or investments, incur unanticipated liabilities, and harm our business generally. Future acquisitions and investments could also result in dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities, or amortization expenses, or write-offs of goodwill, any of which could have a material adverse impact on our business, financial condition and results of operations. Also, the anticipated benefits of our investments may not materialize.

Our ongoing efforts to increase productivity and reduce costs may not result in anticipated savings in operating costs.

Our cost reduction and productivity efforts, including those related to our existing operations, production capacity expansions and new manufacturing platforms, may not produce anticipated results. Our ability to achieve cost savings and other benefits within expected time frames is subject to many estimates and assumptions. These estimates and assumptions are subject to significant economic, competitive and other uncertainties, some of which are beyond our control. If these estimates and assumptions are incorrect, if we experience delays, or if other unforeseen events occur, our business, financial condition and results of operations could be adversely impacted.

Significant changes in the factors and assumptions used to measure our defined benefit plan obligations, actual investment returns on pension assets and other factors could have a negative impact on our financial condition or liquidity.

We have certain defined benefit pension plans and other post-employment benefit (OPEB) plans. Our future funding requirements for defined benefit pension and OPEB plans depend upon a number of factors and assumptions, including our actual experience against assumptions with regard to interest rates used to determine funding levels; return on plan assets; benefit levels; participant experience (e.g., mortality and retirement rates); health care cost trends; and applicable regulatory changes. To the extent actual results are less favorable than our assumptions, there could be a material adverse impact on our financial condition and results of operations.

Additional risks exist due to the nature and magnitude of our investments, including the implementation of or changes to the investment policy, insufficient market capacity to absorb a particular investment strategy or high volume transactions, and the inability to quickly rebalance illiquid and long-term investments.

As of December 31, 2017 and 2016, our U.S. and worldwide defined benefit pension plans were underfunded by a total of $250 million and $363 million, respectively, and OPEB obligations were underfunded by $230 million and $225 million, respectively. If our cash flows and capital resources are insufficient to fund our pension or OPEB obligations, we could be forced to reduce or delay investments and capital expenditures, seek additional capital, or restructure or refinance our indebtedness.

If we were required to write down all or part of our goodwill or other indefinite-lived intangible assets, our results of operations or financial condition could be materially adversely affected in a particular period.

Declines in the Company's business may result in an impairment of the Company's tangible and intangible assets which could result in a material non-cash charge. A significant or prolonged decrease in the Company's market capitalization, including a decline in stock price, or a negative long-term performance outlook, could result in an impairment of its tangible and intangible assets which results when the carrying value of the Company's assets exceed their fair value. At least annually, the Company

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assesses goodwill and intangible assets for impairment. Since the Company utilizes a discounted cash flow methodology to calculate the fair value of its reporting units, weak demand for a specific product line or business could result in an impairment. Accordingly, any determination requiring the write-off of a significant portion of goodwill or intangible assets could negatively impact the Company's results of operations.

RISKS RELATED TO OWNERSHIP OF OUR COMMON STOCK

The market price of our common stock is subject to volatility.

The market price of our common stock could be subject to wide fluctuations in response to numerous factors, many of which are beyond our control. These factors include actual or anticipated variations in our operational results and cash flow, our earnings relative to our competition, changes in financial estimates by securities analysts, trading volume, sales by holders of large amounts of our common stock, short selling, market conditions within the industries in which we operate, seasonality of our business operations, the general state of the securities markets and the market for stocks of companies in our industry, governmental legislation or regulation and currency and exchange rate fluctuations, as well as general economic and market conditions, such as recessions.

We are a holding company with no operations of our own and depend on our subsidiaries for cash.

As a holding company, most of our assets are held by our direct and indirect subsidiaries and we will primarily rely on dividends and other payments or distributions from our subsidiaries to meet our debt service and other obligations and to enable us to pay dividends. The ability of our subsidiaries to pay dividends or make other payments or distributions to us will depend on their respective operating results and may be restricted by, among other things, the laws of their jurisdiction of organization (which may limit the amount of funds available for the payment of dividends or other payments), agreements of those subsidiaries, agreements with any co-investors in non-wholly-owned subsidiaries, the terms of our credit facility and senior notes and the covenants of any future indebtedness we or our subsidiaries may incur.

Provisions in our amended and restated certificate of incorporation and bylaws or Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and therefore depress the trading price of our common stock.

Our amended and restated certificate of incorporation and bylaws contain provisions that could depress the trading price of our common stock through provisions that may discourage, delay or prevent a change in control of our Company or changes in our management that our stockholders may deem advantageous.

Additionally, we are subject to Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any "interested" stockholder for a period of three years following the date on which the stockholder became an "interested" stockholder and which may discourage, delay or prevent a change in control of our company.

Dividends on our common stock are declared at the discretion of our Board of Directors.

Since February 2014, the Board has declared a quarterly dividend on our common stock. The payment of any future cash dividends to our stockholders is not guaranteed and will depend on decisions that will be made by our Board of Directors and will depend on then-existing conditions, including our operating results, financial conditions, contractual restrictions, corporate law restrictions, capital agreements, applicable laws of the State of Delaware and business prospects.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

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ITEM 2. PROPERTIES

Composites

Our Composites segment operates out of 29 manufacturing facilities. During 2017, we announced plans to expand our operations in India, and we expect this capacity to be available later in 2018. Principal manufacturing facilities for our Composites segment, all of which are owned by the Company, include the following:

Aiken, South Carolina	Jackson, Tennessee
Amarillo, Texas	Kimchon, Korea
Anderson, South Carolina	L'Ardoise, France
Besana, Italy	Rio Claro, Brazil
Chambery, France	Taloja, India
Gastonia, North Carolina	Tlaxcala, Mexico
Gous, Russia	Yuhang, China

Insulation

Our Insulation segment operates out of 35 manufacturing facilities. This figure and listing below excludes the facilities of our 2018 acquisition of Paroc Group Oy, whose European facilities are primarily located in the Nordic region and Eastern Europe. We began operations in our recently constructed Joplin, Missouri facility in 2017. Principal manufacturing facilities for our Insulation segment, all of which are owned by the Company, include the following:

Delmar, New York	Rockford, Illinois
Edmonton, Alberta, Canada	Santa Clara, California
Fairburn, Georgia	Sedalia, Missouri
Guangzhou, Guandong, China	Tallmadge, Ohio
Joplin, Missouri	Tessenderlo, Belgium
Kansas City, Kansas	Toronto, Ontario, Canada
Mexico City, Mexico	Wabash, Indiana
Newark, Ohio	Waxahachie, Texas

Roofing

Our Roofing segment operates out of 35 total manufacturing facilities. This number separately counts many roofing and asphalt manufacturing facilities that are located at the same site. Principal manufacturing facilities for our Roofing segment, all of which are owned by the Company, include the following:

Brookville, Indiana	Minneapolis, Minnesota
Denver, Colorado	Portland, Oregon
Irving, Texas	Qingdao, China
Kearny, New Jersey	Savannah, Georgia
Medina, Ohio	Silvassa, India
Memphis, Tennessee	Summit, Illinois

We believe that these properties are in good condition and well maintained, and are suitable and adequate to carry on our business. The capacity of each plant varies depending upon product mix.

Our principal executive offices are located in the Owens Corning World Headquarters, Toledo, Ohio, an owned facility of approximately 400,000 square feet. Our research and development activities are primarily conducted at our Science and Technology Center, located on approximately 500 acres of land owned by the Company outside of Granville, Ohio. It consists of approximately 20 structures totaling more than 650,000 square feet. In addition, we have application development and other product and market focused research and development centers in various locations.

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ITEM 3. LEGAL PROCEEDINGS

Environmental Legal Proceedings
In March 2017, Owens Corning Insulating Systems, LLC (OCIS) received a Notice of Violation (NOV) from the California Bay Area Quality Management District (the "District") alleging that the OCIS facility in Santa Clara, California began operation of a rebuilt furnace without obtaining required air emission permits. In July 2017, OCIS resolved the NOV with the District by entering into a Compliance and Enforcement Agreement (the "Agreement"). Under the Agreement, OCIS paid the District a total penalty of $115,000. OCIS entered into the Agreement to expedite settlement of the matter and does not admit any conduct or condition in violation of any District regulation.

In July 2017, Owens Corning (Shanghai) Fiberglas Co., Ltd., (OCSF) received a NOV from the Shanghai Environmental Protection Agency ("Shanghai") alleging that the OCSF facility in Shanghai had exceeded Shanghai air emission standards for certain air pollutants. In September 2017, OCSF and Shanghai negotiated a resolution to the NOV under which OCSF agreed to pay Shanghai a penalty of 700,000 Chinese Yuan. This penalty was paid in October 2017. At the time of payment, the penalty amounted to approximately $105,000.

Litigation, Other Regulatory Proceedings and Environmental Matters
Additional information required by this item is incorporated by reference to Note 15, Contingent Liabilities and Other Matters.

ITEM 4. MINE SAFETY DISCLOSURES
Not applicable.

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EXECUTIVE OFFICERS OF OWENS CORNING

The name, age and business experience during the past five years of Owens Corning's executive officers as of January 1, 2018 are set forth below. Each executive officer holds office until his or her successor is elected and qualified or until his or her earlier resignation, retirement or removal. All those listed have been employees of Owens Corning during the past five years except as indicated.

Name and Age	Position*
Brian D. Chambers (51)	President, Roofing since October 2014; formerly Vice President and General Manager, Roofing (2013)
Julian Francis (51)	President, Insulation since October 2014; formerly Vice President and General Manager, Residential Insulation (2012)
Arnaud Genis (53)	President, Composites since 2010
Ava Harter (48)	Senior Vice President, General Counsel and Secretary since May 2015; formerly General Counsel, Chief Compliance Officer and Corporate Secretary, Taleris America LLC (2012)
Michael C. McMurray (52)	Senior Vice President and Chief Financial Officer since August 2012
Kelly J. Schmidt (52)	Vice President, Controller since April 2011
Daniel T. Smith (52)	Senior Vice President, Organization and Administration since November 2014; formerly Senior Vice President, Information Technology and Human Resources (2012)
Michael H. Thaman (53)	President and Chief Executive Officer since December 2007 and Chairman of the Board since April 2002; Director since 2002

* Information in parentheses indicates year during the past five years in which service in position began. The last item listed for each individual represents the position held by such individual at the beginning of the five-year period.

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Part II

ITEM 5. MARKET FOR OWENS CORNING'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Owens Corning's common stock trades on the New York Stock Exchange under the symbol "OC." The following table sets forth the high and low sales prices per share of, and dividends declared on, Owens Corning common stock for each quarter from January 1, 2016 through December 31, 2017:

Period	High	Low	Declared Dividend
First Quarter 2016	$47.78	$38.96	$ 0.18
Second Quarter 2016	$52.52	$45.46	$ 0.18
Third Quarter 2016	$58.69	$50.33	$ 0.18
Fourth Quarter 2016	$56.12	$46.45	$ 0.20
First Quarter 2017	$62.79	$50.77	$ 0.20
Second Quarter 2017	$67.74	$59.26	$ 0.20
Third Quarter 2017	$78.31	$63.89	$ 0.20
Fourth Quarter 2017	$92.85	$73.45	$ 0.21

Holders of Common Stock

The number of stockholders of record of Owens Corning's common stock on February 15, 2018 was 426.

Cash Dividends

The payment of any future cash dividends to our stockholders will depend on decisions that will be made by our Board of Directors and will depend on then existing conditions, including our operating results, financial conditions, contractual restrictions, corporate law restrictions, capital agreements, applicable laws of the State of Delaware and business prospects.

Under the credit agreement applicable to our senior revolving credit facility, the Company may not declare a cash dividend if a default or event of default exists or would come to exist at the time of declaration or if a dividend declaration violates the provisions of our formation documents or other material agreements.

The Company's subsidiaries are subject to certain restrictions on their ability to pay dividends under the agreements governing our senior revolving credit facility and our receivables securitization facility.

Recent Sales of Unregistered Securities; Use of Proceeds from Registered Securities

None.

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ITEM 5. MARKET FOR OWENS CORNING’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES (continued)

Issuer Purchases of Equity Securities

The following table provides information about Owens Corning’s purchases of its common stock during the three months ended December 31, 2017:

Period	Total Number of Shares (or Units) Purchased		Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs**	Maximum Number of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs**
October 1-31, 2017	827		$ 79.28	—	7,493,976
November 1-30, 2017	818		82.54	—	7,493,976
December 1-31, 2017	418		87.66	—	7,493,976
Total	2,063	*	$ 82.27	—	7,493,976

* The Company retained 827, 818 and 418 shares surrendered to satisfy tax withholding obligations in connection with the vesting of restricted shares granted to our employees in October, November and December, respectively.

** On October 24, 2016, the Board of Directors approved a share buy-back program under which the Company is authorized to repurchase up to 10 million shares of the Company's outstanding common stock (the “Repurchase Authorization"). The Repurchase Authorization enables the Company to repurchase shares through open market, privately negotiated, or other transactions. The actual number of shares repurchased will depend on timing, market conditions and other factors and is at the Company's discretion. The Company did not repurchase any shares of its common stock during the three months ended December 31, 2017 under the Repurchase Authorization. As of December 31, 2017, approximately 7.5 million shares remain available for repurchase under the Repurchase Authorization.

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ITEM 5. MARKET FOR OWENS CORNING’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES (continued)

Performance Graph
The annual changes for the five-year period shown in the graph on this page are based on the assumption that $100 had been invested in Owens Corning (OC) stock, the Standard & Poor’s 500 Stock Index ("S&P 500") and the Dow Jones U.S. Building Materials & Fixtures Index ("DJ Bld. Mat.") on December 31, 2012, and that all quarterly dividends were reinvested. The total cumulative dollar returns shown on the graph represent the value that such investments would have had on December 31, 2017.

Performance Graph

	2012	2013	2014	2015	2016	2017
OC	$100	$110	$99	$131	$146	$264
S&P 500	$100	$132	$151	$153	$171	$208
DJ Bld. Mat.	$100	$128	$142	$162	$192	$226

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ITEM 6. SELECTED FINANCIAL DATA

	Twelve Months Ended December 31,				
	2017(a)	2016(b)	2015(c)	2014(d)	2013(e)
	(in millions, except per share amounts)				
Statement of Earnings Data					
Net sales	$6,384	$5,677	$5,350	$5,260	$5,295
Gross margin	$1,572	$1,381	$1,153	$976	$966
Marketing and administrative expenses	$620	$584	$525	$487	$530
Earnings before interest and taxes	$737	$699	$548	$392	$385
Interest expense, net	$107	$108	$100	$114	$112
Loss (gain) on extinguishment of debt	$71	$1	$(5)	$46	$—
Income tax expense	$269	$188	$120	$5	$68
Net earnings	$290	$399	$334	$228	$205
Net earnings attributable to Owens Corning	$289	$393	$330	$226	$204
Earnings per common share attributable to Owens Corning common stockholders					
Basic	$2.59	$3.44	$2.82	$1.92	$1.73
Diluted	$2.55	$3.41	$2.79	$1.91	$1.71
Dividend	$0.81	$0.74	$0.68	$0.64	$—
Weighted-average common shares					
Basic	111.5	114.4	117.2	117.5	118.2
Diluted	113.2	115.4	118.2	118.3	119.1
Balance Sheet Data					
Total assets	$8,632	$7,741	$7,326	$7,483	$7,572
Long-term debt, net of current portion	$2,405	$2,099	$1,702	$1,978	$2,012
Total equity	$4,204	$3,889	$3,779	$3,730	$3,830

(a) During 2017, the Company recorded $48 million of restructuring costs, comprised of $27 million of severance, $17 million of accelerated depreciation and $4 million of other exit costs. In connection with our previously announced acquisitions, mainly Pittsburgh Corning Corporation and Pittsburgh Corning Europe NV (collectively "Pittsburgh Corning"), we recognized $15 million of acquisition-related costs and a $5 million charge related to inventory fair value step-up. Other significant items included $64 million of pension settlement losses from risk mitigation actions, a $15 million environmental liability charge for a closed U.S. site, partially offset by a $29 million litigation settlement gain, net of legal fees. Outside of earnings before interest and taxes, the Company also recorded a $71 million loss on debt extinguishment and an $82 million non-cash income tax charge related to the Tax Act.

(b) During 2016, the Company recorded $28 million of restructuring costs, comprised of $19 million of accelerated depreciation, $6 million of facility-related charges and $3 million of personnel-related charges. In connection with our previously announced acquisitions, mainly InterWrap Holdings, Inc. ("InterWrap"), we recognized $9 million of acquisition-related costs and a $10 million charge related to inventory fair value step-up.

(c) During 2015, the Company recorded $2 million of restructuring costs. This was comprised of a $6 million benefit from changes in severance estimates and pension-related adjustments, offset by $3 million in accelerated depreciation and $5 million in other exit costs.

(d) During 2014, the Company recorded $36 million of restructuring costs, comprised of $34 million of severance costs, $3 million of contract termination costs, and partially offset by $1 million of other related gains. There was also a gain of $45 million related to the sale of the Hangzhou, China facility, a $20 million loss related to the sale of the European Stone Business, $3 million related to the impairment loss on Alcala, Spain facility, and $6 million related to Hurricane Sandy costs. Outside of earnings before interest and taxes, the Company recorded a $46 million loss on debt extinguishment.

(e) During 2013, the Company recorded $26 million of restructuring costs, comprised of $8 million of severance costs, $9 million of accelerated depreciation and $9 million in other exit costs. There was also $20 million in accelerated depreciation related to a change in the useful life of assets and a $15 million net gain related to Hurricane Sandy insurance activity.

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

This Management’s Discussion and Analysis (MD&A) is intended to help investors understand Owens Corning, our operations and our present business environment. MD&A is provided as a supplement to, and should be read in conjunction with, our Consolidated Financial Statements and the accompanying Notes thereto contained in this report. Unless the context requires otherwise, the terms “Owens Corning,” “Company,” “we” and “our” in this report refer to Owens Corning and its subsidiaries.

GENERAL

Owens Corning is a leading global producer of glass fiber reinforcements and other materials for composites and of residential and commercial building materials. The Company has three reporting segments: Composites, Insulation and Roofing. Through these lines of business, the Company manufactures and sells products worldwide. We maintain leading market positions in many of our major product categories.

EXECUTIVE OVERVIEW

Net earnings attributable to Owens Corning were $289 million in 2017 compared to $393 million in 2016. The Company reported $737 million in earnings before interest and taxes (EBIT) in 2017 compared to $699 million in 2016. The Company generated $855 million in adjusted earnings before interest and taxes (“Adjusted EBIT”) in 2017 compared to $746 million in 2016. See the Adjusted Earnings Before Interest and Taxes paragraph of MD&A for further information regarding EBIT and Adjusted EBIT, including the reconciliation to net earnings attributable to Owens Corning. Segment EBIT performance compared to 2016 increased $51 million in our Insulation segment, increased $49 million in our Roofing segment and increased $27 million in our Composites segment. Within our Corporate, Other and Eliminations category, General corporate expenses and other increased by $18 million.

In our Insulation segment, EBIT in 2017 was $177 million compared to $126 million in 2016, primarily due to higher sales and production volumes, higher selling prices and the impact of our Pittsburgh Corning acquisition. In our Roofing segment, EBIT in 2017 was $535 million compared to $486 million in 2016, primarily driven by higher sales volumes, as overall input cost inflation was largely offset by higher selling prices. In our Composites segment, EBIT in 2017 was $291 million compared to $264 million in 2016, primarily driven by lower furnace rebuild and startup costs.

In 2017, the Company's operating activities provided $1,016 million of cash flow, compared to $943 million in 2016. While net earnings were lower than the prior year, the measurement of cash provided by operating activities does not include the effects of significant non-cash charges and debt extinguishment financing activities.

On June 27, 2017, the Company acquired all outstanding equity of Pittsburgh Corning Corporation and Pittsburgh Corning Europe NV (collectively, "Pittsburgh Corning"), the world’s leading producer of cellular glass insulation systems for commercial and industrial markets, for approximately $563 million, net of cash acquired. This acquisition expands the Company’s position in commercial and industrial product offerings and grows its presence in Europe and Asia. Pittsburgh Corning's operating results since the date of acquisition and a preliminary purchase price allocation have been included in the Company's Insulation segment in the Consolidated Financial Statements.

On February 5, 2018, the Company acquired all outstanding equity of Paroc Group Oy ("Paroc"), a leading producer of mineral wool insulation for building and technical applications in Europe, for an enterprise value of approximately $1.1 billion (900 million Euro). The acquisition of Paroc expands the Company's mineral wool technology, grows its presence in the European insulation market, provides access to a variety of new end-use markets and will increase the Insulation segment's geographic sales mix outside of the U.S. and Canada. Operating results of the acquisition will be included in the Company’s Insulation segment within the Consolidated Financial Statements beginning February 5, 2018. The Company is in the process of valuing certain assets and liabilities, and the purchase price allocation will be completed with finalization of these valuations.

Throughout 2017 and in January 2018, the Company had several financing activities associated with our acquisitions. In June 2017, the Company issued $600 million of 2047 notes with an annual interest rate of 4.30%, and used a portion of the proceeds to fund the purchase of Pittsburgh Corning. In July 2017, a portion of the proceeds was used by the Company to repay all of its outstanding 2019 senior notes and a portion of its outstanding 2036 senior notes, resulting in a $71 million loss on extinguishment of debt. In October 2017, the Company obtained term loan commitments totaling $900 million that were available to be used, in part, to potentially pay a portion of the purchase of the Paroc acquisition. In January 2018, the Company issued $400 million of 2048 senior notes with an annual interest rate of 4.40%. The proceeds from the senior notes, along with borrowings on a $600 million term loan commitment and the Receivables Securitization Facility, were used to fund the purchase of Paroc in February 2018.

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ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

In 2017, the Company repurchased 2.3 million shares of the Company’s common stock for $142 million under a previously announced repurchase authorization. As of December 31, 2017, 7.5 million shares remain available for repurchase under the Repurchase Authorization.

RESULTS OF OPERATIONS

Consolidated Results (in millions)

	Twelve Months Ended December 31,		
	2017	2016	2015
Net sales	$6,384	$5,677	$5,350
Gross margin	$1,572	$1,381	$1,153
% of net sales	25 %	24 %	22 %
Marketing and administrative expenses	$620	$584	$525
Other expenses, net	$130	$16	$7
Earnings before interest and taxes	$737	$699	$548
Interest expense, net	$107	$108	$100
Loss (gain) on extinguishment of debt	$71	$1	$(5)
Income tax expense	$269	$188	$120
Net earnings attributable to Owens Corning	$289	$393	$330

The Consolidated Results discussion below provides a summary of our results and the trends affecting our business, and should be read in conjunction with the more detailed Segment Results discussion that follows.

NET SALES

2017 Compared to 2016: Net sales increased by $707 million in 2017 as compared to 2016. The increase in net sales was driven by higher sales volumes in all three segments, as well as the acquisitions of Pittsburgh Corning into our Insulation segment and InterWrap into our Roofing segment.

2016 Compared to 2015: Net sales increased by $327 million in 2016 as compared to 2015. The increase in net sales was driven by higher sales volumes in our Roofing and Composites segments and the impact of the InterWrap acquisition. This increase was partially offset by lower sales volumes in our Insulation segment and the negative impact of translating sales denominated in foreign currencies into U.S. dollars, primarily in our Composites and Insulation segments.

GROSS MARGIN

2017 Compared to 2016: Gross margin as a percentage of net sales in 2017 was relatively flat compared to 2016. The $191 million improvement was primarily driven by higher sales volumes in all three segments, the gross margin contribution from our acquisitions of InterWrap and Pittsburgh Corning and lower furnace rebuild and startup costs in our Composites segment.

2016 Compared to 2015: Gross margin as a percentage of net sales in 2016 increased about two percentage points compared to 2015. The $228 million improvement was primarily driven by our Roofing segment's higher sales volumes and the benefit of lower input costs, primarily asphalt. The negative impact of production curtailments in our Insulation segment and restructuring and acquisition-related costs were largely offset by the gross margin contribution from the InterWrap acquisition.

RESTRUCTURING AND ACQUISITION-RELATED COSTS

The Company has incurred restructuring, transaction and integration costs related to acquisitions, along with restructuring costs in connection with its global cost reduction and productivity initiatives. These costs are recorded in the Corporate, Other and Eliminations category. Please refer to Notes 7 and 11 of the Consolidated Financial Statements for further information on the nature of these costs.

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

The following table presents the impact and respective location of these income (expense) items on the Consolidated Statements of Earnings (in millions):

	Location	Twelve Months Ended December 31, 2017	2016	2015
Restructuring costs	Cost of sales	$(20)	$(25)	$(10)
Restructuring costs	Other expenses, net	(28)	(3)	8
Acquisition-related costs	Marketing and administrative expenses	(6)	(6)	—
Acquisition-related costs	Other expenses, net	(9)	(3)	—
Recognition of acquisition inventory fair value step-up	Cost of sales	(5)	(10)	—
Total restructuring, acquisition and integration-related costs		$(68)	$(47)	$(2)

MARKETING AND ADMINISTRATIVE EXPENSES

2017 Compared to 2016: Marketing and administrative expenses increased by $36 million in 2017 compared to 2016. The increase was primarily due to higher selling, general and administrative expenses associated with our acquisitions and higher performance-based compensation.

2016 Compared to 2015: Marketing and administrative expenses increased by $59 million in 2016 compared to 2015. The increase was primarily due to higher selling, general and administrative expenses in our Roofing segment (including InterWrap marketing and administrative expenses), higher performance based compensation and acquisition-related costs.

OTHER EXPENSES, NET

2017 Compared to 2016: Other expenses, net increased $114 million in 2017 compared to 2016. The increase was primarily driven by $64 million of pension settlement losses from risk mitigation actions, $25 million of higher restructuring costs reported in this line, $15 million of environmental liability charges, a $10 million charge for the allowance for doubtful accounts, higher acquisition-related costs and increased general corporate expenses. These costs were partially offset by a $29 million litigation settlement gain, net of legal fees.

2016 Compared to 2015: Other expenses, net increased $9 million in 2016 compared to 2015, primarily due to higher restructuring costs.

INTEREST EXPENSE, NET

2017 Compared to 2016: Interest expense, net in 2017 was flat to 2016, as the effect of higher long-term debt following the issuance of our 2047 senior notes was offset by the lower borrowing rate.

2016 Compared to 2015: Interest expense, net in 2016 was $8 million higher than in 2015. The increase was primarily driven by increased long-term debt following the issuance of our 2026 senior notes.

LOSS (GAIN) ON EXTINGUISHMENT OF DEBT

For the year ended December 31, 2017, the Company recognized a $71 million loss on extinguishment of debt in connection with the redemption of its 2019 senior notes and a portion of its 2036 senior notes. For the year ended December 31, 2016, the Company recorded a $1 million loss on extinguishment of debt in connection with the redemption of its 2016 senior notes. For the year ended December 31, 2015, the Company recorded a $5 million gain on extinguishment of debt as a result of purchasing its World Headquarters facility, which had previously been classified as a capital lease.

INCOME TAX EXPENSE

Income tax expense for 2017 was $269 million compared to $188 million in 2016.

The U.S. government enacted the Tax Act legislation on December 22, 2017. The Tax Act made broad and complex changes to the U.S. tax code, including but not limited to, a reduction to the U.S. federal corporate income tax rate from 35% to 21%; a one-

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

time transition tax on certain unrepatriated earnings of foreign subsidiaries (the "Transition Tax"); eliminating the corporate alternative minimum tax (AMT) and changing realization of AMT credits; changing rules related to uses and limitations of NOL carryforwards created in tax years after December 31, 2017; changes to the limitations on available interest expense deductions; and changes to other existing deductions and business-related exclusions.

The SEC issued Staff Accounting Bulletin No. 118, "Income Tax Accounting Implications of the Tax Cuts and Jobs Act" ("SAB 118"), providing guidance on accounting for the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date to complete the accounting under Accounting Standards Codification (ASC) 740, "Income Taxes." In accordance with SAB 118, a company must account for those aspects of the Act for which the accounting under ASC 740 is complete. To the extent that a company's accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in its financial statements. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis of the tax laws that were in effect immediately before the enactment of the Tax Act.

The Company has not completed the accounting for income tax effects of the Tax Act. However, we were able to make reasonable estimates to record a provisional adjustment. In connection with our initial analysis, a provisional non-cash charge of $82 million was recorded to tax expense during the period for the changes related to the Tax Act. The provisional adjustment includes reasonable estimates for the Transition Tax resulting in a non-cash charge of $264 million, a benefit of $160 million from the generation of FTCs, a charge of $24 million for a valuation allowance established against the FTC generated, and a deferred tax benefit of $46 million for the impact to our net U.S. deferred taxes liabilities as a result of reduction of the corporate tax rate to 21%. The Company was not yet able to make a reasonable estimate of the U.S. state tax effects of the Tax Act. Therefore, no provisional adjustment was recorded with respect to this item.

The Company's effective tax rate for 2017 was 48% on pre-tax income of $559 million. The difference between the 48% effective tax rate and the U.S. federal statutory tax rate of 35% is primarily attributable to the provisional adjustments for the Tax Act, reversal of valuation allowances recorded against certain foreign deferred tax assets, changes in uncertain tax positions and lower foreign tax rates.

New provisions of the Tax Act, including but not limited to, the base erosion anti-abuse tax (BEAT), a new limitation on deductible interest expense, a tax on global intangible low taxed income (GILTI) earned by controlled foreign corporations (CFCs), and limitations on existing deductions, are effective January 1, 2018. The Company continues to evaluate the impact of the tax law changes on future results and monitor the amount of future income levels to fully utilize the U.S. federal NOLs and FTCs, which is substantially similar to the future income levels to fully utilize the U.S. federal NOLs before enactment of the Tax Act.

The realization of deferred tax assets depends on achieving a certain minimum level of future taxable income. Management currently believes that it is at least reasonably possible that the minimum level of taxable income will be met within the next 12 months to reduce the valuation allowances of certain foreign jurisdictions by a range of zero to $6 million.

The Company's effective tax rate for 2016 was 32% on pre-tax income of $590 million. The difference between the 32% effective tax rate and the U.S. federal statutory rate of 35% is primarily attributable to the reversal of valuation allowances recorded in prior years against French and Spanish deferred tax assets, changes in uncertain tax positions and lower foreign tax rates.

Adjusted Earnings Before Interest and Taxes ("Adjusted EBIT")

Adjusted EBIT is a non-GAAP measure that excludes certain items that management does not allocate to our segment results because it believes they are not representative of the Company's ongoing operations. Adjusted EBIT is used internally by the Company for various purposes, including reporting results of operations to the Board of Directors of the Company, analysis of performance and related employee compensation measures. Although management believes that these adjustments result in a measure that provides a useful representation of our operational performance, the adjusted measure should not be considered in isolation or as a substitute for net earnings attributable to Owens Corning as prepared in accordance with accounting principles generally accepted in the United States.

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

Adjusting income (expense) items to EBIT are shown in the table below (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Restructuring costs	$(48)	$(28)	$(2)
Acquisition-related costs	(15)	(9)	—
Recognition of acquisition inventory fair value step-up	(5)	(10)	—
Litigation settlement gain, net of legal fees	29	—	—
Pension settlement losses	(64)	—	—
Environmental liability charges	(15)	—	—
Total adjusting items	$(118)	$(47)	$(2)

The reconciliation from net earnings attributable to Owens Corning to EBIT and Adjusted EBIT is shown in the table below (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
NET EARNINGS ATTRIBUTABLE TO OWENS CORNING	$289	$393	$330
Net earnings attributable to noncontrolling interests	1	6	4
NET EARNINGS	290	399	334
Equity in net earnings (loss) of affiliates	—	(3)	1
Income tax expense	269	188	120
EARNINGS BEFORE TAXES	559	590	453
Interest expense, net	107	108	100
Loss (gain) on extinguishment of debt	71	1	(5)
EARNINGS BEFORE INTEREST AND TAXES	737	699	548
Adjusting items from above	(118)	(47)	(2)
ADJUSTED EBIT	$855	$746	$550

Segment Results

EBIT by segment consists of net sales less related costs and expenses and is presented on a basis that is used internally for evaluating segment performance. Certain items, such as general corporate expenses or income and certain other expense or income items, are excluded from the internal evaluation of segment performance. Accordingly, these items are not reflected in EBIT for our reportable segments and are included in the Corporate, Other and Eliminations category, which is presented following the discussion of our reportable segments.

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ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

Composites

The table below provides a summary of net sales, EBIT and depreciation and amortization expense for the Composites segment (in millions):

	Twelve Months Ended December 31,					
	2017		2016		2015	
Net sales	$2,068		$1,952		$1,902	
% change from prior year	6	%	3	%	-1	%
EBIT	$291		$264		$232	
EBIT as a % of net sales	14	%	14	%	12	%
Depreciation and amortization expense	$144		$138		$125	

NET SALES

2017 Compared to 2016: Net sales in our Composites segment were $116 million higher in 2017 than in 2016, primarily driven by higher sales volumes of approximately 6%. Volume performance benefited from broad-based market strength, particularly the roofing market and other glass non-wovens applications. The favorable impact of translating sales denominated in foreign currencies into United States dollars was largely offset by $18 million of lower selling prices. The remaining change was driven by $10 million of unfavorable product mix (mainly related to higher sales volumes into the roofing market).

2016 Compared to 2015: Net sales in our Composites segment were $50 million higher in 2016 than in 2015. The increase in sales was driven by higher sales volumes of about 6% and higher selling prices of $22 million. These benefits were partially offset by $57 million of unfavorable product mix (mainly related to the prior year's specialty glass sales and higher sales volumes into the roofing market in 2016) and the $22 million negative impact of translating sales denominated in foreign currencies into United States dollars.

EBIT

2017 Compared to 2016: EBIT in our Composites segment was $27 million higher in 2017 than in 2016. The increase was primarily driven by lower furnace rebuild and startup costs of $39 million. The EBIT improvement driven by higher sales volumes was slightly more than offset by lower selling prices and the negative impact of input cost inflation. The remaining change was due to a $10 million charge in the third quarter of 2017 for the allowance for doubtful accounts, primarily due to an estimated uncollectible receivable from a Brazilian customer now in financial reorganization.

2016 Compared to 2015: EBIT in our Composites segment was $32 million higher in 2016 than in 2015. The benefit of higher sales volumes was largely offset by $24 million of unfavorable product mix, which was primarily related to the comparison against the prior year's specialty glass sales and the current year's higher sales volumes into the roofing market. Higher furnace rebuild and startup costs of $28 million were offset about equally by input cost deflation and lower manufacturing costs. The remaining change was driven by higher selling prices of $22 million and one-time benefits from our strategic supply alliances.

OUTLOOK

Global glass reinforcements market demand has historically grown on average as a function of global industrial production and we believe this relationship will continue. In 2018, the Company expects continued global industrial production growth.

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

Insulation

The table below provides a summary of net sales, EBIT and depreciation and amortization expense for the Insulation segment (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Net sales	$2,001	$1,748	$1,850
% change from prior year	14 %	-6 %	6 %
EBIT	$177	$126	$160
EBIT as a % of net sales	9 %	7 %	9 %
Depreciation and amortization expense	$124	$106	$101

NET SALES

2017 Compared to 2016: In our Insulation segment, 2017 net sales were $253 million higher than in 2016. The increase was primarily driven by the $133 million impact of our second quarter 2017 acquisition of Pittsburgh Corning and higher sales volumes of about 6%. The remaining change was driven by higher selling prices of $19 million. The slightly favorable impact of translating sales denominated in foreign currencies into United States dollars was offset by unfavorable channel mix associated with growth in new construction.

2016 Compared to 2015: In our Insulation segment, 2016 net sales were $102 million lower than in 2015. The decrease was primarily driven by lower sales volumes of about 5%, primarily due to the expiration of contract manufacturing agreements at the beginning of 2016 and a commercial dispute with a large residential insulation installer. Favorable customer mix of $35 million was largely offset by lower selling prices of $33 million. The remaining decrease of $22 million was due to the negative impact of translating sales denominated in foreign currencies into United States dollars.

EBIT

2017 Compared to 2016: In our Insulation segment, EBIT increased $51 million in 2017 compared to 2016. Substantially all of the increase was driven by higher sales volumes and higher selling prices. Our second quarter 2017 acquisition of Pittsburgh Corning contributed $15 million of EBIT. Favorable manufacturing performance of $27 million was more than offset (about equally) by $19 million of startup costs for our new mineral wool insulation plant and input cost inflation.

2016 Compared to 2015: In our Insulation segment, EBIT decreased $34 million in 2016 compared to 2015. The change was primarily driven by the $27 million negative impact of lower production volumes. Lower selling prices of $33 million were largely offset by favorable customer mix of $29 million. The $10 million benefit of input cost deflation was offset by lower sales volumes. The remaining decrease of $4 million was driven by negative foreign currency translation.

DEPRECIATION AND AMORTIZATION

In our Insulation segment, depreciation and amortization expense increased by $18 million in 2017 compared to 2016. The change was primarily due to a half-year of depreciation and amortization related to our 2017 Pittsburgh Corning acquisition, including $10 million of depreciation related to property, plant and equipment and $4 million related to amortization of intangible assets. Depreciation and amortization expense was relatively flat in 2016 compared to 2015.

OUTLOOK

During the fourth quarter of 2017, the average Seasonally Adjusted Annual Rate (SAAR) of U.S. housing starts was approximately 1.250 million starts, which was flat compared to 1.250 million starts in the fourth quarter of 2016. While the trend in U.S. housing starts has generally been positive over the past few years, the timing and pace of recovery of the United States housing market remains uncertain.

The Company expects its Insulation segment to benefit from an overall strengthening of the U.S. housing market, higher capacity utilization and improved pricing. Additionally, we expect that global industrial production growth will positively impact the Insulation segment's commercial and industrial markets in North America, Europe and Asia-Pacific. We believe that the geographic, product and channel mix of our portfolio will continue to moderate the impact of any demand-driven variability associated with U.S. new construction.

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

Roofing

The table below provides a summary of net sales, EBIT and depreciation and amortization expense for the Roofing segment (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Net sales	$2,553	$2,194	$1,766
% change from prior year	16 %	24 %	1 %
EBIT	$535	$486	$266
EBIT as a % of net sales	21 %	22 %	15 %
Depreciation and amortization expense	$50	$46	$39

NET SALES

2017 Compared to 2016: In our Roofing segment, net sales were $359 million higher in 2017 than in 2016. Sales volumes increased by approximately 9%, due to higher asphalt shingle volumes, from growth across all our key demand drivers, and growth in roofing components. Our early-second quarter 2016 acquisition of InterWrap contributed $86 million of net sales (and was included in the other comparison categories following the one-year post-acquisition period). The remaining increase was driven by higher selling prices of $47 million and favorable customer and product mix. Third-party asphalt sales were up $10 million year-over-year.

2016 Compared to 2015: In our Roofing segment, net sales were $428 million higher in 2016 than in 2015. Sales volumes increased by about 20%, as higher reroof demand, driven by storm activity, and increased demand from new construction contributed to the growth of the U.S. asphalt shingle market. Our second quarter 2016 acquisition of InterWrap contributed $182 million of net sales. The impact of higher sales volumes and the InterWrap acquisition was partially offset by $51 million each of lower selling prices and lower third-party asphalt sales.

EBIT

2017 Compared to 2016: In our Roofing segment, EBIT was $49 million higher in 2017 than in 2016. The increase was primarily driven by higher sales volumes and higher selling prices. Our early-second quarter 2016 acquisition of InterWrap contributed $20 million of EBIT (and was included in the other comparison categories following the one-year post-acquisition period). These benefits were partially offset by $55 million of input cost inflation (about two-thirds of which was related to asphalt), $14 million of higher logistics costs, $8 million of lower EBIT on third-party asphalt sales (resulting from a lag in the timing of input cost inflation and price increases) and slightly higher marketing costs.

2016 Compared to 2015: In our Roofing segment, EBIT was $220 million higher in 2016 than in 2015. The increase was primarily driven by higher sales volumes. The asphalt cost deflation benefit of $108 million was partially offset by lower selling prices. Our second quarter 2016 acquisition of InterWrap contributed $40 million in EBIT for the year. Higher selling, general and administrative expenses, primarily driven by increased sales and marketing costs associated with higher sales volumes and higher performance-based compensation, offset less than half of the benefit of the InterWrap acquisition.

OUTLOOK

In our Roofing business, we expect the factors that have driven margins in recent years, such as growth from new construction and reroof demand, along with higher sales of roofing components, to continue to deliver profitability. Uncertainties that may impact our Roofing margins include demand from storm and other weather events, competitive pricing pressure and the cost and availability of raw materials, particularly asphalt.

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

Corporate, Other and Eliminations
The table below provides a summary of EBIT and depreciation and amortization expense for the Corporate, Other and Eliminations category (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Restructuring costs	$(48)	$(28)	$(2)
Acquisition-related costs	(15)	(9)	—
Recognition of acquisition inventory fair value step-up	(5)	(10)	—
Litigation settlement gain, net of legal fees	29	—	—
Pension settlement losses	(64)	—	—
Environmental liability charges	(15)	—	—
General corporate expense and other	(148)	(130)	(108)
EBIT	$(266)	$(177)	$(110)
Depreciation and amortization	$53	$53	$35

EBIT
2017 Compared to 2016: In Corporate, Other and Eliminations, EBIT losses in 2017 were $89 million higher compared to 2016, primarily due to pension settlement losses and environmental liability charges in 2017, higher restructuring costs and higher general corporate expenses, which were partially offset by a litigation settlement gain in 2017. Costs related to our acquisitions (including the inventory fair value step-up recognition) were relatively flat to the prior year. See details of these costs in the table above and further explained in the Restructuring and Acquisition-Related Costs paragraph of MD&A.
General corporate expense and other in 2017 was $18 million higher than in 2016, primarily driven by increased general corporate expenses and slightly higher performance-based compensation. The year-over-year comparison was further negatively impacted by the $6 million pension-related gain that was recognized in 2016.
2016 Compared to 2015: In Corporate, Other and Eliminations, EBIT costs in 2016 were $67 million higher compared to 2015, primarily due to restructuring costs and costs related to our previously announced acquisitions. See details of these costs in the table above and further explained in the Restructuring and Acquisition-Related Costs paragraph of MD&A. The $22 million increase in General corporate expense and other was driven about equally by higher performance-based compensation and increased general corporate expenses, partially offset by a $6 million pension-related gain.
Depreciation and amortization in 2016 was $18 million higher than in 2015, primarily due to accelerated depreciation recorded in 2016 in connection with our Insulation restructuring action and post-acquisition restructuring of InterWrap.

OUTLOOK
In 2018, we expect general corporate expenses to range between $140 million and $150 million.

SAFETY
Working safely is a condition of employment at Owens Corning. We believe this organization-wide expectation provides for a safer work environment for employees, improves our manufacturing processes, reduces our costs and enhances our reputation. Furthermore, striving to be a world-class leader in safety provides a platform for all employees to understand and apply the resolve necessary to be a high-performing, global organization. We measure our progress on safety based on Recordable Incidence Rate ("RIR") as defined by the United States Department of Labor, Bureau of Labor Statistics. For the year ended December 31, 2017, our RIR was 0.50, a slight improvement

from the rate in the same period a year ago.

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ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

LIQUIDITY, CAPITAL RESOURCES AND OTHER RELATED MATTERS

Liquidity

The Company's primary external sources of liquidity are its Senior Revolving Credit Facility, Receivables Securitization Facility and term loan commitments.

The Company has an $800 million Senior Revolving Credit Facility that has been amended from time to time, which matures in November 2020 and permits incremental term loans under the facility of up to $600 million.

The Company has a $250 million Receivables Securitization Facility which now matures in May 2020, following amendments in March 2017 and May 2017 to extend its maturity. No other significant terms impacting liquidity were amended.

The Company obtained two term loan commitments on October 27, 2017 for $300 million and $600 million, respectively, (collectively, the "Term Loan Commitments"), separate from the $600 million of allowable incremental term loans under the Senior Revolving Credit Facility. The Company entered into the Term Loan Commitments, in part, to pay a portion of the purchase price of the Paroc acquisition. Please refer to the paragraph below for further information on the $600 million term loan borrowing in the first quarter of 2018. The $600 million term loan commitment requires full repayment of borrowings in February 2021. On February 12, 2018, the Company voluntarily reduced the entire $300 million term loan commitment, thus eliminating the availability of credit under the facility.

The following table shows how the Company utilized its primary sources of liquidity (in millions):

	As of December 31, 2017		
	Term Loan Commitments (a)	Senior Revolving Credit Facility	Receivables Securitization Facility
Facility size	$900	$ 800	$ 250
Collateral capacity limitation on availability	n/a	n/a	26
Outstanding borrowings	—	—	—
Outstanding letters of credit	n/a	9	3
Availability on facility	$900	$ 791	$ 221

(a) Please refer to the paragraphs immediately above and below for information on subsequent activity in February 2018 related to the Term Loan Commitments.

The Company issued $400 million of 2048 senior notes on January 25, 2018 subject to $11 million of discounts and issuance costs. Interest on the 2048 senior notes is payable semiannually in arrears on January 30 and July 30 each year, beginning on July 30, 2018. The proceeds from the 2048 senior notes, along with borrowings on a $600 term loan commitment and the Receivables Securitization Facility, were used to fund the purchase of Paroc in the first quarter of 2018.

The Company issued $600 million of 2047 senior notes on June 26, 2017 subject to $12 million of discounts and issuance costs. Interest on the 2047 senior notes is payable semiannually in arrears on January 15 and July 15 each year, beginning on January 15, 2018. A portion of the proceeds from the 2047 senior notes was used to fund the purchase of Pittsburgh Corning in the second quarter of 2017 and for general corporate purposes. In the third quarter of 2017, a portion of the proceeds was used by the Company, in addition to borrowings on the Receivables Securitization Facility, to repay portions of the Company's outstanding 2019 senior notes and 2036 senior notes. The Company issued a make-whole call to repay the remaining portion of its outstanding 2019 senior notes, and the redemption was completed in the third quarter of 2017. The Company recognized $71 million of loss on extinguishment of debt in the third quarter of 2017 associated with these actions.

The Company has no significant debt maturities of senior notes before 2022, and both our Senior Revolving Credit Facility and Receivables Securitization Facility mature in 2020. The Company also has a $600 million term loan borrowing that must be repaid by 2021. As of December 31, 2017, the Company had $2.4 billion of total debt and cash and cash equivalents of $246 million.

Cash and cash equivalents held by foreign subsidiaries may be subject to foreign withholding taxes upon repatriation to the U.S. As of December 31, 2017 and December 31, 2016, the Company had $101 million and $53 million, respectively, in cash and cash equivalents in certain of its foreign subsidiaries. The Company's analysis whether to change its indefinite reinvestment assertion

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

on account of the Tax Act is incomplete. Therefore, we continue to assert indefinite reinvestment in accordance with ASC 740 based on the laws before enactment of the Tax Act and do not provide for foreign withholding taxes on the undistributed earnings of our foreign subsidiaries.

As a holding company, we have no operations of our own and most of our assets are held by our direct and indirect subsidiaries. Dividends and other payments or distributions from our subsidiaries will be used to meet our debt service and other obligations and to enable us to pay dividends to our stockholders. Please refer to page 13 of the Risk Factors disclosed in Item 1A of this Form 10-K for details on the factors that could inhibit our subsidiaries' abilities to pay dividends or make other distributions to the parent company.

We expect that our cash on hand, coupled with future cash flows from operations and other available sources of liquidity, including our Senior Revolving Credit Facility and Receivables Securitization Facility, will provide ample liquidity to enable us to meet our cash requirements. Our anticipated uses of cash include capital expenditures, working capital needs, pension contributions, meeting financial obligations, payments of quarterly dividends as authorized by our Board of Directors, acquisitions and reducing outstanding amounts under the Senior Revolving Credit Facility and Receivables Securitization Facility.

We have outstanding share repurchase authorizations and will evaluate and consider repurchasing shares of our common stock, as well as strategic acquisitions, divestitures, joint ventures and other transactions to create stockholder value and enhance financial performance. Such transactions may require cash expenditures beyond current sources of liquidity or generate proceeds.

The credit agreements applicable to our Senior Revolving Credit Facility and the Receivables Securitization Facility contain various covenants that we believe are usual and customary. The Senior Revolving Credit Facility and the Receivables Securitization Facility each include a maximum allowed leverage ratio and a minimum required interest expense coverage ratio. We were in compliance with these covenants as of December 31, 2017.

Cash flows

The following table presents a summary of our cash balance, cash flows, and availability on credit facilities (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Cash and cash equivalents	$246	$112	$96
Cash provided by operating activities	$1,016	$943	$742
Cash used for investing activities	$(901)	$(815)	$(369)
Cash provided by (used for) financing activities	$3	$(88)	$(333)
Availability on the Senior Revolving Credit Facility	$791	$791	$791
Availability on the Receivables Securitization Facility	$221	$248	$228
Availability on the Term Loan Commitments	$900	$—	$—

Cash and cash equivalents: In 2017, the balance of cash and cash equivalents increased by $134 million compared to 2016, primarily due to cash that was retained to complete our Composites expansion in India in 2018 and prepare for our 2018 acquisition of Paroc.

Operating activities: In 2017, the Company generated $1,016 million of cash from operating activities compared to $943 million in 2016. While net earnings were lower than the prior year, cash provided by operating activities excludes the effects of the $71 million loss on extinguishment of debt (which is aggregated with payments on long-term debt in financing activities), non-cash income tax charges related to the Tax Act and non-cash pension settlement charges. Despite higher net sales in 2017, the operating cash flow impact of the change in operating assets and liabilities was relatively neutral to the prior year, representing good working capital discipline. The year-over-year benefit of higher payables was offset by the comparison of higher receivables and inventories in the current year

against reductions of both in the prior year.
Investing activities: The $86 million increase in cash used for investing activities in 2017 compared to 2016 was primarily driven by higher spending on acquisitions year-over-year.
Financing activities: Net cash provided by financing activities in 2017 was $3 million compared to $88 million used in 2016. The change year-over-year was primarily driven by lower treasury stock repurchases.

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

2018 Investments

Capital Expenditures: The Company will continue a balanced approach to the use of its cash flows. Operational cash flow will be used to fund the Company's growth and innovation. Capital expenditures in 2018 are expected to be approximately $500 million which is roughly $50 million greater than expected depreciation and amortization. Capital spending in excess of depreciation and amortization is primarily due to the remaining spending for our Composites expansion in India and growth projects in our Roofing and Insulation segments, including the construction of a Paroc mineral wool insulation manufacturing line in Poland. The Company will also continue to evaluate projects and acquisitions that provide opportunities for growth in our businesses, and invest in them when they meet our strategic and financial criteria.

Tax Net Operating Losses and U.S. Foreign Tax Credits

Upon emergence from bankruptcy and subsequent to the distribution of contingent stock and cash in January 2007, we generated a significant United States federal tax NOL of approximately $3.0 billion. As of December 31, 2017 and 2016, our federal tax net operating losses remaining were $0.9 billion and $1.8 billion, respectively. The decrease in U.S. federal tax NOLs is primarily due to the impact of 2017 estimated taxable income and our reasonable estimate from the effects of the Tax Act, but is offset by acquired NOLs from the Pittsburgh Corning acquisition. The company generated a significant U.S. FTC in 2017 of approximately $160 million as a result of changes from the Tax Act. Our NOLs and FTC carryforwards are subject to the limitations imposed under sections 382 and 383 of the Internal Revenue Code. These limits are triggered when a change in control occurs, and are computed based upon several variable factors including the share price of the Company's common stock on the date of the change in control. A change in control is generally defined as a cumulative change of more than 50% in the ownership positions of certain stockholders during a rolling three year period.

In addition to the United States federal tax NOLs described above, we have NOLs in various state and foreign jurisdictions which totaled $1.8 billion and $0.5 billion as of December 31, 2017, respectively and $2.2 billion and $0.5 billion as of December 31, 2016, respectively. The state NOLs decreased from prior year based on our estimate of 2017 taxable income and expiring loss years. Foreign NOLs remained unchanged from the prior year. The evaluation of the amount of NOLs and FTCs expected to be realized necessarily involves forecasting the amount of taxable income that will be generated in future years. In assessing the realizability of our deferred tax assets, we have not relied on any material future tax planning strategies. We have forecasted future results in accordance with the recently enacted Tax Act using estimates management believes to be reasonable, which are based on independent evidence such as expected trends resulting from certain leading economic indicators such as global industrial production and new U.S. residential housing starts. In order to fully utilize our NOLs and U.S. FTCs, we estimate that the Company will need to generate future federal, state and foreign earnings before taxes of approximately $2.0 billion, $2.1 billion and $0.5 billion, respectively. Management believes the Company will generate sufficient future taxable income within the statutory limitations in order to fully realize the carrying value of its U.S. federal NOLs. As of December 31, 2017, a valuation allowance was established for U.S. FTC carryforwards and certain state and foreign jurisdictions' NOL carryforwards.

The realization of deferred income tax assets is dependent on future events. Actual results inevitably will vary from management's forecasts. Should we determine that it is likely that our deferred income tax assets are not realizable, we would be required to reduce our deferred tax assets reflected on our Consolidated Financial Statements to the net realizable amount by establishing an accounting valuation allowance and recording a corresponding charge to current earnings. Such adjustments could be material to the financial statements. To date, we have recorded valuation allowances against certain of these deferred tax assets totaling $94 million as of December 31, 2017.

Pension contributions

Please refer to Note 13 of the Consolidated Financial Statements. The Company has several defined benefit pension plans. The Company made cash contributions of $72 million and $63 million to the plans during the twelve months ended December 31, 2017 and 2016, respectively. The Company expects to contribute $62 million in cash to its pension plans during 2018. Actual contributions to the plans may change as a result of several factors, including changes in laws that impact funding requirements. The ultimate cash flow impact to the Company, if any, of the pension plan liability and the timing of any such impact will depend on numerous variables, including future changes in actuarial assumptions, legislative changes to pension funding laws, and market conditions.

Derivatives

Please refer to Note 4 of the Consolidated Financial Statements.

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

Fair Value Measurement
Please refer to Notes 1, 4, and 12 of the Consolidated Financial Statements.

OFF-BALANCE-SHEET ARRANGEMENTS
The Company has entered into limited off-balance-sheet arrangements, as defined under Securities and Exchange Commission rules, in the ordinary course of business. The Company does not believe these arrangements will have a material effect on the Company's financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

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

CONTRACTUAL OBLIGATIONS

In the ordinary course of business, the Company enters into contractual obligations to make cash payments to third parties. The Company's known contractual obligations as of December 31, 2017 are as follows (in millions):

	Payments due by period						
	2018	2019	2020	2021	2022	2023 and Beyond	Total
Long-term debt obligations	$—	$—	$—	$—	$600	$ 1,810	$2,410
Interest on variable rate debt (1), fixed rate debt, capital lease payments	115	115	114	112	112	1,122	1,690
Capital lease obligations	4	4	5	5	4	9	31
Operating lease obligations	68	59	45	32	22	36	262
Purchase obligations (2)	255	78	71	63	55	111	633
Deferred acquisition payments	4	—	—	2	—	—	6
Pension contributions (3)	62	—	—	—	—	—	62
Total (4)	$508	$256	$235	$214	$793	$ 3,088	$5,094

(1) Interest on variable rate debt is calculated using the weighted-average interest rate in effect as of December 31, 2017 for all future periods.

(2) Purchase obligations are commitments to suppliers to purchase goods or services, and include take-or-pay arrangements, capital expenditures, and contractual commitments to purchase equipment. The Company did not include ordinary course of business purchase orders in this amount as the majority of such purchase orders may be canceled and are reflected in historical operating cash flow trends. The Company does not believe such purchase orders will adversely affect our liquidity position.

(3) Pension contributions include estimated contributions for our defined benefit pension plans. The Company is not presenting estimated payments in the table above beyond 2018 as funding can vary significantly from year to year based upon changes in the fair value of plan assets, funding regulations and actuarial assumptions.

(4) The Company has not included its accounting for uncertainty in income taxes liability in the contractual obligation table as the timing of payment, if any, cannot be reasonably estimated. The balance of this liability at December 31, 2017 was $35 million.

CRITICAL ACCOUNTING ESTIMATES

Our discussion and analysis of our financial condition and results of operations is based upon our Consolidated Financial Statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, management evaluates its estimates and judgments related to these assets, liabilities, revenues and expenses. We believe these estimates to be reasonable under the circumstances. Management bases its estimates and judgments on historical experience, expected future outcomes, and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The Company believes that the following accounting estimates are critical to our financial results:

Tax Estimates. The determination of our tax provision is complex due to operations in several tax jurisdictions outside the United States. We apply a more-likely-than-not recognition threshold for all tax uncertainties. Such uncertainties include any claims by the Internal Revenue Service for income taxes, interest, and penalties attributable to audits of open tax years.

In addition, we record a valuation allowance to reduce our deferred tax assets to the amount that we believe is more likely than not to be realized. We estimate future taxable income and the effect of tax planning strategies in our consideration of whether deferred tax assets will more likely than not be realized. In the event we were to determine that we would not be able to realize all or part of our net deferred tax assets in the future, an adjustment to reduce the net deferred tax assets would be charged to earnings in the period such determination was made. Conversely, if we were to determine that we would be able to realize our net deferred tax assets in the future in excess of their currently recorded amount, an adjustment to increase the net deferred tax assets would be credited to earnings in the period such determination was made.

The SEC issued SAB 118, which provides guidance on the accounting for the effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date to complete the accounting under ASC 740. In accordance with SAB 118, a company must account for those aspects of the Tax Act for which the accounting under ASC 740 is complete. To the extent that a company’s accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in its financial statements. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis on the provision of the tax laws that were in effect immediately before the enactment of the Tax Act.

Impairment of Assets. The Company exercises judgment in evaluating assets for impairment. Goodwill and other indefinite-lived intangible assets are tested for impairment annually, or when circumstances arise which indicate there may be an impairment. Long-lived assets are tested for impairment when economic conditions or management decisions indicate an impairment may exist. These tests require comparing recorded values to estimated fair values for the assets under review.

The Company has recorded its goodwill and conducted testing for potential goodwill impairment at a reporting unit level. Our reporting units represent a business for which discrete financial information is available and segment management regularly reviews the operating results. The Company has three reporting units; Composites, Insulation and Roofing. The following table summarizes the segment allocation of recorded goodwill on our Consolidated Balance Sheet (in millions):

Segment	December 31, 2017	Percent of Total	
Composites	$ 58	4	%
Insulation	1,049	70	%
Roofing	400	26	%
Total goodwill	$ 1,507	100	%

Goodwill is an intangible asset that is not subject to amortization; however, annual tests are required to be performed to determine whether impairment exists. Prior to performing the two-step impairment process described in ASC 350-20, the guidance permits companies to assess qualitative factors to determine if it is more likely than not that a reporting unit’s fair value is less than its carrying value. If it is more likely than not that a reporting unit’s fair value is greater than its carrying value, then no additional testing is required. If it is more likely than not that a reporting unit’s fair value is less than or close to its carrying value then step one of the impairment test must be performed to determine if impairment is required. In 2017, the Company has elected not to perform the qualitative approach, and proceeded in performing a step one analysis.

As part of our quantitative testing process for goodwill, we estimated fair values using a discounted cash flow approach from the perspective of a market participant. Significant estimates in the discounted cash flow approach are cash flow forecasts of our reporting units, the discount rate, the terminal business value and the projected income tax rate. The cash flow forecasts of the reporting units are based upon management’s long-term view of our markets and are the forecasts that are used by senior management and the Board of Directors to evaluate operating performance. The discount rate utilized is management’s estimate of what the market’s weighted average cost of capital is for a company with a similar debt rating and stock volatility, as measured by beta. The projected income tax rates utilized are the statutory tax rates for the countries where each reporting unit operates. The terminal business value is determined by applying a business growth factor to the latest year for which a forecast exists. As part of our goodwill quantitative testing process, the Company evaluates whether there are reasonably likely changes to management's estimates that would have a material impact on the results of the goodwill impairment testing.

Our annual test of goodwill for impairment was conducted as of October 1, 2017. The fair value of each of our reporting units was in excess of its carrying value and thus, no impairment exists. The fair value of all three reporting units substantially exceeded the carrying value as of the date of our assessment.

Other indefinite-lived intangible assets are the Company's trademarks. Fair values used in testing for potential impairment of our trademarks are calculated by applying an estimated market value royalty rate to the forecasted revenues of the businesses that utilize those assets. The assumed cash flows from this calculation are discounted using the Company's weighted average cost of capital. Our annual test of indefinite-lived intangibles was conducted as of October 1, 2017. The fair value of each of our indefinite-

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

lived intangible assets was in excess of its carrying value and thus, no impairment exists. The fair value of these assets substantially exceeded the carrying value as of the date of our assessment.

Fair values for long-lived asset testing are calculated by estimating the undiscounted cash flows from the use and ultimate disposition of the asset or by estimating the amount that a willing third party would pay. For impairment testing, long-lived assets are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets and liabilities. The Company groups long-lived assets based on manufacturing facilities that produce similar products either globally or within a geographic region. Management tests asset groups for potential impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Current market conditions have caused the Company to have idle capacity. We consider such temporary idled capacity to be unimpaired because there has not been a significant change in the forecasted long-term cash flows at the asset group level to indicate that the carrying values may not be recoverable. While management's current strategy is to utilize this capacity to meet expected future demand, any significant decrease in this expectation or change in management's strategy could result in future impairment charges related to this excess capacity. We evaluated and concluded that there are not any reasonably likely changes to management's estimates that would indicate that the carrying value of our long-lived assets is unrecoverable.

In addition, changes in management intentions, market conditions, operating performance and other similar circumstances could affect the assumptions used in these impairment tests. Changes in the assumptions could result in impairment charges that could be material to our Consolidated Financial Statements in any given period.

Pensions and Other Postretirement Benefits, Accounting for pensions and other postretirement benefits involves estimating the cost of benefits to be provided well into the future and attributing that cost over the time period each employee works. To accomplish this, extensive use is made of assumptions about investment returns, discount rates, inflation, mortality, turnover, and medical costs. Changes in assumptions used could result in a material impact to our Consolidated Financial Statements in any given period.

Two key assumptions that could have a significant impact on the measurement of pension liabilities and pension expense are the discount rate and the expected return on plan assets. For our largest plan, the United States plan, the discount rate used for the December 31, 2017 measurement date was derived by matching projected benefit payments to bond yields obtained from the Towers Watson proprietary United States RATE:Link 40-90 pension discount curve developed as of the measurement date. The Towers Watson United States RATE:Link 40-90 pension discount curve is based on certain corporate bonds rated Aa whose weighted average yields lie within the 40th to 90th percentiles of the bonds considered. Corporate bonds are considered to be AA graded if they receive an AA (or equivalent) rating from either or both of the two primary rating agencies in a given geography. For this purpose, we reference the two agencies with the highest ratings coverage for bonds in each region. Those two agencies are Standard and Poor's and Moody's.

The result supported a discount rate of 3.55% at December 31, 2017 compared to 3.95% at December 31, 2016. A 25 basis point increase (decrease) in the discount rate would decrease (increase) the December 31, 2017 projected benefit obligation for the United States pension plans by approximately $27 million. A 25 basis point increase (decrease) in the discount rate would decrease (increase) 2018 net periodic pension cost by less than $1 million.

The expected return on plan assets in the United States was derived by taking into consideration the target plan asset allocation, historical rates of return on those assets, projected future asset class returns and net outperformance of the market by active investment managers and plan related and investment related expenses paid from the plan trust. The Company uses the target plan asset allocation because we rebalance our portfolio to target on a quarterly basis. An asset return model was used to develop an expected range of returns on plan investments over a 20 year period, with the expected rate of return selected from a best estimate range within the total range of projected results. This process resulted in the selection of an expected return of 6.75% at the December 31, 2017 measurement date, which is used to determine net periodic pension cost for the year 2018. This assumption is consistent with the 6.75% return selected at

the December 31, 2016 measurement date. A 25 basis point increase (decrease) in return on plan assets assumption would result in a respective decrease (increase) of 2018 net periodic pension cost by approximately $2 million.
The discount rate for our United States postretirement plan was selected using the same method as described for the pension plan. The result supported a discount rate of 3.45% at December 31, 2017 compared to 3.80% at December 31, 2016. A 25 basis point increase (decrease) in the discount rate would decrease (increase) the United States postretirement benefit obligation by approximately $5 million and decrease (increase) 2018 net periodic postretirement benefit cost by less than $1 million.
The methods corresponding to those described above are used to determine the discount rate and expected return on assets for non-U.S. pension and postretirement plans, to the extent applicable.

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

RECENT ACCOUNTING PRONOUNCEMENTS

Please refer to Note 1 of the Consolidated Financial Statements.

ENVIRONMENTAL MATTERS

Please refer to Note 15 of the Consolidated Financial Statements.

CAUTIONARY STATEMENT CONCERNING FORWARD-LOOKING STATEMENTS

Our disclosures and analysis in this report, including Management's Discussion and Analysis of Financial Condition and Results of Operations, contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 (the "Exchange Act"). Forward-looking statements present our current forecasts and estimates of future events. These statements do not strictly relate to historical or current results and can be identified by words such as "anticipate," "appear," "assume," "believe," "estimate," "expect," "forecast," "intend," "likely," "may," "plan," "project," "seek," "should," "strategy," "will" and other terms of similar meaning or import in connection with any discussion of future operating, financial or other performance. These forward-looking statements are subject to risks, uncertainties and other factors and actual results may differ materially from those results projected in the statements. These risks, uncertainties and other factors include, without limitation:

- relationships with key customers;
- levels of residential and commercial construction activity;
- competitive and pricing factors;
- levels of global industrial production;
- demand for our products;
- industry and economic conditions that affect the market and operating conditions of our customers, suppliers or lenders;
- domestic and international economic and political conditions, policies or other governmental actions, legislation and related regulations or interpretations, in the United States or elsewhere;
- foreign exchange and commodity price fluctuations;
- our level of indebtedness;
- weather conditions;
- availability and cost of credit;
- availability and cost of energy and raw materials;
- issues involving implementation and protection of information technology systems;
- labor disputes;
- legal and regulatory proceedings, including litigation and environmental actions;
- our ability to utilize our net operating loss carryforwards;
- research and development activities and intellectual property protection;
- interest rate movements;
- uninsured losses;
- issues related to acquisitions, divestitures and joint ventures;
- achievement of expected synergies, cost reductions and/or productivity improvements;
- defined benefit plan funding obligations; and
- price volatility in certain wind energy markets in the U.S.

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

All forward-looking statements in this report should be considered in the context of the risks and other factors described above and as detailed from time to time in the Company's filings with the U.S. Securities and Exchange Commission. Any forward-looking statements speak only as of the date the statement is made and we undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise except as required by federal securities laws. It is not possible to identify all of the risks, uncertainties and other factors that may affect future results. In light of these risks and uncertainties, the forward-looking events and circumstances discussed in this report may not occur and actual results may differ materially from those anticipated or implied in the forward-looking statements. Accordingly, users of this report are cautioned not to place undue reliance on the forward-looking statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company is exposed to the impact of changes in foreign currency exchange rates, interest rates and the prices of various commodities used in the normal course of business. To mitigate some of the near-term volatility in our earnings and cash flows, the Company manages certain of our exposures through the use of financial contracts, contracts for physical delivery of a particular commodity, and derivative financial instruments. The Company's objective with these instruments is to reduce exposure to near-term fluctuations in earnings and cash flows. The Company's policy enables the use of foreign currency, interest rate and commodity derivative financial instruments only to the extent necessary to manage exposures as described above. The Company does not enter into such transactions for trading purposes.

A discussion of the Company's accounting policies for derivative financial instruments, as well as the Company's exposure to market risk, is included in Notes 1 and 4 to the Consolidated Financial Statements. Please refer to Note 4 for details of the fair values of derivative financial instruments and their classification on the Consolidated Balance Sheets.

For purposes of disclosing the market risk inherent in its derivative financial instruments the Company uses sensitivity analysis disclosures that express the potential loss in fair values of market rate sensitive instruments resulting from changes in interest rates, foreign currency exchange rates, and commodity prices that assume instantaneous, parallel shifts in exchange rates, interest rate yield curves, and commodity prices. The following analysis provides such quantitative information regarding market risk. There are certain shortcomings inherent in the sensitivity analysis presented, primarily due to the assumption that exchange rates change instantaneously and that interest rates change in a parallel fashion. In addition, the analyses are unable to reflect the complex market reactions that normally would arise from the market shifts modeled.

Foreign Exchange Rate Risk

The Company has transactional foreign currency exposures related to buying, selling, and financing in currencies other than the local currencies in which it operates. The Company enters into various forward contracts, which change in value as foreign currency exchange rates change, to preserve the carrying amount of foreign currency-denominated assets, liabilities, commitments, and certain anticipated foreign currency transactions. Exposures are related to the United States Dollar primarily relative to the Brazilian Real, Chinese Yuan, Indian Rupee, Japanese Yen, and South Korean Won exchange rates. Also, there are additional exposures related to the European Euro primarily versus the Russian Ruble. These transactional risks are mitigated through the use of derivative financial instruments and balancing of cash deposits and loans. The net fair value of derivative financial instruments used to limit exposure to foreign currency risk was less than $1 million and $1 million as of December 31, 2017 and 2016, respectively. The potential change in fair value at both December 31, 2017 and 2016 for such financial instruments from an increase (decrease) of 10% in the quoted foreign currency exchange rates would be an increase (decrease) of approximately $1 million and $3 million, respectively.

We have translation exposure resulting from translating the financial statements of foreign subsidiaries into United States dollars. Our most significant translation exposures are the Canadian Dollar, Chinese Yuan, European Euro, and

Indian Rupee in relation to the United States Dollar. The Company has hedged a portion of the net investment in foreign subsidiaries against fluctuations in the European Euro through derivative financial instruments. The net fair value of these instruments was $31 million and $10 million as of December 31, 2017 and 2016, respectively. The potential change in fair value at December 31, 2017 and December 31, 2016 for such financial instruments from an increase (decrease) of 10% in the quoted foreign currency exchange rates would be an increase (decrease) of approximately $60 million and $27 million, respectively.

Interest Rate Risk

The Company is subject to market risk from exposure to changes in interest rates due to its financing, investing, and cash management activities. The Company has a Senior Revolving Credit Facility, Receivables Securitization Facility, other floating rate debt and cash and cash equivalents which are exposed to floating interest rates and may impact cash flow. As of December 31, 2017, the

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ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK (continued)

Company had no borrowings on its Senior Revolving Credit Facility or its Receivables Securitization Facility, with the balance of other floating rate debt of $1 million. As of December 31, 2016, the Company had no borrowings on its Senior Revolving Credit Facility or its Receivables Securitization Facility, with the balance of other floating rate debt of less than $1 million. Cash and cash equivalents were $246 million and $112 million at December 31, 2017 and 2016, respectively. A one percentage point increase (decrease) in interest rates at both December 31, 2017 and 2016 would increase (decrease) our annual net interest expense by less than $1 million.

The fair market value of the Company's senior notes are subject to interest rate risk. The following table shows how a one percentage point increase / decrease in interest rates would impact the fair market value of the senior notes:

	Senior Notes Maturity Year					
As of December 31, 2017:	2019	2022	2024	2026	2036	2047
Increase in interest rates						
Decrease in fair value	n/a	4 %	6 %	7 %	11 %	15 %
Decrease in interest rates						
Increase in fair value	n/a	5 %	6 %	8 %	13 %	19 %

	Senior Notes Maturity Year					
As of December 31, 2016:	2019	2022	2024	2026	2036	2047
Increase in interest rates						
Decrease in fair value	2 %	5 %	6 %	8 %	11 %	n/a
Decrease in interest rates						
Increase in fair value	2 %	5 %	7 %	8 %	12 %	n/a

Commodity Price Risk

The Company is exposed to changes in prices of commodities used in its operations, primarily associated with energy, such as natural gas, and raw materials, such as asphalt and polystyrene. The Company enters into cash-settled natural gas swap contracts to protect against changes in natural gas prices that mature within 15 months; however, no financial instruments are currently used to protect against changes in raw material costs. At December 31, 2017 and 2016, the net fair value of such swap contracts was less than $1 million and $5 million, respectively. The potential change in fair value at December 31, 2017 and 2016 resulting from an increase (decrease) of 10% change in the underlying commodity prices would be an increase (decrease) of approximately $2 million and $3 million, respectively. This amount excludes the offsetting impact of the price risk inherent in the physical purchase of the underlying commodities.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Pages 51 through 112 of this filing are incorporated herein by reference.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

The Company maintains (a) disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), and (b) internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act).

The Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures as of the end of the period covered by this report. Based on such evaluation, the Company's Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, the Company's disclosure controls and procedures are effective.

There has been no change in the Company's internal control over financial reporting during the quarter ended December 31, 2017 that materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

On June 27, 2017, the Company completed its acquisition of Pittsburgh Corning. As a result, the Company's management excluded the operations of Pittsburgh Corning from its assessment of internal control over financial reporting as of December 31, 2017. Pittsburgh Corning represented 4% of the Company's consolidated Total assets as of December 31, 2017 and 2% of the Company's consolidated Net sales for the year ended December 31, 2017. SEC guidelines permit companies to omit an acquired entity's internal control over financial reporting from its management assessment during the first year of the acquisition. We plan to fully integrate Pittsburgh Corning into our internal control over financial reporting in 2018.

A report of the Company's management on the Company's internal control over financial reporting is contained on page 52 hereof and is incorporated here by reference. PricewaterhouseCoopers LLP's report on the effectiveness of internal control over financial reporting is included in the Report of Independent Registered Public Accounting Firm beginning on page 53 hereof.

ITEM 9B. OTHER INFORMATION

None.

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Part III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information with respect to directors and corporate governance will be presented in the 2018 Proxy Statement in the sections titled “Information Concerning Directors,” “Governance Information” and “Section 16(a) Beneficial Ownership Reporting Compliance,” and such information is incorporated herein by reference.

Information with respect to executive officers is included herein under Part I, “Executive Officers of Owens Corning.”

Code of Ethics for Senior Financial Officers

Owens Corning has adopted an Ethics Policy for Chief Executive and Senior Financial Officers that applies to our Chief Executive Officer, Chief Financial Officer and Controller. This policy is available on our website (www.owenscorning.com) under “Corporate Governance” located in the "Investing in Owens Corning" section and print copies will be made available free of charge upon request to the Secretary of the Company. To the extent required by applicable SEC rules or New York Stock Exchange listing standards, the Company intends to post any amendments or waivers to the above referenced codes of ethics to our website, under the tab entitled "Corporate Governance".

ITEM 11. EXECUTIVE COMPENSATION

Information regarding executive officer and director compensation will be presented in the 2018 Proxy Statement under the section titled “Executive Compensation,” exclusive of the subsection titled “Compensation Committee Report,” and the section titled “2017 Non-Management Director Compensation,” and such information is incorporated herein by reference.

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

Information regarding security ownership of certain beneficial owners and management and related stockholder matters, as well as equity compensation plan information, will be presented in the 2018 Proxy Statement under the sections titled “Security Ownership of Certain Beneficial Owners and Management” and “Securities Authorized for Issuance Under Equity Compensation Plans,” and such information is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, DIRECTOR INDEPENDENCE

Information regarding certain relationships and related transactions and director independence will be presented in the 2018 Proxy Statement under the sections titled “Certain Transactions with Related Persons,” “Review of Transactions with Related Persons,” “Director Qualifications Standards” and “Director Independence,” and such information is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information regarding principal accounting fees and services will be presented in the 2018 Proxy Statement under the sections titled “Principal Accountant Fees and Services,” and such information is incorporated herein by reference.

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Part IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) DOCUMENTS FILED AS PART OF THIS REPORT

1. See Index to Consolidated Financial Statements on page 51 hereof.
2. See Index to Financial Statement Schedules on page 113 hereof.

EXHIBIT INDEX

Pursuant to the rules and regulations of the SEC, the Company has filed or incorporated by reference certain agreements as exhibits to this Annual Report on Form 10-K. These agreements may contain representations and warranties by the parties. These representations and warranties have been made solely for the benefit of the other party or parties to such agreements and (i) may have been qualified by disclosures made to such other party or parties, (ii) were made only as of the date of such agreements or such other date(s) as may be specified in such agreements and are subject to more recent developments, which may not be fully reflected in the Company's public disclosure, (iii) may reflect the allocation of risk among the parties to such agreements and (iv) may apply materiality standards different from what may be viewed as material to investors. Accordingly, these representations and warranties may not describe the Company's actual state of affairs at the date hereof and should not be relied upon.

Exhibit Number	Description
2.1	Purchase Agreement, dated as of October 27, 2017, by and among Owens Corning Finland Oy, Parry Investment S.A. and the individuals party thereto (incorporated by reference to Exhibit 2.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed February 5, 2018).+
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100), for the quarter ended March 31, 2016).
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to Owens Corning's Quarterly Report on Form 10-Q (File 1-33100), for the quarter ended March 31, 2016).
4.1	Indenture, dated as of October 31, 2006, by and among Owens Corning, each of the guarantors named therein and LaSalle Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed November 2, 2006).
4.2	First Supplemental Indenture, dated as of April 13, 2007, by and among Owens Corning, each of the guarantors named therein and LaSalle Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed April 13, 2007).
4.3	Second Supplemental Indenture, dated as of December 12, 2007, by and among Owens Corning, each of the guarantors named therein and LaSalle Bank National Association, as trustee (incorporated by reference to Exhibit 4.3 to Owens Corning's Annual Report on Form 10-K (File No. 1-33100) for the year ended December 31, 2007).
4.4	Third Supplemental Indenture, dated as of April 24, 2008, by and among Owens Corning, each of the guarantors named therein and LaSalle Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100) for the quarter ended June 30, 2008).

4.6	Fourth Supplemental Indenture, dated as of May 26, 2010, by and among Owens Corning, each of the guarantors named therein and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed May 28, 2010).
4.7	Fifth Supplemental Indenture, dated as of October 3, 2016, by and among Owens Corning, each of the guarantors named therein and Wells Fargo Bank, National Association, as trustee (filed herewith).
4.8	Sixth Supplemental Indenture, dated as of February 27, 2017, by and among Owens Corning, each of the guarantors named therein and Wells Fargo Bank, National Association, as trustee (filed herewith).

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4.9	Seventh Supplemental Indenture, dated as of August 23, 2017, by and among Owens Corning, the guarantor named therein and Wells Fargo Bank, National Association, as successor trustee (incorporated by reference to Exhibit 4.5 to Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100), for the quarter ended September 30, 2017).
4.10	Indenture, dated as of June 2, 2009, between Owens Corning, certain of Owens Corning's subsidiaries and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Registration Statement on Form S-3 (File No. 333-159689), filed June 3, 2009).
4.11	Second Supplemental Indenture, dated as of May 26, 2010, by and among Owens Corning, certain subsidiaries, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.2 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed May 28, 2010).
4.12	Third Supplemental Indenture, dated as of October 22, 2012, by and among Owens Corning, certain subsidiaries, and Wells Fargo Bank, National Association, as successor Trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Form 8-K (File No. 1-33100), filed October 22, 2012).
4.13	Form of 4.200% Senior Notes due 2022 (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed October 22, 2012).
4.14	Fourth Supplemental Indenture, dated as of November 12, 2014, by and among Owens Corning, the guarantors named therein and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100) filed November12, 2014).
4.15	Form of 4.200% Senior Notes due 2024 (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed November 12, 2014).
4.16	Fifth Supplemental Indenture, dated as of August 8, 2016, by and among the Company, the guarantors party thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100) filed August 8, 2016).
4.17	Form of 3.400% Senior Notes due 2026 (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100) filed August 8, 2016).
4.18	Sixth Supplemental Indenture, dated as of October 3, 2016, by and among Owens Corning, the guarantors party thereto and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.9 to Post-Effective Amendment No. 1 to Owens Corning's Registration Statement on Form S-3 (Registration No. 333-202011), filed June 21, 2017).
4.19	Seventh Supplemental Indenture, dated as of February 27, 2017, by and among Owens Corning, the guarantors party thereto and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.10 to Post-Effective Amendment No. 1 to Owens Corning's Registration Statement on Form S-3 (Registration No. 333-202011), filed June 21, 2017).
4.20	Eighth Supplemental Indenture, dated as of June 26, 2017, by and among Owens Corning, the guarantors party thereto and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to

	Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed June 26, 2017).
4.21	Form of 4.300% Senior Notes due 2047 (incorporated by reference to Exhibit 4.2 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed June 26, 2017).
4.22	Ninth Supplemental Indenture, dated as of August 23, 2017, by and among Owens Corning, the guarantor named therein and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.6 to Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100), for the quarter ended September 30, 2017).
4.23	Tenth Supplemental Indenture, dated as of January 25, 2018, by and among Owens Corning, the guarantors party thereto and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed January 25, 2018).

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4.24	Form of 4.400% Senior Notes due 2048 (incorporated by reference to Exhibit 4.2 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed January 25, 2018).
10.1	Amended and Restated Credit Agreement, dated as of November 13, 2015, by and among the Company, certain of its subsidiaries, the lenders signatory thereto and Wells Fargo Bank, National Association, as Administrative Agent, (incorporated by reference to Exhibit 10.1 of Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed November 17, 2015).
10.2	First Amendment to the Amended and Restated Credit Agreement, dated as of March 22, 2016, by and among the Company, certain of its subsidiaries, the lenders signatory thereto and Wells Fargo Bank, National Association, as Administrative Agent (incorporated by reference to Exhibit 10.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed April 22, 2016).
10.3	Acknowledgment and Agreement and Second Amendment to Amended and Restated Credit Agreement, dated as of May 27, 2016, (incorporated by reference to Exhibit 10.40 to Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100), for the quarter ended June 30, 2016.
10.4	Purchase and Sale Agreement dated as of March 31, 2011 between Owens Corning Sales, LLC and Owens Corning Receivables LLC (incorporated by reference to Exhibit 10.2 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed April 5, 2011).
10.5	Amended and Restated Receivables Purchase Agreement dated as of December 16, 2011 (incorporated by reference to Exhibit 10.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed December 19, 2011).
10.6	Second Amendment to Amended and Restated Purchase Agreement dated as of July 26, 2013 (incorporated by reference to Exhibit 10.1 to Owens Corning Current Report on Form 8-K (File No. 1-33100), filed July 29, 2013).
10.7	Sixth Amendment to the Amended and Restated Receivables Purchase Agreement, dated as of March 24, 2017 (incorporated by reference to Exhibit 10.36 to Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100), for the quarter ended March 31, 2017).
10.8	Second Amended and Restated Receivables Purchase Agreement, dated as of May 5, 2017 (incorporated by reference to Exhibit 10.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed May 9, 2017).
10.9	First Amendment to Purchase and Sale Agreement, dated as of May 5, 2017, by and between Owens Corning Sales, LLC and Owens Corning Receivables LLC (incorporated by reference to Exhibit 10.2 to Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100), for the quarter ended June 30, 2017).
10.10	Performance Guaranty dated as of March 31, 2011 (incorporated by reference to Exhibit 10.3 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed April 5, 2011).
10.11	Amended and Restated Performance Guaranty, dated as of May 5, 2017 (incorporated by reference to Exhibit 10.3 to Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100), for the quarter ended June 30,

2017).

10.12	Term Loan Agreement, dated as of June 8, 2017, by and among Owens Corning, the lenders referred to therein and Wells Fargo Bank, National Association, as administrative agent (incorporated by reference to Exhibit 10.4 to Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100), for the quarter ended June 30, 2017).
10.13	Term Loan Agreement, dated as of October 27, 2017, by and among Owens Corning, the lenders signatory thereto and JPMorgan Chase Bank, N.A., as administrative agent (filed herewith).
10.14	364-Day Term Loan Agreement, dated as of October 27, 2017, by and among Owens Corning, the lenders signatory thereto and JPMorgan Chase Bank, N.A., as administrative agent (filed herewith).
10.15	Key Management Severance Agreement with Charles E. Dana (incorporated by reference to Exhibit 10.18 to Owens Corning's annual report on Form 10-K (File No. 1-33100) for the year ended December 31, 2008).*

10.16	Form of Key Management Severance Agreement for Executive Officers* (incorporated by reference to Exhibit 10.10 to Owens Corning's Annual Report on Form 10-K (File No. 1-33100) for the year ended December 31, 2013).*
10.17	Amended and Restated Key Management Severance Agreement with Michael H. Thaman (incorporated by reference to Exhibit 10 to Owens Corning Sales, LLC’s Annual Report on Form 10-K (File No. 1-3660) for the year ended December 31, 2005).*
10.18	Amendment, dated April 16, 2015, to Key Management Severance Agreement with Michael H. Thaman (incorporated by reference to Exhibit 10.31 to Owens Corning’s Quarterly Report on Form 10-Q (File 1-33100), for the quarter ended March 31, 2015).*
10.19	Form of Directors’ Indemnification Agreement (incorporated by reference to Exhibit 10.2 of Owens Corning’s Current Report on Form 8-K (File No. 1-33100), filed November 2, 2006).
10.20	Owens Corning Long-Term Incentive Plan (incorporated by reference to Exhibit 10 to Owens Corning Sales, LLC’s Quarterly Report on Form 10-Q (File No. 1-3660) for the quarter ended June 30, 2003).*
10.21	Owens Corning Executive Supplemental Benefit Plan, 2009 Restatement (incorporated by reference to Exhibit 10.28 to Owens Corning’s annual report on Form 10-K (File No. 1-33100) for the year ended December 31, 2008).*
10.22	Corporate Incentive Plan Terms Applicable to Certain Executive Officers (incorporated by reference to Exhibit 10 to Owens Corning Sales, LLC’s Quarterly Report on Form 10-Q (File No. 1-3660) for the quarter ended March 31, 1999).*
10.23	Amended and Restated Corporate Incentive Plan Terms Applicable to Certain Executive Officers (incorporated by reference to Annex B to Owens Corning’s Proxy Statement (File No. 1-33100), filed March 16, 2011).*
10.24	Owens Corning Supplemental Executive Retirement Plan, as amended and restated, effective as of January 1, 2009 (incorporated by reference to Exhibit 10.30 to Owens Corning’s annual report on Form 10-K (File No. 1-33100) for the year ended December 31, 2008).*
10.25	Corporate Incentive Plan Terms Applicable to Key Employees Other Than Certain Executive Officers (incorporated by reference to Exhibit 10 to Owens Corning Sales, LLC’s Quarterly Report on Form 10-Q (File No. 1-3660) for the quarter ended June 30, 1999).*
10.26	Corporate Incentive Plan Terms Applicable to Certain Executive Officers (As Amended and Restated as of January 1, 2016) (incorporated by reference to Exhibit 10.38 to Owens Corning’s Quarterly Report on Form 10-Q (File No. 1-33100) for the quarter ended March 31, 2016).*
10.27	Owens Corning Deferred Compensation Plan, effective as of January 1, 2007 (incorporated by reference to Exhibit 10.5 to Owens Corning’s Quarterly Report on Form 10-Q (File No. 1-33100) for the quarter ended March 31, 2007).*
10.28	First Amendment to the Owens Corning Deferred Compensation Plan, effective as of January 1, 2009 (incorporated by reference to Exhibit 10.33 to Owens Corning’s annual report on Form 10-K (File No. 1-33100)

	for the year ended December 31, 2008).*
10.29	Owens Corning Amended and Restated Deferred Compensation Plan, effective as of January 1, 2014 (incorporated by reference to Exhibit 10.22 to Owens Corning's Annual Report on Form 10-K (File No. 1-33100) for the year ended December 31, 2013).*
10.30	Owens Corning 2010 Stock Plan (incorporated by reference to Exhibit 10.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed April 23, 2010).*
10.31	Owens Corning 2013 Stock Plan (incorporated by reference to Annex C to Owens Corning's Proxy Statement (File No 1-33100), filed March 14, 2013).*

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10.32	Owens Corning 2016 Stock Plan (incorporated by reference to Exhibit 10.39 to Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100) for the quarter ended March 31, 2016).*
10.33	Owens Corning Employee Stock Purchase Plan, effective as of April 18, 2013, (incorporated by reference to Annex B to Owens Corning's Proxy Statement (File No. 1-33100), filed March 14, 2013).*
10.34	Form of Owens Corning 2013 Long Term Incentive Program Award Agreement for Option Award (incorporated by reference to Exhibit 10.27 to Owens Corning's Annual Report on Form 10-K (File No. 1-33100) for the year ended December 31, 2013).*
10.35	Form of Owens Corning 2013 Long Term Incentive Program Award Agreement for Performance Share Unit (incorporated by reference to Exhibit 10.28 to Owens Corning's Annual Report on Form 10-K (File No. 1-33100) for the year ended December 31, 2013).*
10.36	Form of Owens Corning 2016 Long Term Incentive Program Award Agreement for Performance Share Unit (incorporated by reference to Exhibit 10.29 to Owens Corning's Annual Report on Form 10-K (File No. 1-33100) for the year ended December 31, 2016).*
10.37	Form of Owens Corning 2013 Long Term Incentive Program Award Agreement for Restricted Stock Unit (incorporated by reference to Exhibit 10.29 to Owens Corning's Annual Report on Form 10-K (File No. 1-33100) for the year ended December 31, 2013).*
10.38	Form of Owens Corning 2013 Long Term Incentive Program Award Agreement for Restricted Stock (incorporated by reference to Exhibit 10.30 to Owens Corning's Annual Report on Form 10-K (File No. 1-33100) for the year ended December 31, 2013).*
10.39	Form of Deferred Stock Unit Award Agreement for Directors (incorporated by reference to Exhibit 10.32 to Owens Corning's Quarterly Report on Form 10-Q (File 1-33100), for the quarter ended June 30, 2015).*
10.40	Form of Long Term Incentive Program Award Agreement for Restricted Stock Unit (incorporated by reference to Exhibit 10.33 to Owens Corning's Quarterly Report on Form 10-Q (File 1-33100), for the quarter ended June 30, 2015).*
10.41	Form of Long Term Incentive Program Award Agreement for Performance Share Unit (incorporated by reference to Exhibit 10.34 to Owens Corning's Quarterly Report on Form 10-Q (File 1-33100), for the quarter ended June 30, 2015).*
10.42	Form of Long Term Incentive Program Award Agreement for Restricted Stock (incorporated by reference to Exhibit 10.35 to Owens Corning's Quarterly Report on Form 10-Q (File 1-33100), for the quarter ended June 30, 2015).*
21.1	Subsidiaries of Owens Corning (filed herewith).
23.1	Consent of PricewaterhouseCoopers LLP (filed herewith).
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a) (filed herewith).

31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a) (filed herewith).
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350.
101.INS	XBRL Taxonomy Extension Schema
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase

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101.LAB XBRL Taxonomy Extension Label Linkbase

101.PRE XBRL Taxonomy Extension Presentation Linkbase

+ Schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Owens Corning agrees to furnish supplementally to the Securities and Exchange Commission a copy of any omitted schedule upon request.

* Denotes management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Form 10-K.

Owens Corning agrees to furnish to the U.S. Securities and Exchange Commission, upon request, copies of all instruments defining the rights of holders of long-term debt of Owens Corning where the total amount of securities authorized under each issue does not exceed 10% of the total assets of Owens Corning and its subsidiaries on a consolidated basis.

ITEM 16. SUMMARY

None.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

OWENS CORNING

By /s/ Michael H. Thaman February 21, 2018
Michael H. Thaman,
Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)

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Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

/s/ Michael H. Thaman Michael H. Thaman, Chairman of the Board, President, Chief Executive Officer and Director	February 21, 2018
/s/ Michael C. McMurray Michael C. McMurray, Senior Vice President and Chief Financial Officer	February 21, 2018
/s/ Kelly J. Schmidt Kelly J. Schmidt, Vice President and Controller	February 21, 2018
/s/ Cesar Conde Cesar Conde, Director	February 21, 2018
/s/ Adrienne Elsner Adrienne Elsner, Director	February 21, 2018
/s/ J. Brian Ferguson J. Brian Ferguson, Director	February 21, 2018
/s/ Ralph F. Hake Ralph F. Hake, Director	February 21, 2018
/s/ F. Philip Handy F. Philip Handy, Director	February 21, 2018
/s/ Edward F. Lonergan Edward F. Lonergan, Director	February 21, 2018

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/s/ Maryann T. Mannen Maryann T. Mannen, Director	February 21, 2018
/s/ James J. McMonagle James J. McMonagle, Director	February 21, 2018
/s/ W. Howard Morris W. Howard Morris, Director	February 21, 2018
/s/ Suzanne P. Nimocks Suzanne P. Nimocks, Director	February 21, 2018
/s/ John D. Williams John D. Williams, Director	February 21, 2018

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INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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Management’s Report on Internal Control Over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. Management has assessed the effectiveness of the Company’s internal control over financial reporting as of December 31, 2017 based on criteria established in the Internal Control-Integrated Framework in 2013 issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

On June 27, 2017, the Company completed its acquisition of Pittsburgh Corning. As a result, the Company's management excluded the operations of Pittsburgh Corning from its assessment of internal control over financial reporting as of December 31, 2017. Pittsburgh Corning represented 4% of the Company's consolidated Total assets as of December 31, 2017 and 2% of the Company's consolidated Net sales for the year ended December 31, 2017. SEC guidelines permit companies to omit an acquired entity's internal control over financial reporting from its management assessment during the first year of the acquisition. We plan to fully integrate Pittsburgh Corning into our internal control over financial reporting in 2018.

PricewaterhouseCoopers LLP has audited the effectiveness of the internal controls over financial reporting as of December 31, 2017 as stated in their Report of Independent Registered Public Accounting Firm on page 53 hereof.

Based on our assessment, management determined that, as of December 31, 2017, the Company’s internal control over financial reporting was effective.

/s/ Michael H. Thaman Michael H. Thaman, President and Chief Executive Officer	February 21, 2018
/s/ Michael C. McMurray Michael C. McMurray, Senior Vice President and Chief Financial Officer	February 21, 2018

Report of Independent Registered Public Accounting Firm
To the Board of Directors and Stockholders of Owens Corning:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Owens Corning and its subsidiaries as of December 31, 2017 and 2016, and the related consolidated statements of earnings, comprehensive earnings, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2017, including the related notes and financial statement schedule of valuation and qualifying accounts and reserves appearing in the Index to Condensed Financial Statement Schedule (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

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

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

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As described in Management's Report on Internal Control over Financial Reporting, management has excluded Pittsburgh Corning (as defined in Note 7) from its assessment of internal control over financial reporting as of December 31, 2017 because it was acquired by the Company in a purchase business combination during 2017. We have also excluded Pittsburgh Corning from our audit of internal control over financial reporting. Pittsburgh Corning is a wholly-owned subsidiary whose total assets and total net sales excluded from management's assessment and our audit of internal control over financial reporting represent approximately 4% and 2%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2017.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are

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being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.
/s/ PricewaterhouseCoopers LLP
Toledo, Ohio
February 21, 2018

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

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OWENS CORNING AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EARNINGS
(in millions, except per share amounts)

	Twelve Months Ended December 31,		
	2017	2016	2015
NET SALES	$6,384	$5,677	$5,350
COST OF SALES	4,812	4,296	4,197
Gross margin	1,572	1,381	1,153
OPERATING EXPENSES			
Marketing and administrative expenses	620	584	525
Science and technology expenses	85	82	73
Other expenses, net	130	16	7
Total operating expenses	835	682	605
EARNINGS BEFORE INTEREST AND TAXES	737	699	548
Interest expense, net	107	108	100
Loss (gain) on extinguishment of debt	71	1	(5)
EARNINGS BEFORE TAXES	559	590	453
Income tax expense	269	188	120
Equity in net earnings (loss) of affiliates	—	(3)	1
NET EARNINGS	290	399	334
Net earnings attributable to noncontrolling interests	1	6	4
NET EARNINGS ATTRIBUTABLE TO OWENS CORNING	$289	$393	$330
EARNINGS PER COMMON SHARE ATTRIBUTABLE TO OWENS CORNING COMMON STOCKHOLDERS			
Basic	$2.59	$3.44	$2.82
Diluted	$2.55	$3.41	$2.79
Dividend	$0.81	$0.74	$0.68
WEIGHTED AVERAGE COMMON SHARES			
Basic	111.5	114.4	117.2
Diluted	113.2	115.4	118.2

The accompanying Notes to the Consolidated Financial Statements are an integral part of this Statement.

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OWENS CORNING AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE EARNINGS
(in millions)

	Twelve Months Ended December 31,		
	2017	2016	2015
NET EARNINGS	$290	$399	$334
Currency translation adjustment (net of tax of $15, $(2), and $(5), for the periods ended December 31, 2017, 2016 and 2015, respectively)	101	(37)	(115)
Pension and other postretirement adjustment (net of tax of $(32), $15, and $1, for the periods ended December 31, 2017, 2016 and 2015, respectively)	98	(10)	(6)
Hedging adjustment (net of tax of $2, $(3), and $(1), for the periods ended December 31, 2017, 2016 and 2015, respectively)	(3)	7	1
COMPREHENSIVE EARNINGS	486	359	214
Comprehensive earnings attributable to noncontrolling interests	1	6	4
COMPREHENSIVE EARNINGS ATTRIBUTABLE TO OWENS CORNING	$485	$353	$210

The accompanying Notes to the Consolidated Financial Statements are an integral part of this Statement.

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OWENS CORNING AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in millions)

	December 31, 2017	December 31, 2016
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 246	$ 112
Receivables, less allowances of $19 at December 31, 2017 and $9 at December 31, 2016	806	678
Inventories	841	710
Assets held for sale	12	12
Other current assets	80	74
Total current assets	1,985	1,586
Property, plant and equipment, net	3,425	3,112
Goodwill	1,507	1,336
Intangible assets, net	1,360	1,138
Deferred income taxes	144	375
Other non-current assets	211	194
TOTAL ASSETS	$ 8,632	$ 7,741
LIABILITIES AND EQUITY		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	$ 1,277	$ 960
Short-term debt	1	—
Long-term debt – current portion	4	3
Total current liabilities	1,282	963
Long-term debt, net of current portion	2,405	2,099
Pension plan liability	256	367
Other employee benefits liability	225	221
Deferred income taxes	37	36
Other liabilities	223	164
Redeemable equity	—	2
OWENS CORNING STOCKHOLDERS' EQUITY		
Preferred stock, par value $0.01 per share (a)	—	—
Common stock, par value $0.01 per share (b)	1	1
Additional paid in capital	4,011	3,984
Accumulated earnings	1,575	1,377
Accumulated other comprehensive deficit	(514)	(710)
Cost of common stock in treasury (c)	(911)	(803)
Total Owens Corning stockholders' equity	4,162	3,849
Noncontrolling interests	42	40
Total equity	4,204	3,889
TOTAL LIABILITIES AND EQUITY	$ 8,632	$ 7,741

(a) 10 shares authorized; none issued or outstanding at December 31, 2017 and December 31, 2016
(b)

400 shares authorized; 135.5 issued and 111.5 outstanding at December 31, 2017; 135.5 issued and 112.7 outstanding at December 31, 2016

(c) 24.0 shares at December 31, 2017 and 22.8 shares at December 31, 2016

The accompanying Notes to the Consolidated Financial Statements are an integral part of this Statement.

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OWENS CORNING AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions)

	Common Stock Outstanding		Treasury Stock		APIC (a)	Accumulated Earnings	AOCI (b)	NCI (c)	Total
	Shares	Par Value	Shares	Cost					
Balance at December 31, 2014	117.8	$ 1	17.7	$(518)	$3,954	$ 805	$(550)	$ 38	$3,730
Net earnings attributable to Owens Corning	—	—	—	—	—	330	—	—	330
Net earnings attributable to noncontrolling interests	—	—	—	—	—	—	—	4	4
Currency translation adjustment	—	—	—	—	—	—	(115)	(2)	(117)
Pension and other postretirement adjustment (net of tax)	—	—	—	—	—	—	(6)	—	(6)
Deferred gain on hedging transactions (net of tax)	—	—	—	—	—	—	1	—	1
Issuance of common stock under share-based payment plans	1.4		(1.4)	46	(19)				27
Purchases of treasury stock	(3.3)	—	3.3	(140)	—	—	—	—	(140)
Stock-based compensation expense	—	—	—	—	30	—	—	—	30
Dividends declared	—	—	—	—	—	(80)	—	—	(80)
Balance at December 31, 2015	115.9	$ 1	19.6	$(612)	$3,965	$ 1,055	$(670)	$ 40	$3,779
Net earnings attributable to Owens Corning	—	—	—	—	—	393	—	—	393
Net earnings attributable to noncontrolling interests	—	—	—	—	—	—	—	6	6
Currency translation adjustment	—	—	—	—	—	—	(37)	(2)	(39)
Pension and other postretirement adjustment (net of tax)	—	—	—	—	—	—	(10)	—	(10)
Deferred gain on hedging transactions (net of tax)	—	—	—	—	—	—	7	—	7
Redeemable equity issued	—	—	—	—	(2)	—	—	—	(2)
Issuance of common stock under share-based payment plans	1.7	—	(1.7)	57	(20)	—	—	—	37
Purchases of treasury stock	(4.9)	—	4.9	(248)	—	—	—	—	(248)
Stock-based compensation expense	—	—	—	—	41	—	—	—	41
Cumulative effect of accounting change (d)	—	—	—	—	—	14	—	—	14
Dividends declared	—	—	—	—	—	(85)	—	(4)	(89)
Balance at December 31, 2016	112.7	$ 1	22.8	$(803)	$3,984	$ 1,377	$(710)	$ 40	$3,889
Net earnings attributable to Owens Corning	—	—	—	—	—	289	—	—	289
Net earnings attributable to noncontrolling interests	—	—	—	—	—	—	—	1	1
Currency translation adjustment	—	—	—	—	—	—	101	4	105
	—	—	—	—	—	—	98	—	98

Pension and other postretirement adjustment (net of tax)									
Deferred loss on hedging transactions (net of tax)	—	—	—	—	—	—	(3)	—	(3)
Redeemable equity redeemed and changes in subsidiary shares from noncontrolling interests	—	—	—	—	2	—	—	(1)	1
Issuance of common stock under share-based payment plans	1.3	—	(1.3)	48	(19)	—	—	—	29
Purchases of treasury stock	(2.5)	—	2.5	(156)	—	—	—	—	(156)
Stock-based compensation expense	—	—	—	—	44	—	—	—	44
Dividends declared	—	—	—	—	—	(91)	—	(2)	(93)
Balance at December 31, 2017	111.5	$ 1	24.0	$ (911)	$ 4,011	$ 1,575	$ (514)	$ 42	$ 4,204

(a) Additional Paid in Capital (APIC)
(b) Accumulated Other Comprehensive Earnings (Deficit) ("AOCI")
(c) Noncontrolling Interest ("NCI")
(d) Cumulative effect of accounting change relates to our adoption of ASU 2016-09 "Compensation - Stock Compensation (Topic 718)."

The accompanying Notes to the Consolidated Financial Statements are an integral part of this Statement.

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OWENS CORNING AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Twelve Months Ended December 31,		
	2017	2016	2015
NET CASH FLOW PROVIDED BY OPERATING ACTIVITIES			
Net earnings	$290	$399	$334
Adjustments to reconcile net earnings to cash provided by operating activities:			
Depreciation and amortization	371	343	300
Deferred income taxes	183	136	64
Provision for pension and other employee benefits liabilities	74	11	15
Stock-based compensation expense	44	41	30
Other non-cash	18	4	(13)
Loss (gain) on extinguishment of debt	71	1	(5)
Change in operating assets and liabilities:			
Changes in receivables, net	(66)	55	(71)
Changes in inventories	(57)	5	150
Changes in accounts payable and accrued liabilities	187	25	28
Changes in other current and non-current assets	(10)	(4)	(19)
Pension fund contributions	(72)	(63)	(60)
Payments for other employee benefits liabilities	(18)	(18)	(20)
Other	1	8	9
Net cash flow provided by operating activities	1,016	943	742
NET CASH FLOW USED FOR INVESTING ACTIVITIES			
Cash paid for property, plant and equipment	(337)	(373)	(401)
Proceeds from the sale of assets or affiliates	3	—	28
Investment in subsidiaries and affiliates, net of cash acquired	(570)	(452)	—
Other	3	10	4
Net cash flow used for investing activities	(901)	(815)	(369)
NET CASH FLOW PROVIDED BY (USED FOR) FINANCING ACTIVITIES			
Proceeds from senior revolving credit and receivables securitization facilities	1,133	669	1,546
Payments on senior revolving credit and receivables securitization facilities	(1,133)	(669)	(1,652)
Proceeds from term loan borrowing	—	300	—
Payments on term loan borrowing	—	(300)	—
Proceeds from long-term debt	588	395	—
Payments on long-term debt	(351)	(163)	(8)
Dividends paid	(89)	(81)	(78)
Net increase (decrease) in short-term debt	1	(6)	(22)
Purchases of treasury stock	(159)	(247)	(138)
Other	13	14	19
Net cash flow provided by (used for) financing activities	3	(88)	(333)
Effect of exchange rate changes on cash	17	(18)	(11)
Net increase in cash, cash equivalents and restricted cash	135	22	29
Cash, cash equivalents and restricted cash at beginning of period	118	96	67
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT END OF PERIOD	$253	$118	$96

DISCLOSURE OF CASH FLOW INFORMATION			
Cash paid during the year for income taxes	$67	$69	$33
Cash paid during the year for interest	$106	$118	$113

The accompanying Notes to the Consolidated Financial Statements are an integral part of this Statement.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
Description of Business
Owens Corning, a Delaware corporation, is a leading global producer of glass fiber reinforcements and other materials for composite systems and of residential and commercial building materials. The Company operates within three segments: Composites, which includes the Company's Reinforcements and Downstream businesses; Insulation and Roofing. Through these lines of business, Owens Corning manufactures and sells products worldwide. The Company maintains leading market positions in many of its major product categories.
General

On February 1, 2018, the Board of Directors declared a quarterly dividend of $0.21 per common share payable on April 3, 2018 to shareholders of record as of March 9, 2018.
Basis of Presentation
Unless the context requires otherwise, the terms "Owens Corning," "Company," "we" and "our" in these notes refer to Owens Corning and its subsidiaries.
The accompanying Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States.
Principles of Consolidation
The Consolidated Financial Statements of the Company include the accounts of majority-owned subsidiaries. Intercompany accounts and transactions are eliminated.
Reclassifications
Certain reclassifications have been made to the 2016 and 2015 Consolidated Financial Statements and Notes to the Consolidated Financial Statements to conform to the classifications used in 2017.
Use of Estimates and Assumptions
The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ materially from those estimates.
Revenue Recognition
Revenue is recognized when title and risk of loss pass to the customer and collectability is reasonably assured. Provisions for discounts and rebates to customers, returns and other adjustments are provided in the same period that the related sales are recorded and are based on historical experience, current conditions and contractual obligations, as applicable.
Cost of Sales
Cost of sales includes material, labor, energy and manufacturing overhead costs, including depreciation and amortization expense associated with the manufacture and distribution of the Company's products. Provisions for warranties are provided in the same period that the related sales are recorded and are based on historical experience, current conditions and contractual obligations, as applicable. Distribution costs include inbound freight costs; purchasing and receiving costs; inspection costs; warehousing costs; shipping and handling costs, which include costs incurred relating to preparing, packaging, and shipping products to customers; and other costs of the Company's distribution network. All shipping and handling costs billed to the customer are included as net sales in the Consolidated Statements of Earnings.

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1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Marketing and Advertising Expenses
Marketing and advertising expenses are included in Marketing and administrative expenses. These costs include advertising and marketing communications, which are expensed the first time the advertisement takes place. Marketing and advertising expenses for the years ended December 31, 2017, 2016 and 2015 were $108 million, $105 million and $98 million, respectively.
Science and Technology Expenses
The Company incurs certain expenses related to science and technology. These expenses include salaries, building and equipment costs, utilities, administrative expenses, materials and supplies associated with the improvement and development of the Company’s products and manufacturing processes. These costs are expensed as incurred.
Earnings per Share
Basic earnings per share are computed using the weighted-average number of common shares outstanding during the period. Diluted earnings per share reflect the dilutive effect of common equivalent shares and increased shares that would result from the conversion of equity securities. The effects of anti-dilution are not presented.
Cash, Cash Equivalents and Restricted Cash
The Company defines cash and cash equivalents as cash and time deposits with maturities of three months or less when purchased. On the Consolidated Statements of Cash Flows, the total of Cash, cash equivalents and restricted cash includes restricted cash of $7 million and $6 million as of December 31, 2017 and 2016, respectively. Restricted cash primarily represents amounts received from a counterparty related to its performance assurance on an executory contract, and is included in Other current assets on the Consolidated Balance Sheets. These amounts are contractually required to be set aside, and the counterparty can exchange the cash for another form of performance assurance at its discretion. There were no restricted cash amounts presented for the year ended December 31, 2015 in the Consolidated Statements of Cash Flows.
Accounts Receivable
Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is an estimate of the amount of probable credit losses in our existing accounts receivable. Account balances are charged off against the allowance when the Company believes it is probable the receivable will not be recovered.
Inventory Valuation
Inventory costs include material, labor, and manufacturing overhead costs, including depreciation and amortization expense associated with the manufacture and distribution of the Company’s products. Inventories are stated at lower of cost or net realizable value and expense estimates are made for excess and obsolete inventories. Cost is determined by the first-in, first-out (“FIFO”) method.
Investments in Affiliates
The Company accounts for investments in affiliates of 20% to 50% ownership when the Company does not have a controlling financial interest using the equity method under which the Company’s share of earnings and losses of the affiliate is reflected in earnings and dividends are credited against the investment in affiliate when declared. Investments in affiliates are recorded in Other non-current assets on the Consolidated Balance Sheets and as of December 31, 2017 and 2016, the total value of investments was $52 million and $50 million, respectively.

Goodwill and Other Intangible Assets
Goodwill assets are not amortized but are tested for impairment on at least an annual basis. In the current year, as part of the annual assessment, the Company used a quantitative approach to determine whether the fair value of a reporting unit was less than its carrying amount.
As part of our testing process for goodwill the Company estimates fair values using a discounted cash flow approach from the perspective of a market participant. Significant estimates in the discounted cash flow approach are cash flow

forecasts of our reporting units, the discount rate, the terminal business value and the projected income tax rate. The cash flow forecasts of the reporting units are based upon management's long-term view of our markets and are the forecasts that are used by senior management and the Board of Directors to evaluate operating performance. The discount rate utilized is management's estimate of what the market's weighted average cost of capital is for a company with a similar debt rating and stock volatility, as measured by beta. The projected income tax rates utilized are the statutory tax rates for the countries where each reporting unit operates. The terminal business value is determined by applying a business growth factor to the latest year for which a forecast exists. As part of our goodwill quantitative testing process, we would evaluate whether there are reasonably likely changes to management's estimates that would have a material impact on the results of the goodwill impairment testing.

Other indefinite-lived intangible assets are not amortized but are tested for impairment on at least an annual basis or when determined to have a finite useful life. Substantially all of the indefinite-lived intangible assets are in trademarks and trade names. The Company uses the royalty relief approach to determine whether it is more likely than not that the fair value of these assets is less than its carrying amount. This review is performed annually, or when circumstances arise which indicate there may be impairment. When applying the royalty relief approach, the Company performs a discounted cash flow analysis based on the value derived from owning these trademarks and trade names and being relieved from paying royalty to third parties. Significant assumptions used include projected cash flows, discount rate, projected income tax rate and terminal business value.

The inputs for the goodwill and indefinite-lived intangible tests are considered Level 3 inputs under the fair value hierarchy as they are the Company's own data, and are unobservable in the marketplace. Indefinite-lived intangible assets purchased through acquisition are generally tested qualitatively for impairment in the first year following the acquisition before transitioning to the standard methodology described herein in subsequent years.

Identifiable intangible assets with a determinable useful life are amortized over that determinable life. Amortization expense for the years ended December 31, 2017, 2016 and 2015 was $31 million, $25 million and $22 million, respectively. See Note 5 to the Consolidated Financial Statements for further discussion.

Properties and Depreciation

Property, plant and equipment are stated at cost and depreciated over their estimated useful lives using the straight-line method. Property, plant and equipment accounts are relieved of the cost and related accumulated depreciation when assets are disposed of or otherwise retired.

Precious metals used in our production tooling are included in property, plant and equipment and are depleted as they are consumed during the production process. Depletion typically represents an annual expense of less than 3% of the outstanding value and is recorded in Cost of sales on the Consolidated Statements of Earnings.

For the years ended December 31, 2017, 2016 and 2015, depreciation expense was $340 million, $318 million and $278 million, respectively. In 2017, 2016 and 2015, depreciation expense included $17 million, $19 million and $3 million, respectively, of accelerated depreciation related to restructuring actions further explained in Note 11 to the Consolidated Financial Statements.

The range of useful lives for the major components of the Company's plant and equipment is as follows:

Buildings and leasehold improvements	15 – 40 years
Machinery and equipment	
Furnaces	4 – 15 years
Information systems	5 – 10 years
Equipment	5 – 20 years

Expenditures for normal maintenance and repairs are expensed as incurred.

Asset Impairments

The Company evaluates tangible and intangible long-lived assets for impairment when triggering events have occurred. This requires significant assumptions including projected cash flows, projected income tax rate and terminal business value. These inputs are considered Level 3 inputs under the fair value hierarchy as they are the Company's own data, and are unobservable in the marketplace. Changes in management intentions, market conditions or operating performance could indicate that impairment charges might be necessary that would be material to the Company's Consolidated Financial Statements in any given period.

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Income Taxes
The Company recognizes current tax liabilities and assets for the estimated taxes payable or refundable on the tax returns for the current year. Deferred tax balances reflect the impact of temporary differences between the carrying amount of assets and liabilities and their tax basis. Amounts are stated at enacted tax rates expected to be in effect when taxes are actually paid or recovered. In addition, realization of certain deferred tax assets is dependent upon our ability to generate future taxable income. The Company records a valuation allowance to reduce its deferred tax assets to the amount that it believes is more likely than not to be realized. In addition, the Company estimates tax reserves to cover potential taxing authority claims for income taxes and interest attributable to audits of open tax years. Please refer to Note 19 for information on the Company's application of SEC Staff Accounting Bulletin No. 118, "Income Tax Accounting Implications of the Tax Cuts and Jobs Act," ("SAB 118") on the provisional estimates used to record the effects of the recently-enacted tax legislation commonly known as the U.S. Tax Cuts and Jobs Act of 2017 (the "Tax Act").
Taxes Collected from Customers and Remitted to Government Authorities and Taxes Paid to Vendors
Taxes are assessed by various governmental authorities at different rates on many different types of transactions. The Company charges sales tax or value-added tax (VAT) on sales to customers where applicable, as well as captures and claims back all available VAT that has been paid on purchases. VAT is recorded in separate payable or receivable accounts and does not affect revenue or cost of sales line items in the income statement. VAT receivable is recorded as a percentage of qualifying purchases at the time the vendor invoice is processed. VAT payable is recorded as a percentage of qualifying sales at the time an Owens Corning sale to a customer subject to VAT occurs. Amounts are paid to the taxing authority according to the method and collection prescribed by local regulations. Where applicable, VAT payable is netted against VAT receivable. The Company also pays sales tax to vendors who include a tax, required by government regulations, to the purchase price charged to the Company.

Pension and Other Postretirement Benefits
Accounting for pensions and other postretirement benefits involves estimating the cost of benefits to be provided well into the future and attributing that cost over the time period each employee works. To accomplish this, extensive use is made of assumptions about investment returns, discount rates, inflation, mortality, turnover and medical costs.
Derivative Financial Instruments
The Company recognizes all derivative instruments as either assets or liabilities at fair value on the balance sheet. To the extent that a derivative is effective as a cash flow hedge, the change in fair value of the derivative is deferred in accumulated other comprehensive income/deficit (“AOCI”). Any portion considered to be ineffective is reported in earnings immediately. To the extent that a derivative is effective as a fair value hedge, the change in the fair value of the derivative is offset by the change in the fair value of the item being hedged in the Consolidated Statements of Earnings. See Note 4 to the Consolidated Financial Statements for further discussion.
Fair Value Measurements
The carrying value of cash and cash equivalents, accounts receivable and short-term debt approximate fair value because of the short-term maturity of the instruments. Please refer to Notes 4 and 12 for additional fair value disclosure of derivative financial instruments and long-term debt, respectively.
Foreign Currency
The functional currency of the Company’s subsidiaries is generally the applicable local currency. Assets and liabilities of foreign subsidiaries are translated into United States dollars at the period-end rate of exchange, and their Statements of Earnings and Statements of Cash Flows are converted on an ongoing basis at the monthly average rate. The resulting translation adjustment is included in AOCI in the Consolidated Balance Sheets and Consolidated Statements of Stockholders’ Equity. Transaction gains and losses that arise from exchange rate fluctuations on transactions

denominated in a currency other than the functional currency are included in the Consolidated Statements of Earnings as incurred. The Company recorded a foreign currency transaction loss of $4 million, $2 million and $5 million during the years ended December 31, 2017, 2016, and 2015, respectively.

Accounting Pronouncements

The following table summarizes recent accounting standard updates (ASU) issued by the Financial Accounting Standards Board (FASB) that could have an impact on the Company's Consolidated Financial Statements:

Standard	Description	Effective Date for Company	Effect on the Consolidated Financial Statements
Recently issued standards:			
ASU 2014-09 "Revenue from Contracts with Customers (Topic 606)," as amended by ASU's 2015-14, 2016-08, 2016-10, 2016-11, 2016-12, 2016-20, 2017-05, 2017-13 and 2017-14.	This standard outlines a new, single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. Entities can adopt this standard either through a retrospective or modified-retrospective approach.	January 1, 2018	We do not expect that the adoption of this standard will have a material impact on our Consolidated Financial Statements, both at the adoption date and on an ongoing basis. We will use the modified-retrospective method to adopt the standard on January 1, 2018. Our implementation process included review of material revenue streams and customer contracts, design of new disclosures and assessment of internal controls over financial reporting. Many of our customer volume commitments are short-term (as explained on pg. 5 of Item 1A Risk Factors) and do not contain multiple-element arrangements. As a result, we do not expect many elements of the new standard to impact the accounting for our business model. We reached similar conclusions on the expected effect of the new standard on our recent acquisitions. Substantially all of our revenue will continue to be recognized at a point-in-time when control of goods transfers to the customer. This is consistent with our current revenue recognition accounting policy (as described in Note 1), in which we recognize revenue when title and risk of loss pass to the customer and collectability is reasonably assured. Control transfer typically occurs when goods are shipped from our facilities or at other predetermined control transfer points (for instance, destination terms or consignment arrangements). Our variable consideration estimates are largely consistent with the new standard, as we currently estimate different forms of variable consideration at the time of sale based on historical experience, current conditions and contractual obligations.

ASU 2016-02 "Leases (Topic 842)," as amended by ASU 2017-13 and 2018-01, and potentially subject to change through the "Targeted Improvements" Proposed ASU exposure draft released on January 5, 2018.	The standard requires lessees to recognize a right-of-use asset and lease liability for all leases with terms of more than 12 months. The recognition and presentation of expenses will depend on classification as a finance or operating lease. Entities will adopt this standard through a retrospective approach.	January 1, 2019	We are currently assessing the potential impact of this standard adoption on our financial reporting processes and disclosures. We believe that our adoption of the standard will likely have a material impact to our Consolidated Balance Sheets for the recognition of certain operating leases as right-of-use assets and lease liabilities. (Our operating lease obligations are described in Note 8). We are in the process of analyzing our lease portfolio and implementing systems to comply with the standard's retrospective adoption requirements. We are monitoring the outcome of the FASB's recent exposure draft, which could impact our transition and the comparative reporting at adoption.
ASU 2016-13 "Financial Instruments - Credit Losses (Topic 326)"	This standard replaces the incurred loss methodology for recognizing credit losses with a current expected credit losses model and applies to all financial assets, including trade receivables. Entities will adopt the standard using a modified-retrospective approach.	January 1, 2020	We are currently assessing the impact this standard will have on our Consolidated Financial Statements. Our current accounts receivable policy (as described in Note 1) uses historical and current information to estimate the amount of probable credit losses in our existing accounts receivable. We have not yet analyzed our current systems and methods to determine the impact of using forward-looking information to estimate expected credit losses.
ASU 2016-16 "Income Taxes (Topic 740)"	This standard clarifies that an entity should recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs.	January 1, 2018	We are still analyzing the effect of the transition on on certain lines of our Consolidated Balance Sheets, but we do not expect the adoption of this standard to have a material impact on our Consolidated Financial Statements.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

ASU 2017-07 "Compensation - Retirement Benefits (Topic 715)"	This standard requires that the other components of net benefit cost be presented in the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. Entities will adopt the presentation elements of this standard on a retrospective basis.	January 1, 2018	We do not expect that the adoption of this standard will have a material effect on our Consolidated Financial Statements on an ongoing basis. The standard's retrospective adoption, though, will likely have a significant impact on the classifications in our 2017 Consolidated Statements of Earnings, mainly due to pension settlement losses that were recorded in the second and fourth quarters of 2017 (as described in Note 13).
ASU 2017-12 "Derivatives and Hedging (Topic 815)"	This standard changes how an entity assesses effectiveness of derivative instruments, potentially resulting in less ineffectiveness and more derivatives qualifying for hedge accounting. Entities may early adopt the standard in any interim period, with the effect of adoption being applied to existing hedging relationships as of the beginning of the fiscal year of adoption.	January 1, 2019	We do not expect the adoption of this standard to have a material impact on our Consolidated Financial Statements.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
2. SEGMENT INFORMATION

The Company has three reportable segments: Composites, Insulation and Roofing. Accounting policies for the segments are the same as those for the Company. The Company's three reportable segments are defined as follows:
Composites – The Composites segment includes vertically integrated downstream activities. The Company manufactures, fabricates and sells glass reinforcements in the form of fiber. Glass reinforcement materials are also used downstream by the Composites segment to manufacture and sell glass fiber products in the form of fabrics, non-wovens and other specialized products.
Insulation – Within our Insulation segment, the Company manufactures and sells fiberglass insulation into residential, commercial, industrial and other markets for both thermal and acoustical applications. It also manufactures and sells glass fiber pipe insulation, flexible duct media, bonded and granulated mineral wool insulation, cellular glass insulation and foam insulation used in above- and below-grade construction applications.
Roofing – Within our Roofing segment, the Company manufactures and sells residential roofing shingles, oxidized asphalt materials, roofing components used in residential and commercial construction and specialty applications, and synthetic packaging materials.

NET SALES
The following table summarizes our net sales by segment and geographic region (in millions). Corporate eliminations (shown below) largely reflect the intercompany sales from Composites to Roofing. External customer sales are attributed to geographic region based upon the location from which the product is shipped to the external customer.

	Twelve Months Ended December 31,		
	2017	2016	2015
Reportable Segments			
Composites	$2,068	$1,952	$1,902
Insulation	2,001	1,748	1,850
Roofing	2,553	2,194	1,766
Total reportable segments	6,622	5,894	5,518
Corporate eliminations	(238)	(217)	(168)
NET SALES	$6,384	$5,677	$5,350
External Customer Sales by Geographic Region			
United States	$4,495	$3,963	$3,697
Europe	661	550	515
Asia Pacific	675	666	662
Canada and other	553	498	476
NET SALES	$6,384	$5,677	$5,350

EARNINGS BEFORE INTEREST AND TAXES
Earnings before interest and taxes (EBIT) by segment consists of net sales less related costs and expenses and are presented on a basis that is used internally for evaluating segment performance. Certain items, such as general corporate expenses or income and certain other expense or income items, are excluded from the internal evaluation of segment performance. Accordingly, these items are not reflected in EBIT for our reportable segments and are included in the Corporate, Other and Eliminations category.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
2. SEGMENT INFORMATION (continued)

The following table summarizes EBIT by segment (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Reportable Segments			
Composites	$291	$264	$232
Insulation	177	126	160
Roofing	535	486	266
Total reportable segments	1,003	876	658
Restructuring costs	(48)	(28)	(2)
Acquisition-related costs	(15)	(9)	—
Recognition of acquisition inventory fair value step-up	(5)	(10)	—
Litigation settlement gain, net of legal fees	29	—	—
Pension settlement losses	(64)	—	—
Environmental liability charges	(15)	—	—
General corporate expense and other	(148)	(130)	(108)
Total Corporate, other and eliminations	$(266)	$(177)	$(110)
EBIT	$737	$699	$548

TOTAL ASSETS AND PROPERTY, PLANT AND EQUIPMENT BY GEOGRAPHIC REGION
The following table summarizes total assets by segment and property, plant and equipment by geographic region (in millions):

	December 31,	
TOTAL ASSETS	2017	2016
Reportable Segments		
Composites	$2,486	$2,375
Insulation	3,618	2,864
Roofing	1,621	1,553
Total reportable segments	7,725	6,792
Cash and cash equivalents	246	112
Current and noncurrent deferred income taxes	144	375
Investments in affiliates	52	50
Assets held for sale	12	12
Corporate property, plant and equipment, other assets and eliminations	453	400
CONSOLIDATED TOTAL ASSETS	$8,632	$7,741

	December 31,	
PROPERTY, PLANT AND EQUIPMENT BY GEOGRAPHIC REGION	2017	2016
United States	$2,164	$2,070
Europe	479	351
Asia Pacific	459	360
Canada and other	323	331
TOTAL PROPERTY, PLANT AND EQUIPMENT	$3,425	$3,112

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
2. SEGMENT INFORMATION (continued)

PROVISION FOR DEPRECIATION AND AMORTIZATION

The following table summarizes the provision for depreciation and amortization by segment (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Reportable Segments			
Composites	$144	$138	$125
Insulation	124	106	101
Roofing	50	46	39
Total reportable segments	318	290	265
General corporate depreciation and amortization (a)	53	53	35
CONSOLIDATED PROVISION FOR DEPRECIATION AND AMORTIZATION	$371	$343	$300

(a) In 2017, 2016 and 2015, General corporate depreciation and amortization expense included $17 million, $19 million and $3 million, respectively, of accelerated depreciation related to restructuring actions further explained in Note 11 to the Consolidated Financial Statements.

ADDITIONS TO PROPERTY, PLANT AND EQUIPMENT

The following table summarizes additions to property, plant and equipment by segment (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Reportable Segments			
Composites	$148	$152	$186
Insulation	151	154	141
Roofing	66	66	44
Total reportable segments	365	372	371
General corporate additions	37	42	40
CONSOLIDATED ADDITIONS TO PROPERTY, PLANT AND EQUIPMENT	$402	$414	$411

The amounts in the table above represent Additions to property, plant and equipment on an accrual basis.

3. INVENTORIES

Inventories consist of the following (in millions):

	December 31,	
	2017	2016
Finished goods	$562	$482
Materials and supplies	279	228
Total inventories	$841	$710

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4. DERIVATIVE FINANCIAL INSTRUMENTS

The Company is exposed to, among other risks, the impact of changes in commodity prices, foreign currency exchange rates, and interest rates in the normal course of business. The Company's risk management program is designed to manage the exposure and volatility arising from these risks, and utilizes derivative financial instruments to offset a portion of these risks. The Company uses derivative financial instruments only to the extent necessary to hedge identified business risks, and does not enter into such transactions for trading purposes.

The Company generally does not require collateral or other security with counterparties to these financial instruments and is therefore subject to credit risk in the event of nonperformance; however, the Company monitors credit risk and currently does not anticipate nonperformance by other parties. Contracts with counterparties generally contain right of offset provisions. These provisions effectively reduce the Company's exposure to credit risk in situations where the Company has gain and loss positions outstanding with a single counterparty. It is the Company's policy to offset on the Consolidated Balance Sheets the amounts recognized for derivative instruments with any cash collateral arising from derivative instruments executed with the same counterparty under a master netting agreement. As of December 31, 2017 and 2016, the Company did not have any amounts on deposit with any of its counterparties, nor did any of its counterparties have any amounts on deposit with the Company.

Our derivatives consist of natural gas forward swaps, cross currency swaps and foreign exchange forward contracts, all of which are over-the-counter and not traded through an exchange. The Company uses widely accepted valuation tools to determine fair value, such as discounting cash flows to calculate a present value for the derivatives. The models use Level 2 inputs, such as forward curves and other commonly quoted observable transactions and prices. The fair value of our derivatives and hedging instruments are all classified as Level 2 investments within the three-tier hierarchy.

The following table presents the fair value of derivatives and hedging instruments and the respective location on the Consolidated Balance Sheets (in millions):

	Location	Fair Value at December 31, 2017	December 31, 2016
Derivative assets designated as hedging instruments:			
Net investment hedges:			
Cross currency swaps	Other current assets	$ 7	$ 4
Cross currency swaps	Other non-current assets	$ —	$ 6
Cash flow hedges:			
Natural gas forward swaps	Other current assets	$ 1	$ 4
Derivative liabilities designated as hedging instruments:			
Net investment hedges:			
Cross currency swaps	Other liabilities	$ 38	$ —
Cash flow hedges:			
Natural gas forward swaps	Accounts payable and accrued liabilities	$ 1	$ —
Derivative assets not designated as hedging instruments:			
Natural gas forward swaps	Other current assets	$ —	$ 1
Foreign exchange forward contracts	Other current assets	$ 1	$ 1
Derivative liabilities not designated as hedging instruments:			
Foreign exchange forward contracts	Accounts payable and accrued liabilities	$ 1	$ 2

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
4. DERIVATIVE FINANCIAL INSTRUMENTS (continued)

The following table presents the notional of derivatives and hedging instruments on the Consolidated Balance Sheets (in millions):

	Unit of Measure	Notional Amount December 31, 2017
Net investment hedges:		
Cross currency swaps	U.S. Dollars	$ 516
Cash flow hedges:		
Natural gas forward swaps U.S. indices	MMBtu	5
Natural gas forward swaps European indices	MMBtu (equivalent)	1

The Company had notional amounts of $109 million for derivative hedging instruments related to non-designated foreign currency exposure in U.S. Dollars primarily relative to Brazilian Real, Chinese Yuan, Indian Rupee, Japanese Yen, and South Korean Won. In addition, the Company had notional amounts of $34 million for derivative financial instruments related to non-designated foreign currency exposure in European Euro primarily related to the Russian Ruble. Please refer to the Other Derivatives section below for more detail on these instruments.

The following table presents the impact and respective location of derivative activities on the Consolidated Statements of Earnings (in millions):

	Location	Twelve Months Ended December 31, 2017	2016	2015
Derivative activity designated as hedging instruments:				
Natural gas:				
Amount of (gain)/loss reclassified from AOCI into earnings (effective portion)	Cost of sales	$(1)	$6	$10
Amount of loss recognized in earnings (ineffective portion)	Other expenses, net	$2	$—	$—
Foreign currency:				
Amount of loss reclassified from AOCI into earnings (effective portion)	Other expenses, net	$—	$1	$—
Interest rate:				
Amount of loss recognized in earnings	Interest expense, net	$1	$1	$—
Derivative activity not designated as hedging instruments:				
Natural gas:				
Amount of (gain)/loss recognized in earnings	Other expenses, net	$—	$(2)	$1
Foreign currency exchange contract:				
Amount of loss/(gain) recognized in earnings (a)	Other expenses, net	$5	$3	$(6)

(a) Losses and gains related to foreign currency derivatives were substantially offset by net revaluation impacts on foreign currency denominated balance sheet exposures, which were also recorded in Other expenses, net.

Cash Flow Hedges

The Company uses a combination of derivative financial instruments, which qualify as cash flow hedges, and physical contracts to manage forecasted exposure to electricity and natural gas prices. The Company's policy for electricity exposure is to hedge up to 75% of its total forecasted exposure for the current calendar year and up to 65% of its total forecasted exposure for the first calendar year forward. The Company’s policy for natural gas exposure is to hedge up to 75% of its total forecasted exposure for the next three months and up to 60% of its total forecasted exposure for the following three months, and lesser amounts for the

remaining periods. Based on market conditions, approved variation from these standard policies may occur for certain geographic regions. Currently, the Company is managing risk associated with electricity prices only through physical contracts and has natural gas derivatives designated as hedging instruments that mature within 15 months.
The Company performs an analysis for effectiveness of its derivatives designated as hedging instruments at the end of each quarter based on the terms of the contracts and the underlying items being hedged. The effective portion of the change in the fair value of cash flow hedges is deferred in AOCI and is subsequently recognized in Cost of sales on the Consolidated Statements of Earnings for commodity hedges, when the hedged item impacts earnings. Changes in the fair value of derivative assets and liabilities designated as hedging instruments are shown in the Other non-cash line within operating activities on the Consolidated Statements of Cash Flows. Any portion of the change in fair value of derivatives designated as hedging instruments that is determined to be ineffective is recorded in Other expenses, net on the Consolidated Statements of Earnings.

As of December 31, 2017, less than $1 million of loss included in AOCI on the Consolidated Balance Sheets relate to natural gas contracts that are expected to impact earnings during the next 12 months. Transactions and events that are expected to occur over the next 12 months that will necessitate recognizing these deferred amounts include the recognition of the hedged item through earnings.

Net Investment Hedges

The Company uses cross currency forward contracts to hedge a portion of the net investment in foreign subsidiaries against fluctuations in foreign exchange rates (primarily the European Euro). For derivative instruments that are designated and qualify as hedges of net investments in foreign operations, settlements and changes in fair values of the derivative instruments are recognized in Currency translation adjustment, a component of AOCI, to offset the changes in the values of the net investments being hedged. Any portion of net investment hedges that is determined to be ineffective is recorded in Other expenses, net on the Consolidated Statements of Earnings. Cash settlements are included in Other investing activities in the Consolidated Statements of Cash Flows.

Other Derivatives

The Company uses forward currency exchange contracts to manage existing exposures to foreign exchange risk related to assets and liabilities recorded on the Consolidated Balance Sheet. Gains and losses resulting from the changes in fair value of these instruments are recorded in Other expenses, net on the Consolidated Statements of Earnings.

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5. GOODWILL AND OTHER INTANGIBLE ASSETS

The Company tests goodwill and indefinite-lived intangible assets for impairment as of October 1 each year, or more frequently should circumstances change or events occur that would more likely than not reduce the fair value of a reporting unit below its carrying amount. The annual tests performed in 2017 resulted in no impairment of goodwill or indefinite-lived intangible assets.

Intangible assets and goodwill consist of the following (in millions):

December 31, 2017	Weighted Average Useful Life	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortizable intangible assets:				
Customer relationships	20	$ 363	$ (109)	$ 254
Technology	18	255	(116)	139
Other	8	47	(26)	21
Indefinite-lived intangible assets:				
Trademarks		946	—	946
Total intangible assets		$ 1,611	$ (251)	$ 1,360
Goodwill		$ 1,507		

December 31, 2016	Weighted Average Useful Life	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortizable intangible assets:				
Customer relationships	22	$ 252	$ (94)	$ 158
Technology	19	216	(103)	113
Other	9	45	(23)	22
Indefinite-lived intangible assets:				
Trademarks		845	—	845
Total intangible assets		$ 1,358	$ (220)	$ 1,138
Goodwill		$ 1,336		

Goodwill

The 2017 goodwill increase was primarily related to $156 million of goodwill from the acquisition of Pittsburgh Corning. The changes in the net carrying amount of goodwill by segment are as follows (in millions):

	Composites	Insulation	Roofing	Total
Balance at December 31, 2016	$ 55	888	$ 393	$1,336
Acquisitions (see Note 7)	2	156	—	158
Foreign currency translation	1	5	7	13
Balance at December 31, 2017	$ 58	$ 1,049	$ 400	$1,507

Other Intangible Assets

The Company amortizes the cost of other intangible assets over their estimated useful lives which, individually, range up to 25 years. The Company's future cash flows are not materially impacted by its ability to extend or renew agreements related to its amortizable intangible assets. These costs are reported in Other expenses, net on the Consolidated Statements of Earnings.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
5. GOODWILL AND OTHER INTANGIBLE ASSETS (continued)

The Other category below primarily includes franchise agreements and emission rights. The changes in the gross carrying amount of intangible assets by asset group are as follows (in millions):

	Customer Relationships	Technology	Trademarks	Other	Total
Balance at December 31, 2016	$ 252	$ 216	$ 845	$ 45	$ 1,358
Acquisitions (see Note 7)	107	37	101	—	245
Foreign currency translation	4	2	—	2	8
Balance at December 31, 2017	$ 363	$ 255	$ 946	$ 47	$ 1,611

The estimated amortization expense for intangible assets for the next five years is as follows (in millions):

Period	Amortization (a) (b)
2018	$ 35
2019	$ 35
2020	$ 35
2021	$ 34
2022	$ 30

(a) The yearly amortization amounts in the table above include approximately $8 million of amortization expense related to the preliminary purchase price allocation of the acquisition of Pittsburgh Corning Corporation and Pittsburgh Corning Europe NV (collectively "Pittsburgh Corning"); see Note 7 for more details of this acquisition.

(b) The figures in the table above do not include yearly amortization expense estimates related to the acquisition of Paroc Group Oy ("Paroc"), which closed subsequent to year-end on February 5, 2018; see Note 7 for more details of this acquisition.

6. PROPERTY, PLANT AND EQUIPMENT
Property, plant and equipment consist of the following (in millions):

	December 31, 2017	December 31, 2016
Land	$ 251	$ 189
Buildings and leasehold improvements	944	874
Machinery and equipment	4,211	3,818
Construction in progress	350	250
	5,756	5,131
Accumulated depreciation	(2,331)	(2,019)
Property, plant and equipment, net	$ 3,425	$ 3,112

Machinery and equipment includes certain precious metals used in our production tooling, which comprise approximately 12% and 14% of total machinery and equipment as of December 31, 2017 and December 31, 2016, respectively. Precious metals used in our production tooling are depleted as they are consumed during the production process, which typically represents an annual expense of less than 3% of the outstanding carrying value.

7. ACQUISITIONS

During 2017, the Company completed acquisitions with an aggregate purchase price of $570 million, net of cash acquired.

Pittsburgh Corning Acquisition

On June 27, 2017, the Company acquired all the outstanding equity of Pittsburgh Corning, the world’s leading producer of cellular glass insulation systems for commercial and industrial markets, for approximately $563 million, net of cash acquired. This acquisition expands the Company’s position in commercial and industrial product offerings and grows its presence in Europe and Asia. Pittsburgh Corning's operating results since the date of acquisition and a preliminary purchase price allocation have been included in the Company's Insulation segment in the Consolidated Financial Statements. The Company is continuing to obtain information to complete its valuation of certain assets and liabilities. During the year ended December 31, 2017, the Company recorded immaterial measurement period adjustments to the purchase price allocation.

The following table details the identifiable indefinite and definite-lived intangible assets acquired, their preliminary fair values and estimated weighted average useful lives (in millions):

Type of Intangible Asset	Preliminary Fair Value	Weighted Average Useful Life
Customer relationships	$ 107	19
Technology	37	15
Trademarks	101	indefinite
Total	$ 245	

During 2017, the Consolidated Statements of Earnings included $133 million in Net sales attributable to the acquisition and a $5 million charge related to inventory fair value step-up in Cost of sales. Goodwill has been initially valued at approximately $156 million, with none of the amount expected to be tax-deductible. The factors contributing to the recognition of the amount of goodwill are based on several strategic and synergistic benefits that are expected to be realized from the Pittsburgh Corning acquisition and will accelerate making the Company the leading provider of insulation solutions by building on core glass technologies. The acquisition also included cash of approximately $52 million. The Company expects to complete its valuations no later than one year from the acquisition date and adjustments will continue to be made to the fair value of the identifiable assets acquired and liabilities assumed. Those adjustments may or may not be material. The pro forma effect of this acquisition on Net sales and Net earnings attributable to Owens Corning was not material.

InterWrap Acquisition

On April 21, 2016, the Company acquired all outstanding shares of InterWrap Holdings, Inc. ("InterWrap"), a leading manufacturer of roofing underlayment and packaging materials, for approximately $452 million, net of cash acquired. This acquisition expands the Company’s position in roofing components, strengthens the Company’s capabilities to support the conversion from organic to synthetic underlayment and accelerates its growth in the roofing components market. Interwrap's operating results have been included in the Roofing segment of the Company's Consolidated Financial Statements since the date of the acquisition. During the year ended December 31, 2017, the Consolidated Statements of Earnings included $86 million in Net sales attributable to the InterWrap acquisition (related to the one-year post-acquisition period). The pro forma effect of this acquisition on Net sales and Net earnings attributable to Owens Corning was not material.

Paroc Acquisition

On February 5, 2018, the Company acquired all the outstanding equity of Paroc, a leading producer of mineral wool insulation for building and technical applications in Europe, for an enterprise value of approximately $1.1 billion (900 million Euro). The acquisition of Paroc expands the Company's mineral wool technology, grows its presence in the European insulation market, provides access to a variety of new end-use markets and will increase the Insulation segment's geographic sales mix outside of the U.S. and Canada. Operating results of the acquisition will be included in the Company's Insulation segment within the Consolidated Financial Statements beginning on February 5, 2018. The Company is in the process of valuing certain identifiable assets and liabilities, and the purchase price allocation will be completed with finalization of these valuations.

8. OPERATING LEASES

The Company leases certain equipment and facilities under operating leases expiring on various dates through 2027. Some of these leases include cost-escalation clauses. Such cost-escalation clauses are recognized on a straight-line basis over the lease term. Total rental expense was $87 million, $79 million and $88 million in the years ended December 31, 2017, 2016 and 2015, respectively. At December 31, 2017, the minimum future rental commitments under non-cancelable operating leases with initial maturities greater than one year payable over the remaining lives of the leases are (in millions):

Period	Minimum Future Rental Commitments
2018	$ 68
2019	$ 59
2020	$ 45
2021	$ 32
2022	$ 22
2023 and beyond	$ 36

9. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities consist of the following current portions of these liabilities (in millions):

	December 31,	
	2017	2016
Accounts payable	$834	$615
Payroll, vacation pay and incentive compensation	198	160
Payroll, property and other taxes	71	46
Other employee benefits liabilities	35	36
Dividends payable	24	23
Warranties	15	13
Deferred revenue	10	11
Legal, environmental and audit costs	17	8
Accrued interest	22	11
Restructuring costs	15	2
Other	36	35
Total	$1,277	$960

10. WARRANTIES

The Company records a liability for warranty obligations at the date the related products are sold. Adjustments are made as new information becomes available. A reconciliation of the warranty liability is as follows (in millions):

	December 31,	
	2017	2016
Beginning balance	$52	$43
Amounts accrued for current year	18	21
Settlements of warranty claims	(15)	(12)
Ending balance	$55	$52

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11. RESTRUCTURING AND ACQUISITION-RELATED COSTS

The Company may incur restructuring, transaction and integration costs related to acquisitions, and may incur restructuring costs in connection with its global cost reduction and productivity initiatives.

Acquisition-Related Costs

During 2017, the Company incurred $15 million of transaction and integration costs related to its announced acquisitions. Please refer to Note 7 of the Consolidated Financial Statements for further information on these acquisitions. These costs are recorded in the Corporate, Other and Eliminations category. See the Restructuring Costs paragraph below for detail on additional costs related to these acquisitions. The following table presents the impact and respective location of acquisition-related costs for 2017 in the Consolidated Statements of Earnings (in millions):

Location	InterWrap Acquisition		Pittsburgh Corning Acquisition		Paroc Acquistion		Total
Marketing and administrative expenses	$	1	$	3	$	2	$ 6
Other expenses, net	—		9		—		9
Total acquisition-related costs	$	1	$	12	$	2	$ 15

Restructuring Costs

Pittsburgh Corning Acquisition-Related Restructuring
Following the acquisition of Pittsburgh Corning into the Company's Insulation segment, the Company took actions to realize expected synergies from the newly acquired operations. During 2017, the Company recorded $17 million of charges related to these actions, mainly comprised of severance.

2017 Cost Reduction Actions
During the second quarter of 2017, the Company took actions to avoid future capital outlays and reduce costs in its Composites segment, mainly through decisions to close certain sub-scale manufacturing facilities in Asia Pacific (Doudian, Peoples Republic of China and Thimmapur, India) and North America (Mexico City, Mexico and Brunswick, Maine) and to reposition assets in its Chambery, France operation. During 2017, the Company recorded $29 million of charges, comprised of $11 million of severance, $16 million of accelerated depreciation, and $2 million of exit costs associated with these actions. The Company expects to recognize approximately $20 million of incremental costs in 2018, of which about $7 million is accelerated depreciation.

Other Restructuring Actions
During 2017, the Company incurred an immaterial amount of costs related to its 2016 cost reduction actions and InterWrap acquisition-related restructuring. The Company does not expect to incur any additional costs related to these actions. Please refer to Note 11 of our 2016 Form 10-K for more information about these restructuring actions.

Consolidated Statements of Earnings Classification
The following table presents the impact and respective location of total restructuring costs on the Consolidated Statements of Earnings, which are included in our Corporate, Other and Eliminations category (in millions):

	Twelve Months Ended

		December 31,		
Type of Cost	Location	2017	2016	2015
Accelerated depreciation	Cost of sales	$17	$ 19	$ 3
Other exit costs	Cost of sales	3	6	7
Severance	Other expenses, net	27	1	(3)
Other exit costs	Other expenses, net	1	2	(5)
Total restructuring costs		$48	$ 28	$ 2

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
11. RESTRUCTURING AND ACQUISITION-RELATED COSTS (continued)

Summary of Unpaid Liabilities
The following table summarizes the status of the unpaid liabilities from the Company’s restructuring activities (in millions):

	2017 Cost Reduction Actions	Pittsburgh Corning Acquisition-Related Restructuring	2016 Cost Reduction Actions	InterWrap Acquisition-Related Restructuring	2014 Cost Reduction Actions	Total
Balance at December 31, 2016	$ —	$ —	$ 1	$ —	$ 1	$ 2
Restructuring costs	29	17	1	1	—	48
Payments	—	(7)	(1)	—	(1)	(9)
Non-cash items and reclassifications to other accounts	(18)	(1)	(1)	(1)	—	(21)
Balance at December 31, 2017	$ 11	$ 9	$ —	$ —	$ —	$ 20
Cumulative charges incurred	$ 29	$ 17	$ 19	$ 4	$ 45	$ 114

As of December 31, 2017, the remaining liability balance is comprised of $20 million of severance, inclusive of $5 million of non-current severance and $15 million of severance the Company expects to pay over the next twelve months.

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12. DEBT

Details of the Company's outstanding long-term debt, as well as the fair values, are as follows (in millions):

	December 31, 2017		December 31, 2016	
	Carrying Value	Fair Value	Carrying Value	Fair Value
9.00% senior notes, net of discount and financing fees, due 2019	$—	n/a	$143	114 %
4.20% senior notes, net of discount and financing fees, due 2022	597	105 %	596	104 %
4.20% senior notes, net of discount and financing fees, due 2024	392	105 %	391	102 %
3.40% senior notes, net of discount and financing fees, due 2026	395	98 %	395	95 %
7.00% senior notes, net of discount and financing fees, due 2036	400	132 %	536	118 %
4.30% senior notes, net of discount and financing fees, due 2047	588	99 %	—	n/a
Various capital leases, due through and beyond 2050 (a)	31	100 %	33	100 %
Unamortized interest rate swap basis adjustment	6	n/a	8	n/a
Total long-term debt	2,409	n/a	2,102	n/a
Less – current portion (a)	4	100 %	3	100 %
Long-term debt, net of current portion	$2,405	n/a	$2,099	n/a

(a) The Company determined that the book value of the above noted debt instruments approximates fair value.

The fair values of the Company's outstanding long-term debt instruments were estimated using market observable inputs, including quoted prices in active markets, market indices and interest rate measurements. Within the hierarchy of fair value measurements, these are Level 2 fair values.

Senior Notes

The Company issued $400 million of 2048 senior notes on January 25, 2018 subject to $11 million of discounts and issuance costs. Interest on the 2048 senior notes is payable semiannually in arrears on January 30 and July 30 each year, beginning on July 30, 2018. The proceeds from the 2048 senior notes were used, along with borrowings on a $600 million term loan commitment and borrowings on the Receivables Securitization Facility, to fund the purchase of Paroc in the first quarter of 2018.

The Company issued $600 million of 2047 senior notes on June 26, 2017 subject to $12 million of discounts and issuance costs. Interest on the 2047 senior notes is payable semiannually in arrears on January 15 and July 15 each year, beginning on January 15, 2018. A portion of the proceeds from the 2047 senior notes was used to fund the purchase of Pittsburgh Corning in the second quarter of 2017 and for general corporate purposes. In the third quarter of 2017, a portion of the proceeds was used by the Company, in addition to borrowings on the Receivables Securitization Facility (as defined below), to repay portions of the Company's outstanding 2019 senior notes and 2036 senior notes. The Company issued a make-whole call to repay the remaining portion of its outstanding 2019 senior notes, and the redemption was completed in the third quarter of 2017. The Company recognized $71 million of loss on extinguishment of debt in the third quarter of 2017 associated with these actions.

The Company issued $400 million of 2026 senior notes on August 8, 2016. Interest on the notes is payable semiannually in arrears on February 15 and August 15 each year, beginning on February 15, 2017. A portion of the proceeds from these notes was used to redeem $158 million of our 2016 senior notes. The remaining proceeds were used to pay down portions of our Receivables Securitization Facility and for general corporate purposes.

The Company issued $400 million of 2024 senior notes on November 12, 2014. Interest on the notes is payable semiannually in arrears on June 1 and December 1 each year, beginning on June 1, 2015. A portion of the proceeds from these notes was used to repay $242 million of our 2016 senior notes and $105 million of our 2019 senior notes. The remaining proceeds were used to pay down our Senior Revolving Credit Facility (as defined below), finance general working capital needs, and for general corporate purposes.

12. DEBT (continued)

The Company issued $600 million of 2022 senior notes on October 17, 2012. Interest on the notes is payable semiannually in arrears on June 15 and December 15 each year, beginning on June 15, 2013. The proceeds of these notes were used to refinance $250 million of our 2016 senior notes and $100 million of our 2019 senior notes and pay down our Senior Revolving Credit Facility.

The Company issued $350 million of 2019 senior notes on June 3, 2009. On October 31, 2006, the Company issued $650 million of 2016 senior notes and $540 million of 2036 senior notes. The proceeds of these notes were used to pay certain unsecured and administrative claims, finance general working capital needs and for general corporate purposes.

Collectively, the notes above are referred to as the “Senior Notes.” The Senior Notes are general unsecured obligations of the Company and rank pari passu with all existing and future senior unsecured indebtedness of the Company.

The Senior Notes are fully and unconditionally guaranteed by each of the Company’s current and future domestic subsidiaries that are a borrower or guarantor under the Company’s Credit Agreement (as defined below). The guarantees are unsecured and rank equally in right of payment with all other existing and future senior unsecured indebtedness of the guarantors. The guarantees are effectively subordinated to existing and future secured debt of the guarantors to the extent of the assets securing that indebtedness.

The Company has the option to redeem all or part of the Senior Notes at any time at a “make-whole” redemption price. The Company is subject to certain covenants in connection with the issuance of the Senior Notes that it believes are usual and customary. The Company was in compliance with these covenants as of December 31, 2017.

In the first quarter of 2016, the Company terminated interest rate swaps designated to hedge a portion of the 4.20% senior notes due 2022. The residual fair value of the swaps are recognized in Long-term debt, net of current portion on the Consolidated Balance Sheets as an unamortized interest rate swap basis adjustment.

Senior Revolving Credit Facilities

The Company has an $800 million multi-currency senior revolving credit facility that has been amended from time to time (the "Senior Revolving Credit Facility") with a maturity date in November 2020 and uncommitted incremental loans permitted under the facility of $600 million. The Senior Revolving Credit Facility includes both borrowings and letters of credit. Borrowings under the Senior Revolving Credit Facility may be used for general corporate purposes and working capital. The Company has the discretion to borrow under multiple options, which provide for varying terms and interest rates including the United States prime rate or LIBOR plus a spread.

The Senior Revolving Credit Facility contains various covenants, including a maximum allowed leverage ratio and a minimum required interest expense coverage ratio, that the Company believes are usual and customary for a senior unsecured credit agreement. The Company was in compliance with these covenants as of December 31, 2017. Please refer to the Credit Facility Utilization paragraph below for liquidity information as of December 31, 2017.

Term Loan Commitments

The Company obtained two term loan commitments on October 27, 2017 for $300 million and $600 million, respectively, (collectively, the "Term Loan Commitments"), separate from the $600 million of allowable incremental term loans under the Senior Revolving Credit Facility. The Company entered into the Term Loan Commitments, in part, to pay a portion of the purchase price of the Paroc acquisition. In the first quarter of 2018, the Company borrowed on the $600 million term loan commitment, along with borrowings on the Receivables Securitization Facility and the proceeds of the 2048 senior notes, to fund the purchase of Paroc. The $600 million term loan borrowing requires full repayment by February 2021. On February 12, 2018, the Company voluntarily reduced the entire $300 million term loan commitment, thus eliminating the availability of credit under the facility.

The Company obtained a term loan commitment on June 8, 2017 for $350 million (the "June Term Loan Commitment"), separate from the $600 million of uncommitted incremental loans permitted under the Senior Revolving Credit Facility. The Company entered into the June Term Loan Commitment, in part, to potentially pay a portion of the purchase price of the Pittsburgh Corning acquisition. On July 24, 2017, the Company provided formal notification of its intent to voluntarily reduce the entire June Term Loan Commitment, thus eliminating the availability of credit under the facility effective on July 31, 2017.

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Receivables Securitization Facility

Included in long-term debt on the Consolidated Balance Sheets are borrowings outstanding under a Receivables Purchase Agreement (RPA) that are accounted for as secured borrowings in accordance with ASC 860, "Accounting for Transfers and Servicing." Owens Corning Sales, LLC and Owens Corning Receivables LLC, each a subsidiary of the Company, have a $250 million RPA with certain financial institutions. The securitization facility (the "Receivables Securitization Facility") now matures in May 2020, following amendments in March 2017 and May 2017 to extend its maturity. No other significant terms impacting liquidity were amended. The Company has the ability to borrow at the lenders' cost of funds, which approximates A-1/P-1 commercial paper rates, plus a fixed spread.

The Receivables Securitization Facility contains various covenants, including a maximum allowed leverage ratio and a minimum required interest expense coverage ratio that the Company believes are usual and customary for a securitization facility. The Company was in compliance with these covenants as of December 31, 2017. Please refer to the Credit Facility Utilization section below for liquidity information as of December 31, 2017.

Owens Corning Receivables LLC’s sole business consists of the purchase or acceptance through capital contributions of trade receivables and related rights from Owens Corning Sales, LLC and the subsequent retransfer of or granting of a security interest in such trade receivables and related rights to certain purchasers party to the RPA. Owens Corning Receivables LLC is a separate legal entity with its own separate creditors who will be entitled, upon its liquidation, to be satisfied out of Owens Corning Receivables LLC’s assets prior to any assets or value in Owens Corning Receivables LLC becoming available to Owens Corning Receivables LLC’s equity holders. The assets of Owens Corning Receivables LLC are not available to pay creditors of the Company or any other affiliates of the Company or Owens Corning Sales, LLC.

Credit Facility Utilization

The following table shows how the Company utilized its primary sources of liquidity (in millions):

	As of December 31, 2017		
	Term Loan Commitments (a)	Senior Revolving Credit Facility	Receivables Securitization Facility
Facility size	$900	$ 800	$ 250
Collateral capacity limitation on availability	n/a	n/a	26
Outstanding borrowings	—	—	—
Outstanding letters of credit	n/a	9	3
Availability on facility	$900	$ 791	$ 221

(a) Please refer to the Term Loan Commitments section on pg. 79 for information on subsequent activity in February 2018 related to the Term Loan Commitments.

Debt Maturities

The aggregate maturities for all long-term debt issues for each of the five years following December 31, 2017 and thereafter are presented in the table below (in millions). The maturities stated below are the aggregate par amounts of the outstanding senior notes and capital lease payments:

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Period	Maturities
2018	$ 7
2019	7
2020	7
2021	6
2022	605
2023 and beyond	1,819
Total	$ 2,451

Short-Term Debt

At December 31, 2017 and December 31, 2016, short-term borrowings were $1 million and less than $1 million, respectively. The short-term borrowings for both periods consisted of various operating lines of credit and working capital facilities. Certain of these borrowings are collateralized by receivables, inventories or property. The borrowing facilities are typically for one-year renewable terms. The weighted average interest rate on all short-term borrowings was approximately 6.7% and 5.4% for December 31, 2017 and December 31, 2016, respectively.

13. PENSION PLANS

The Company sponsors defined benefit pension plans. Under the plans, pension benefits are based on an employee’s years of service and, for certain categories of employees, qualifying compensation. Company contributions to these pension plans are determined by an independent actuary to meet or exceed minimum funding requirements. In our U.S. plan, the unrecognized cost of any retroactive amendments and actuarial gains and losses are amortized over the average remaining life expectancy of inactive participants. In all of our Non-U.S plans, the unrecognized cost of any retroactive amendments and actuarial gains and losses are amortized over the average future service period of plan participants expected to receive benefits.

During the second and fourth quarters of 2017, the Company completed balance sheet risk mitigation actions related to certain U.S. and non-U.S. pension plans. These actions included the purchase of non-participating annuity contracts from insurance companies and the payment of lump sums to retirees, which resulted in the settlement of liabilities to affected participants. As a result of these transactions, the Company recognized pension settlement losses of $64 million during the twelve months ended December 31, 2017. These losses are included in Other expenses, net on the Consolidated Statements of Earnings in our Corporate, Other and Eliminations category. These transactions did not have a material effect on the plans' funded status.

The following tables provide a reconciliation of the change in the projected benefit obligation, the change in plan assets and the net amount recognized in the Consolidated Balance Sheets (in millions):

	December 31, 2017			December 31, 2016		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
Change in Projected Benefit Obligation						
Benefit obligation at beginning of period	$1,066	$ 512	$1,578	$1,092	$ 485	$1,577
Service cost	7	5	12	7	3	10
Interest cost	40	15	55	44	18	62
Actuarial loss (gain)	30	(16)	14	5	75	80
Currency loss (gain)	—	42	42	—	(46)	(46)
Benefits paid	(53)	(18)	(71)	(82)	(21)	(103)
Settlements/curtailments	(97)	(116)	(213)	—	(7)	(7)
Acquisition	—	21	21	—	—	—
Other	—	12	12	—	5	5
Benefit obligation at end of period	$993	$ 457	$1,450	$1,066	$ 512	$1,578

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
13. PENSION PLANS (continued)

	December 31, 2017			December 31, 2016		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
Change in Plan Assets						
Fair value of assets at beginning of period	$822	$ 393	$1,215	$806	$ 379	$1,185
Actual return on plan assets	114	26	140	47	53	100
Currency gain (loss)	—	31	31	—	(29)	(29)
Company contributions	50	22	72	50	13	63
Benefits paid	(53)	(18)	(71)	(82)	(21)	(103)
Settlements/curtailments	(97)	(116)	(213)	—	(4)	(4)
Acquisition	—	14	14	—	—	—
Other	—	12	12	1	2	3
Fair value of assets at end of period	$836	$ 364	$1,200	$822	$ 393	$1,215
Funded status	$(157)	$ (93)	$(250)	$(244)(119)	$ (119)	$(363)

	December 31, 2017			December 31, 2016		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
Amounts Recognized in the Consolidated Balance Sheets						
Prepaid pension cost	$—	$ 7	$7	$—	$ 5	$5
Accrued pension cost – current	—	(1)	(1)	—	(1)	(1)
Accrued pension cost – non-current	(157)	(99)	(256)	(244)	(123)	(367)
Net amount recognized	$(157)	$ (93)	$(250)	$(244)	$ (119)	$(363)

Amounts Recorded in AOCI						
Net actuarial loss	$(357)	$(86)	$(443)	$(433)	$(129)	$(562)

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The following table presents information about the projected benefit obligation, accumulated benefit obligation (ABO) and plan assets of the Company's pension plans (in millions):

	December 31, 2017			December 31, 2016		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
Plans with ABO in excess of fair value of plan assets:						
Projected benefit obligation	$993	$ 288	$1,281	$1,066	$ 310	$1,376
Accumulated benefit obligation	$993	$ 284	$1,277	$1,066	$ 305	$1,371
Fair value of plan assets	$836	$ 193	$1,029	$822	$ 192	$1,014
Plans with fair value of assets in excess of ABO:						
Projected benefit obligation	$—	$ 169	$169	$—	$ 202	$202
Accumulated benefit obligation	$—	$ 145	$145	$—	$ 187	$187
Fair value of plan assets	$—	$ 171	$171	$—	$ 201	$201
Summary of all plans:						
Total projected benefit obligation	$993	$ 457	$1,450	$1,066	$ 512	$1,578
Total accumulated benefit obligation	$993	$ 429	$1,422	$1,066	$ 492	$1,558
Total fair value of plan assets	$836	$ 364	$1,200	$822	$ 393	$1,215

Weighted-Average Assumptions Used to Determine Benefit Obligation

The following table presents weighted average assumptions used to determine benefit obligations at the measurement dates:

	December 31,	
	2017	2016
United States Plans		
Discount rate	3.55%	3.95%
Expected return on plan assets	6.75%	6.75%
Non-United States Plans		
Discount rate	2.88%	3.14%
Expected return on plan assets	5.22%	5.92%
Rate of compensation increase	4.29%	4.25%

Components of Net Periodic Pension Cost

The following table presents the components of net periodic pension cost (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Service cost	$12	$10	$12
Interest cost	55	62	63
Expected return on plan assets	(79)	(81)	(84)
Amortization of actuarial loss	18	16	18
Settlement/curtailment	64	(6)	(3)
Other	—	2	1
Net periodic benefit cost	$70	$3	$7

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Weighted-Average Assumptions Used to Determine Net Periodic Pension Cost

The following table presents weighted-average assumptions used to determine net periodic pension costs for the periods noted:

	Twelve Months Ended December 31,					
	2017		2016		2015	
United States Plans						
Discount rate	3.95 %		4.20 %		3.85 %	
Expected return on plan assets	6.75 %		7.00 %		7.00 %	
Rate of compensation increase	N/A	(a)	N/A	(a)	N/A	(a)
Non-United States Plans						
Discount rate	3.14 %		3.88 %		3.60 %	
Expected return on plan assets	5.92 %		6.23 %		6.27 %	
Rate of compensation increase	4.25 %		3.97 %		4.01 %	

(a) Not applicable due to changes in plan made on August 1, 2009 that were effective beginning January 1, 2010.

The expected return on plan assets assumption is derived by taking into consideration the target plan asset allocation, historical rates of return on those assets, projected future asset class returns and net outperformance of the market by active investment managers. An asset return model is used to develop an expected range of returns on plan investments over a 20 year period, with the expected rate of return selected from a best estimate range within the total range of projected results. The result is then rounded down to the nearest 25 basis points.

Accumulated Other Comprehensive Earnings (Deficit)

Of the $(443) million balance in AOCI, $15 million is expected to be recognized as net periodic pension cost during 2018.

Items Measured at Fair Value

The Company classifies and discloses pension plan assets in one of the following three categories:

Level 1: Quoted market prices in active markets for identical assets.

Level 2: Observable market based inputs or unobservable inputs that are corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data.

Plan Assets

The tables in this section show pension plan asset fair values and fair value leveling information. The assets are categorized into one of the three levels of the fair value hierarchy or are not subject to leveling, in the case of investments that are valued using the net asset value per share (or its equivalent) practical expedient ("NAV").

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
13. PENSION PLANS (continued)

The following table summarizes the fair values and applicable fair value hierarchy levels of United States pension plan assets (in millions):

	December 31, 2017			
Asset Category	Level 1	Level 2	Level 3	Total
Equities				
Domestic	$67	$ —	$ —	$67
International	78	—	—	78
Fixed income and cash equivalents				
Corporate bonds	—	231	—	231
Government debt	—	88	—	88
Real estate investment trusts	26	—	—	26
Total United States plan assets subject to leveling	$171	$ 319	$ —	490
Plan assets measured at NAV				
Equities				173
Real assets				51
Fixed income and cash equivalents				69
Absolute return strategies				53
Total United States plan assets				$836

	December 31, 2016			
Asset Category	Level 1	Level 2	Level 3	Total
Equities				
Domestic	$69	$ —	$ —	$69
International	81	—	—	81
Fixed income and cash equivalents				
Corporate bonds	200	25	—	225
Government debt	86	—	—	86
Real estate investment trusts	24	—	—	24
Total United States plan assets subject to leveling	$460	$ 25	$ —	485
Plan assets measured at NAV				
Equities				180
Real assets				51
Fixed income and cash equivalents				54
Absolute return strategies				52
Total United States plan assets				$822

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
13. PENSION PLANS (continued)

The following table summarizes the fair values and applicable fair value hierarchy levels of non-United States pension plan assets (in millions):

	December 31, 2017			
Asset Category	Level 1	Level 2	Level 3	Total
Equities				
Domestic	$ —	$ 1	$ —	$ 1
International	—	2	—	2
Fixed income and cash equivalents				
Cash and cash equivalents	—	64	—	64
Corporate bonds	—	12	—	12
Total non-United States plan assets subject to leveling	$ —	$ 79	$ —	79
Plan assets measured at NAV				
Equities				52
Fixed income and cash equivalents				123
Absolute return strategies				110
Total non-United States plan assets				$ 364

	December 31, 2016			
Asset Category	Level 1	Level 2	Level 3	Total
Equities				
Domestic	$ —	$ 1	$ —	$ 1
International	—	2	—	2
Fixed income and cash equivalents				
Cash and cash equivalents	—	36	—	36
Corporate bonds	—	5	—	5
Total non-United States plan assets subject to leveling	$ —	$ 44	$ —	44
Plan assets measured at NAV				
Equities				90
Fixed income and cash equivalents				164
Absolute return strategies				95
Total non-United States plan assets				$ 393

Investment Strategy

The current targeted asset allocation for the United States pension plans is to have 38% of assets invested in equities, 3% in real estate, 6% in real assets, 47% in intermediate and long-term fixed income securities and 6% in absolute return strategies. Assets are rebalanced quarterly to conform to policy tolerances. The Company actively evaluates the reasonableness of its asset mix given changes in the projected benefit obligation and market dynamics. Our investment policy and asset mix for the non-United States pension plans varies by location and is based on projected benefit obligation and market dynamics.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
13. PENSION PLANS (continued)

Estimated Future Benefit Payments
The following table shows estimated future benefit payments from the Company's pension plans (in millions):

Year	Estimated Benefit Payments
2018	$ 85
2019	$ 87
2020	$ 85
2021	$ 83
2022	$ 86
2023-2027	$ 420

Contributions
Owens Corning expects to contribute $50 million in cash to the United States pension plans during 2018 and another $12 million to non-United States plans. Actual contributions to the plans may change as a result of a variety of factors, including changes in laws that impact funding requirements.
Defined Contribution Plans
The Company sponsors two defined contribution plans which are available to substantially all United States employees. The Company matches a percentage of employee contributions up to a maximum level and contributes up to 2% of an employee's wages regardless of employee contributions. The Company recognized expense of $42 million, $38 million and $33 million during the years ended December 31, 2017, 2016 and 2015, respectively, related to these plans.

14. POSTEMPLOYMENT AND POSTRETIREMENT BENEFITS OTHER THAN PENSIONS
The Company maintains health care and life insurance benefit plans for certain retired employees and their dependents. The health care plans in the United States are non-funded and pay either (1) stated percentages of covered medically necessary expenses, after subtracting payments by Medicare or other providers and after stated deductibles have been met, or (2) fixed amounts of medical expense reimbursement.
Salaried employees hired on or before December 31, 2005 become eligible to participate in the United States health care plans upon retirement if they have accumulated 10 years of service after age 45, 48 or 50, depending on the category of employee. For employees hired after December 31, 2005, the Company does not provide subsidized retiree health care. Some of the plans are contributory, with some retiree contributions adjusted annually. The Company has reserved the right to change or eliminate these benefit plans subject to the terms of collective bargaining agreements.
The Company implemented an Employee Group Waiver Plan (EGWP) effective January 1, 2013 to manage its prescription drug benefits for certain retiree groups. The Company also negotiated with certain unionized employees to increase the eligibility age for retiree medical benefits and to eliminate the post-65 retiree reimbursement account benefit for employees retiring on or after January 1, 2014.
During 2017, the Company reclassified an immaterial employee-related liability as a postemployment benefit other than pension. This change had a de minimis effect on the non-U.S. projected benefit obligation in the tables below. Due to the insignificant balance of the overall non-U.S. liabilities, the effect of this reclassification shows a year-over-increase increase to the non U.S. weighted-average rates in the tables below, including discount rates and health care cost trend rates.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
14. POSTEMPLOYMENT AND POSTRETIREMENT BENEFITS OTHER THAN PENSIONS (continued)

The following table provides a reconciliation of the change in the projected benefit obligation and the net amount recognized in the Consolidated Balance Sheets for the years ended December 31, 2017 and 2016 (in millions):

	December 31, 2017			December 31, 2016		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
Change in Projected Benefit Obligation						
Benefit obligation at beginning of period	$212	$ 13	$225	$230	$ 13	$243
Service cost	2	—	2	2	—	2
Interest cost	8	1	9	9	—	9
Actuarial gain	(13)	(2)	(15)	(15)	—	(15)
Currency loss	—	1	1	—	—	—
Plan amendments	(3)	—	(3)	—	—	—
Benefits paid	(12)	(1)	(13)	(14)	(1)	(15)
Acquisition	22	—	22	—	—	—
Other	—	2	2	—	1	1
Benefit obligation at end of period	$216	$ 14	$230	$212	$ 13	$225
Funded status	$(216)	$ (14)	$(230)	$(212)	$ (13)	$(225)
Amounts Recognized in the Consolidated Balance Sheets						
Accrued benefit obligation – current	$(18)	$(1)	$(19)	$(17)	$(1)	$(18)
Accrued benefit obligation – non-current	(198)	(13)	(211)	(195)	(12)	$(207)
Net amount recognized	$(216)	$(14)	$(230)	$(212)	$(13)	$(225)
Amounts Recorded in AOCI						
Net actuarial loss (gain)	$(29)	$(6)	$(35)	$(19)	$(4)	$(23)
Net prior service cost (credit)	(12)	1	(11)	(12)	—	(12)
Net amount recognized	$(41)	$(5)	$(46)	$(31)	$(4)	$(35)

Weighted-Average Assumptions Used to Determine Benefit Obligations

The following table presents the discount rates used to determine the benefit obligations:

	December 31,	
	2017	2016
United States plans	3.45%	3.80%
Non-United States plans	4.56%	3.55%

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
14. POSTEMPLOYMENT AND POSTRETIREMENT BENEFITS OTHER THAN PENSIONS (continued)

Components of Net Periodic Postretirement Benefit Cost

The following table presents the components of net periodic postretirement benefit cost (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Service cost	$2	$ 2	$ 2
Interest cost	9	9	9
Amortization of prior service cost	(4)	(4)	(4)
Amortization of actuarial gain	(3)	(1)	(1)
Other	—	1	1
Net periodic postretirement benefit cost	$4	$ 7	$ 7

Weighted-Average Assumptions Used to Determine Net Periodic Postretirement Benefit Cost

The following table presents the discount rates used to determine net periodic postretirement benefit cost:

	Twelve Months Ended December 31,		
	2017	2016	2015
United States plans	3.80%	4.00%	3.70%
Non-United States plans	6.78%	3.80%	3.70%

The following table presents health care cost trend rates used to determine net periodic postretirement benefit cost, as well as information regarding the ultimate rate and the year in which the ultimate rate is reached:

	Twelve Months Ended December 31,		
	2017	2016	2015
United States plans			
Initial rate at end of year	6.56 %	6.78 %	7.00 %
Ultimate rate	5.00 %	5.00 %	5.00 %
Year in which ultimate rate is reached	2025	2025	2025
Non-United States plans			
Initial rate at end of year	5.73 %	5.07 %	5.25 %
Ultimate rate	5.49 %	4.70 %	4.70 %
Year in which ultimate rate is reached	2019	2019	2019

The health care cost trend rate assumption can have a significant effect on the amounts reported. To illustrate, a one-percentage point change in the December 31, 2017 assumed health care cost trend rate would have the following effects (in millions):

	1-Percentage Point	
	Increase	Decrease
Increase (decrease) in total service cost and interest cost components of net periodic postretirement benefit cost	$ —	$ —
Increase (decrease) of accumulated postretirement benefit obligation	$ 7	$ (6)

Accumulated Other Comprehensive Earnings (Deficit)

Approximately $11 million of the $46 million balance in AOCI is expected to be recognized as net periodic postretirement benefit during 2018.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
14. POSTEMPLOYMENT AND POSTRETIREMENT BENEFITS OTHER THAN PENSIONS (continued)

Estimated Future Benefit Payments

The following table shows estimated future benefit payments from the Company's postretirement benefit plans (in millions):

Year	Estimated Benefit Payments
2018	$ 19
2019	$ 19
2020	$ 19
2021	$ 18
2022	$ 18
2023-2027	$ 78

Postemployment Benefits

The Company may also provide benefits to former or inactive employees after employment but before retirement under certain conditions. These benefits include continuation of benefits such as health care and life insurance coverage. The accrued postemployment benefits liability at December 31, 2017 and 2016 was $13 million and $14 million, respectively. The net periodic postemployment benefit expense was $3 million for the year ended December 31, 2017, $2 million in 2016, and $1 million in 2015.

15. CONTINGENT LIABILITIES AND OTHER MATTERS

The Company may be involved in various legal and regulatory proceedings relating to employment, antitrust, tax, product liability, environmental and other matters (collectively, "Proceedings"). The Company regularly reviews the status of such Proceedings along with legal counsel. Liabilities for such Proceedings are recorded when it is probable that the liability has been incurred and when the amount of the liability can be reasonably estimated. Liabilities are adjusted when additional information becomes available. Management believes that the amount of any reasonably possible losses in excess of any amounts accrued, if any, with respect to such Proceedings or any other known claim, including the matters described below under the caption Environmental Matters (the "Environmental Matters"), are not material to the Company's financial statements. Management believes that the ultimate disposition of the Proceedings and the Environmental Matters will not have a material adverse effect on the Company's financial condition. While the likelihood is remote, the disposition of the Proceedings and Environmental Matters could have a material impact on the results of operations, cash flows or liquidity in any given reporting period.

Litigation and Regulatory Proceedings

The Company is involved in litigation and regulatory Proceedings from time to time in the regular course of its business. The Company believes that adequate provisions for resolution of all contingencies, claims and pending matters have been made for probable losses that are reasonably estimable.

Litigation Settlement Gain

In May 2017, the Company and TopBuild Corp. entered into a settlement agreement in connection with a commercial breach of contract dispute from the second quarter of 2016. Under the terms of the settlement, TopBuild Corp. paid Owens Corning $30 million in cash in the second quarter of 2017. The settlement also resulted in the dismissal of the lawsuit filed in May 2016 in connection with the dispute. During the second quarter of 2017, a $29 million litigation settlement gain, net of legal fees, was recorded in Other expenses, net on the Consolidated Statements of Earnings in the Corporate, Other and Eliminations category.

Environmental Matters

The Company has established policies and procedures designed to ensure that its operations are conducted in compliance with all relevant laws and regulations and that enable the Company to meet its high standards for corporate sustainability and environmental stewardship. Our manufacturing facilities are subject to numerous foreign, federal, state and local laws and regulations relating to the presence of hazardous materials, pollution and protection of the environment, including emissions to air, discharges to water, management of hazardous materials, handling and disposal of solid wastes, and remediation of contaminated sites. All Company manufacturing facilities operate using an ISO 14001 or equivalent environmental management system. The Company's 2020 Sustainability Goals require significant global reductions in energy use, water consumption, waste to landfill, and emissions of greenhouse gases, fine particulate matter and toxic air emissions.

Owens Corning is involved in remedial response activities and is responsible for environmental remediation at a number of sites, including certain of its currently owned or formerly owned plants. These responsibilities arise under a number of laws, including, but not limited to, the Federal Resource Conservation and Recovery Act, and similar state or local laws pertaining to the management and remediation of hazardous materials and petroleum. The Company has also been named a potentially responsible party under the U.S. Federal Superfund law, or state equivalents, at a number of disposal sites. The Company became involved in these sites as a result of government action or in connection with business acquisitions. As of December 31, 2017, the Company was involved with a total of 20 sites worldwide, including 7 Superfund sites and 13 owned or formerly owned sites. None of the liabilities for these sites are individually significant to the Company.

Remediation activities generally involve a potential range of activities and costs related to soil and groundwater contamination. This can include pre-cleanup activities such as fact finding and investigation, risk assessment, feasibility studies, remedial action design and implementation (where actions may range from monitoring to removal of contaminants, to installation of longer-term remediation systems). A number of factors affect the cost of environmental remediation, including the number of parties involved in a particular site, the determination of the extent of contamination, the length of time the remediation may require, the complexity of environmental regulations, variability in clean-up standards, the need for legal action, and changes in remediation technology. Taking these factors into account, Owens Corning has predicted the costs of remediation reasonably estimated to be paid over a period of years. The Company accrues an amount on an undiscounted basis, consistent with the reasonable estimates of these costs when it is probable that a liability has been incurred. Actual cost may differ from these estimates for the reasons mentioned above.

During the fourth quarter of 2017, the Company recorded a $15 million environmental liability charge to Other expenses, net on the Consolidated Statements of Earnings in the Corporate, Other and Eliminations reporting category, primarily as a result of changes in estimable remediation costs at a single closed U.S. site owned by the Company. Factors contributing to this change in estimate included the complexity of environmental regulations at the site and the completion of a remedial action work plan. The Company expects this recorded amount to be paid over the next ten years, with the majority of the costs expected to be paid over the next three years. At December 31, 2017, the Company had an accrual totaling $17 million for its environmental liabilities, of which the current portion is $11 million. Changes in required remediation procedures or timing of those procedures, or discovery of contamination at additional sites, could result in material increases to the Company's environmental obligations.

16. STOCK COMPENSATION

2016 Stock Plan

On April 21, 2016, the Company's stockholders approved the Owens Corning 2016 Stock Plan (the "2016 Stock Plan") which replaced the 2013 Stock Plan. The 2016 Stock Plan authorizes grants of stock options, stock appreciation rights, restricted stock awards, restricted stock units, bonus stock awards and performance stock awards. At December 31, 2017, the number of shares remaining available under the 2016 Stock Plan for all stock awards was 3.3 million.

Stock Options

The Company has granted stock options under its stockholder approved stock plans. The Company calculates a weighted-average grant-date fair value using a Black-Scholes valuation model for options granted. Compensation expense for options is measured based on the fair market value of the option on the date of grant, and is recognized on a straight-line basis over a four year vesting period. In general, the exercise price of each option awarded was equal to the closing market price of the Company's common stock on the date of grant and an option's maximum term is 10 years. The volatility assumption was based on a benchmark study of our peers prior to 2014. Starting with the options granted in 2014, the volatility was based on the Company's historic volatility.

During 2017, 2016 and 2015, no stock options were granted.

During the years ended December 31, 2017, 2016 and 2015, the Company recognized expense of $1 million, $2 million and $4 million, respectively, related to the Company's stock options. As of December 31, 2017, there was less than $1 million of total unrecognized compensation cost related to stock options. That cost is expected to be recognized over a weighted-average period of 0.17 years. The total aggregate intrinsic value of options outstanding as of December 31, 2017, 2016 and 2015 was $28 million, $16 million and $31 million, respectively. The total aggregate intrinsic value of options exercisable as of December 31, 2017, 2016 and 2015 was $25 million, $13 million and $28 million, respectively. Cash received from option exercises was $15 million, $26 million and $21 million for the years ended December 31, 2017, 2016 and 2015, respectively. Tax benefits realized from tax deductions associated with option exercises totaled $7 million, $9 million and $4 million for the years ended December 31, 2017, 2016 and 2015, respectively.

The following table summarizes the Company's stock option activity:

	Twelve Months Ended December 31,					
	2017		2016		2015	
	Number of Options	Weighted-Average Exercise Price	Number of Options	Weighted-Average Exercise Price	Number of Options	Weighted-Average Exercise Price
Beginning Balance	975,400	$ 35.14	1,953,320	$ 31.09	2,754,895	$ 31.04
Granted	—	—	—	—	—	—
Exercised	(453,425)	32.79	(960,570)	26.90	(691,375)	29.75
Forfeited	(3,250)	37.65	(11,350)	38.50	(105,100)	38.09
Expired	—	—	(6,000)	30.00	(5,100)	41.89
Ending Balance	518,725	$ 37.17	975,400	$ 35.14	1,953,320	$ 31.09

The following table summarizes information about the Company's options outstanding and exercisable:

Options Outstanding				Options Exercisable		
		Weighted-Average		Number	Weighted-Average	
Range of Exercise Prices	Options Outstanding	Remaining Contractual Life	Exercise Price	Exercisable at Dec. 31, 2017	Remaining Contractual Life	Exercise Price
$13.89 - $42.16	518,725	4.93	$ 37.17	452,150	4.76	$ 37.10

Restricted Stock Awards and Restricted Stock Units

The Company has granted restricted stock awards and restricted stock units (collectively referred to as "restricted stock") under its stockholder approved stock plans. Compensation expense for restricted stock is measured based on the closing market price of the stock at date of grant and is recognized on a straight-line basis over the vesting period, which is typically three or four years. The Stock Plan allows alternate vesting schedules for death, disability, and retirement over various periods ending in 2020.

During the years ended December 31, 2017, 2016 and 2015, the Company recognized expense of $21 million, $19 million and $17 million, respectively, related to the Company's restricted stock. As of December 31, 2017, there was $33 million of total unrecognized compensation cost related to restricted stock. That cost is expected to be recognized over a weighted-average period of 2.50 years. The total grant date fair value of shares vested during the years ended December 31, 2017, 2016 and 2015, was $19 million, $15 million and $17 million, respectively.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
16. STOCK COMPENSATION (continued)

The following table shows a summary of the Company’s Restricted Stock plans:

	Twelve Months Ended December 31,					
	2017		2016		2015	
	Number of Shares	Weighted-Average Grant Date Fair Value	Number of Shares	Weighted-Average Grant Date Fair Value	Number of Shares	Weighted-Average Grant Date Fair Value
Beginning Balance	1,800,557	$ 37.78	1,707,490	$ 35.37	1,727,741	$ 33.58
Granted	496,021	56.60	544,627	45.61	625,652	39.75
Vested	(477,857)	38.94	(398,751)	37.55	(504,704)	34.24
Forfeited	(66,585)	44.90	(52,809)	39.80	(141,199)	38.20
Ending Balance	1,752,136	$ 42.40	1,800,557	$ 37.78	1,707,490	$ 35.37

Performance Stock Awards and Performance Stock Units

The Company has granted performance stock awards and performance stock units (collectively referred to as “PSUs”) as a part of its long-term incentive plan. All outstanding performance grants will fully settle in stock. The amount of stock ultimately distributed from the 2017, 2016 and 2015 grants is contingent on meeting internal company-based metrics or an external-based stock performance metric.

In 2017, 2016 and 2015, the Company granted both internal company-based and external-based metric PSUs.

Internal Company-based metrics

The internal company-based metrics vest after a three-year period and are based on various company-based metrics over a three-year period. The amount of stock distributed will vary from 0% to 300% of PSUs awarded depending on performance versus the company-based metrics.

The initial fair value for all internal company-based metric PSUs assumes that the performance goals will be achieved and is based on the grant date stock price. This assumption is monitored quarterly and if it becomes probable that such goals will not be achieved or will be exceeded, compensation expense recognized will be adjusted and previous surplus compensation expense recognized will be reversed or additional expense will be recognized. The expected term represents the period from the grant date to the end of the three-year performance period. Pro-rata vesting may be utilized in the case of death, disability or retirement, and awards if earned will be paid at the end of the three-year period.

External based metrics

The external-based metric vests after a three-year period. Outstanding grants issued in or after 2015 will be based on the Company's total stockholder return relative to the performance of the S&P Building & Construction Industry Index. The amount of stock distributed will vary from 0% to 200% of PSUs awarded depending on the relative stockholder return performance.

2017 Grant

For the 2017 grant, the fair value of the external based metric PSUs was estimated at the grant date using a Monte Carlo simulation that used various assumptions that include expected volatility of 26.06%, a risk free interest rate of 1.44% and an expected term of 2.92 years. Expected volatility was based on Owens Corning's most recent 2.92 years volatility. The risk-free interest rate was based on zero coupon United States Treasury bills at the grant date. The expected term represents the period from the grant date to the end of the three-year performance period.

For the 2017 grant, the fair value of the internal based metric PSUs was estimated using the grant date stock price and assumed that the performance goals will be achieved. This assumption is monitored each quarter and if it becomes probable that such goals will not be achieved or will be exceeded, compensation expense recognized will be adjusted.

This adjustment results in either reversing previous surplus compensation expense recognized or recognizing additional expense.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
16. STOCK COMPENSATION (continued)

2016 Grant

For the 2016 grant, the fair value of the external based metric PSUs was estimated at the grant date using a Monte Carlo simulation that used various assumptions that include expected volatility of 26.55%, a risk free interest rate of 0.84% and an expected term of 2.91 years. Expected volatility was based on Owens Corning's most recent 2.91 years volatility. The risk-free interest rate was based on zero coupon United States Treasury bills at the grant date. The expected term represents the period from the grant date to the end of the three-year performance period.

For the 2016 grant, the fair value of the internal based metric PSUs was estimated using the grant date stock price and assumed that the performance goals will be achieved. This assumption is monitored each quarter and if it becomes probable that such goals will not be achieved or will be exceeded, compensation expense recognized will be adjusted. This adjustment results in either reversing previous surplus compensation expense recognized or recognizing additional expense.

2015 Grant

For the 2015 grant, the fair value of the external based metric PSUs was estimated at the grant date using a Monte Carlo simulation that used various assumptions that include expected volatility of 29.2%, a risk free interest rate of 1.08% and an expected term of 2.90 years. Expected volatility was based on Owens Corning's most recent 2.90 years volatility. The risk-free interest rate was based on zero coupon United States Treasury bills at the grant date. The expected term represents the period from the grant date to the end of the three-year performance period.

For the 2015 grant, the fair value of the internal based metric PSUs was estimated using the grant date stock price and assumed that the performance goals would be achieved. The performance period for this grant ended in 2017, and performance was consistent with estimated compensation expense that was recognized over the life of the grant.

PSU Summary

For all PSUs, respectively, during the years ended December 31, 2017, 2016 and 2015, the Company recognized expense of $19 million, $16 million and $8 million. As of December 31, 2017, there was $14 million total unrecognized compensation cost related to PSUs. That cost is expected to be recognized over a weighted-average period of 1.65 years. The total grant date fair value of shares vested during the years ended December 31, 2017, 2016 and 2015, was $9 million, $3 million and $1 million, respectively.

The following table shows a summary of the Company's PSU plans:

	Twelve Months Ended December 31,					
	2017		2016		2015	
	Number of PSUs	Weighted-Average Grant Date Fair Value	Number of PSUs	Weighted-Average Grant Date Fair Value	Number of PSUs	Weighted-Average Grant Date Fair Value
Beginning Balance	472,300	$ 47.19	431,400	$ 44.52	416,250	$ 49.53
Granted	221,050	59.71	244,250	48.74	252,200	43.88
Vested	(219,050)	43.83	(186,750)	44.43	(151,700)	56.71
Forfeited/canceled	(23,152)	49.50	(16,600)	44.48	(85,350)	48.66
Ending Balance	451,148	$ 53.96	472,300	$ 47.19	431,400	$ 44.52

Employee Stock Purchase Plan

The Owens Corning Employee Stock Purchase Plan (ESPP) is a tax qualified plan under Section 423 of the Internal Revenue Code. The purchase price of shares purchased under the ESPP is equal to 85% of the lower of the fair market value of shares of Owens Corning common stock at the beginning or ending of the offering period, which is a six month period ending on May 31 and November 30 of each year. There were 2 million shares available for purchase under the ESPP as of its approval date. The Company recognized expense related to the ESPP of $3 million, $3 million and $2 million for the years ended December 31, 2017, 2016 and 2015, respectively. As of December 31, 2017, the Company had $2 million of total unrecognized compensation costs related to the ESPP. For the years ended December 31, 2017, 2016 and 2015, our employees purchased 0.3 million shares at an average price of $48.48, 0.2 million shares at an average price of $41.99, and 0.2 million shares at an average price of $32.57,

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respectively. Under the outstanding ESPP as of February 15, 2018 employees have contributed $3 million to purchase shares for the current purchase period ending May 31, 2018.

17. CHANGES IN ACCUMULATED OTHER COMPREHENSIVE DEFICIT

The following table summarizes the changes in accumulated other comprehensive income (deficit) (in millions):

	Twelve Months Ended December 31, 2017	2016
Currency Translation Adjustment		
Beginning balance	$(284)	$(247)
Net investment hedge amounts classified into AOCI, net of tax	(24)	2
Gain (loss) on foreign currency translation	125	(39)
Other comprehensive income/(loss), net of tax	101	(37)
Ending balance	$(183)	$(284)
Pension and Other Postretirement Adjustment		
Beginning balance	$(429)	$(419)
Amounts reclassified from AOCI to net earnings, net of tax (a)	53	4
Amounts classified into AOCI, net of tax	45	(14)
Other comprehensive income/(loss), net of tax	98	(10)
Ending balance	$(331)	$(429)
Hedging Adjustment		
Beginning balance	$3	$(4)
Amounts reclassified from AOCI to net earnings, net of tax (b)	(1)	5
Amounts classified into AOCI, net of tax	(2)	2
Other comprehensive (loss)/income, net of tax	(3)	7
Ending balance	$—	$3
Total AOCI ending balance	$(514)	$(710)

(a) These AOCI components are included in the computation of total Pension and OPEB expense and are recorded in Cost of sales, marketing and administrative expenses and Other expenses, net. See Notes 13 and 14 for additional information.
(b) Amounts reclassified from (loss)/gain on cash flow hedges are reclassified from AOCI to income when the hedged item affects earnings and is recognized in Cost of sales. See Note 4 for additional information.

18. EARNINGS PER SHARE

The following table is a reconciliation of weighted-average shares for calculating basic and diluted earnings per-share (in millions, except per share amounts):

	Twelve Months Ended December 31,		
	2017	2016	2015
Net earnings attributable to Owens Corning	$289	$393	$330
Weighted-average number of shares outstanding used for basic earnings per share	111.5	114.4	117.2
Non-vested restricted and performance shares	1.5	0.8	0.6
Options to purchase common stock	0.2	0.2	0.4
Weighted-average number of shares outstanding and common equivalent shares used for diluted earnings per share	113.2	115.4	118.2
Earnings per common share attributable to Owens Corning common stockholders:			
Basic	$2.59	$3.44	$2.82
Diluted	$2.55	$3.41	$2.79

Basic earnings per share is calculated by dividing earnings attributable to Owens Corning by the weighted-average number of shares of the Company’s common stock outstanding during the period. Outstanding shares consist of issued shares less treasury stock.

On October 24, 2016, the Board of Directors approved a new share buy-back program under which the Company is authorized to repurchase up to 10 million shares of the Company’s outstanding common stock (the “Repurchase Authorization"). The Repurchase Authorization enables the Company to repurchase shares through the open market, privately negotiated, or other transactions. The actual number of shares repurchased will depend on timing, market conditions and other factors and is at the Company’s discretion. The Company repurchased 2.3 million shares of its common stock for $142 million for the year ended December 31, 2017 under the Repurchase Authorization. As of December 31, 2017, 7.5 million shares remain available for repurchase under the Repurchase Authorization.

For the year ended December 31, 2017, we did not have any non-vested performance shares that had an anti-dilutive effect on earnings per share. For the years ended December 31, 2016 and 2015, the number of shares used in the calculation of diluted earnings per share did not include 0.1 million performance shares, and for the year ended December 31, 2015, 0.6 million options to purchase common stock, due to their anti-dilutive effect.

19. INCOME TAXES

The following table summarizes our Earnings before taxes and Income tax expense (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Earnings before taxes:			
United States	$342	$281	$214
Foreign	217	309	239
Total	$559	$590	$453
Income tax expense:			
Current			
United States	$(2)	$(7)	$2
State and local	5	4	1
Foreign	83	55	53
Total current	86	52	56
Deferred			
United States	196	117	83
State and local	3	8	10
Foreign	(16)	11	(29)
Total deferred	183	136	64
Total income tax expense	$269	$188	$120

The reconciliation between the United States federal statutory rate and the Company's effective income tax rate from continuing operations is:

	Twelve Months Ended December 31,		
	2017	2016	2015
United States federal statutory rate	35 %	35 %	35 %
State and local income taxes, net of federal tax benefit	2	2	2
Foreign tax rate differential	(5)	(4)	2
U.S. tax expense on foreign earnings/loss	49	2	4
Legislative tax rate changes	(9)	1	—
Foreign tax credits	(29)	—	—
Valuation allowance	3	(3)	(16)
Uncertain tax positions and settlements	1	1	—
Other, net	1	(2)	—
Effective tax rate	48 %	32 %	27 %

The U.S. government enacted the Tax Act legislation on December 22, 2017. The Tax Act made broad and complex changes to the U.S. tax code, including but not limited to, a reduction to the U.S. federal corporate income tax rate from 35% to 21%; a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries (the "Transition Tax"); eliminating the corporate alternative minimum tax (AMT) and changing realization of AMT credits; changing rules related to uses and limitations of net operating loss (NOL) carryforwards created in tax years after December 31, 2017; changes to the limitations on available interest expense deductions; and changes to other existing deductions and business-related exclusions.

The SEC issued SAB 118, which provides guidance on the accounting for the tax effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date to complete the accounting under ASC 740, "Income Taxes." In accordance with SAB 118, a company must account for those aspects of the Tax Act for which the accounting under ASC 740 is complete. To the extent that a company's accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in its financial statements. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis of the tax laws that were in effect immediately before the enactment of the Tax Act.

The Company's accounting for the income tax effects of the Tax Act is incomplete. However, we were able to make reasonable estimates on certain effects of the Tax Act resulting in a total provisional charge to the financial statements of $82 million. The provisional charge includes reasonable estimates for the Transition Tax charge of $264 million, a benefit of $160 million from the generation of foreign tax credits (FTCs), a charge of $24 million for a valuation allowance established against the FTC generated, and a deferred tax benefit of $46 million for the impact to our net U.S. deferred taxes liabilities as a result of the reduction of the corporate tax rate to 21%. The Company's provisional charge is based on reasonable and supportable assumptions and available inputs and underlying information as of December 31, 2017. Future guidance and interpretations from the Internal Revenue Service (IRS) may also impact our estimates and assumptions used for the provisional adjustments. We are continuing to gather additional information to more precisely compute the amount of the Transition Tax which may affect our analysis of FTCs generated and our deferred tax assets recorded at the reduced corporate tax rate of 21%. The Company was not yet able to make a reasonable estimate of the U.S. state tax effects of the Tax Act. Therefore, no provisional adjustments were recorded.

Effective January 1, 2018, the Tax Act creates a new requirement to include in U.S. income global intangible low-taxed income (GILTI) earned by controlled foreign corporations (CFCs). The GILTI must be included currently in the gross income of the CFCs' U.S. shareholder. Because of the complexity of the new GILTI tax rules, we are continuing to evaluate this provision of the Tax Act and the application of ASC 740 related to it. Under U.S. GAAP, we are allowed to make an accounting policy choice of either (1) treating taxes due on future U.S. inclusions related to GILTI as a current-period expense when incurred (the "period cost method") or (2) factoring such amounts into a company's measurement of its deferred taxes (the "deferred method"). Our selection of an accounting policy depends on several factors including, but not limited to, analyzing global income and the GILTI impact, future results of global operations and our intent and ability to modify our current legal structure. Therefore, we have not made a policy decision regarding whether to record deferred taxes on GILTI and have not made any adjustments related to the potential GILTI tax included in our financial statements.

The Company's analysis whether to change its indefinite reinvestment assertion on account of the Tax Act is incomplete. Therefore, we continue to assert indefinite reinvestment in accordance with ASC 740 based on the laws before enactment of the Tax Act. As of December 31, 2017, the Company has not recorded a deferred tax liability of approximately $76 million for foreign withholding on approximately $2.1 billion of accumulated undistributed earnings of its foreign subsidiaries and affiliates as they are considered by management to be permanently reinvested.

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The cumulative temporary differences giving rise to the deferred tax assets and liabilities are as follows (in millions):

	December 31, 2017		December 31, 2016	
	Deferred Tax Assets	Deferred Tax Liabilities	Deferred Tax Assets	Deferred Tax Liabilities
Other employee benefits	$92	$ —	$117	$ —
Pension plans	48	—	146	—
Operating loss and tax credit carryforwards	377	—	826	—
Depreciation	—	234	—	330
Amortization	—	314	—	384
Foreign tax credits	160	—	—	—
State and local taxes	3	—	5	—
Other	69	—	62	—
Subtotal	749	548	1,156	714
Valuation allowances	(94)	—	(103)	—
Total deferred taxes	$655	$ 548	$1,053	$ 714

The following table summarizes the amount and expiration dates of our deferred tax assets related to operating loss and credit carryforwards at December 31, 2017 (in millions):

	Expiration Dates	Amounts
U.S. federal loss carryforwards	2027 – 2032	$ 160
U.S. state loss carryforwards (a)	2018 – 2034	67
Foreign loss and tax credit carryforwards	Indefinite	70
Foreign loss and tax credit carryforwards (a)	2018 – 2034	51
Other U.S. federal and state tax credits	2028 – 2034	29
Total operating loss and tax credit carryforwards		$ 377
U.S foreign tax credits	2027	$ 160

(a) As of December 31, 2017, $8 million of U.S. state and $8 million of foreign deferred tax assets related to loss carryforwards are set to expire over the next three years.

At December 31, 2017, the Company had federal, state and foreign NOL carryforwards of $0.9 billion, $1.8 billion and $0.5 billion, respectively. In order to fully utilize our NOLs and U.S. FTCs, the Company will need to generate federal, state, and foreign earnings before taxes of approximately $2.0 billion, $2.1 billion, and $0.5 billion, respectively. Certain of these loss carryforwards are subject to limitation as a result of the changes of control that resulted from the Company’s emergence from bankruptcy in 2006 and the acquisition of certain foreign entities in 2007. However, the Company believes that these limitations on its loss carryforwards will not result in a forfeiture of any of the carryforwards.

On June 27, 2017, the Company acquired all the outstanding equity of Pittsburgh Corning Corporation (PCC). On the date of acquisition, PCC's tax attributes included a $296 million NOL carryover generated during the tax year 2016 and short tax year ending June 27, 2017. Section 382 of the Internal Revenue Code (IRC) limits the use of net operating loss tax attributes when a corporation experiences an "ownership change." The acquisition of PCC on June 27, 2017 qualifies as an "ownership change" under IRC Section 382 which limits the ability to use pre-ownership change losses to offset post-ownership change taxable income. The limits imposed under IRC Section 382 allows utilization of $192 million of PCC's NOLs and is included in the Company's total federal NOLs recorded as of December 31, 2017.

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OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
19. INCOME TAXES (continued)

Deferred income taxes are provided for temporary differences between amounts of assets and liabilities for financial reporting purposes and the basis of such assets and liabilities as measured under enacted tax laws and regulations, as well as NOLs, tax credits and other carryforwards. A valuation allowance will be recorded to reduce deferred tax assets if, based on all available evidence, it is considered more likely than not that some portion or all of the recorded deferred tax assets will not be realized in future periods. To the extent the reversal of deferred tax liabilities is relied upon in our assessment of the realizability of deferred tax assets, they will reverse in the same period and jurisdiction as the temporary differences giving rise to the deferred tax assets. As of December 31, 2017, the Company had federal, state, and foreign net deferred tax assets before valuation allowances of $100 million, $24 million, and $77 million, respectively.

The valuation allowance of $94 million as of December 31, 2017 is related to tax assets of $24 million, $1 million and $69 million for U.S. federal FTCs and certain state and foreign jurisdictions, respectively. The realization of deferred tax assets depends on achieving a certain minimum level of future taxable income. Management currently believes that it is at least reasonably possible that the minimum level of taxable income will be met within the next 12 months to reduce the valuation allowance of certain foreign jurisdictions by a range of zero to $6 million. The valuation allowance of $103 million as of December 31, 2016 is related to tax assets of $13 million and $90 million for certain state and foreign jurisdictions, respectively.

The Company, or one of its subsidiaries, files income tax returns in the United States and other foreign jurisdictions. The Company is no longer subject to U.S. federal tax examinations for years before 2013 or state and foreign examinations for years before 2008. Due to the potential for resolution of federal, state and foreign examinations, and the expiration of various statutes of limitation, it is reasonably possible that the gross unrecognized tax benefits balance may change within the next 12 months by a range of zero to $6 million.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows (in millions):

	Twelve Months Ended December 31,		
	2017	2016	2015
Balance at beginning of period	$98	$84	$106
Tax positions related to the current year			
Gross additions	1	1	1
Tax positions related to prior years			
Gross additions	13	19	2
Gross reductions	(11)	(5)	(18)
Settlements	(12)	(1)	(7)
Impact of currency changes	1	—	—
Balance at end of period	$90	$98	$84

The gross reduction of tax positions related to prior years includes the impact of adjusting our U.S. unrecognized tax benefits (UTBs) from the reduction of the U.S. federal corporate income tax rate from 35% to 21% as our U.S. UTBs are offset by our U.S. NOL position. If these UTBs were to be recognized as of December 31, 2017, the Company's income tax expense would decrease by about $75 million.

The Company classifies all interest and penalties as income tax expense. As of December 31, 2017, 2016 and 2015, and for the periods then ended, the Company recognized $11 million, $11 million and $8 million respectively, in liabilities for tax related interest and penalties on its Consolidated Balance Sheets and $1 million, $(1) million and $3 million, respectively, of interest and penalty expense (income) on its Consolidated Statements of Earnings.

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20. QUARTERLY FINANCIAL INFORMATION (unaudited)

Select quarterly financial information is presented in the tables below for the quarterly periods (in millions, except per share amounts):

	Quarter			
	First	Second	Third	Fourth
2017				
Net sales	$1,478	$1,597	$1,703	$1,606
Gross margin	$343	$409	$424	$396
Income tax expense (a)	$43	$67	$32	$127
Net earnings (loss) attributable to Owens Corning	$101	$96	$96	$(4)
BASIC EARNINGS (LOSS) PER COMMON SHARE ATTRIBUTABLE TO OWENS CORNING COMMON STOCKHOLDERS	$0.90	$0.86	$0.86	$(0.04)
DILUTED EARNINGS (LOSS) PER COMMON SHARE ATTRIBUTABLE TO OWENS CORNING COMMON STOCKHOLDERS	$0.89	$0.85	$0.85	$(0.04)

	Quarter			
	First	Second	Third	Fourth
2016				
Net sales	$1,231	$1,545	$1,518	$1,383
Gross margin	$272	$416	$374	$319
Income tax expense	$34	$73	$65	$16
Net earnings attributable to Owens Corning	$57	$138	$112	$86
BASIC EARNINGS PER COMMON SHARE ATTRIBUTABLE TO OWENS CORNING COMMON STOCKHOLDERS	$0.49	$1.20	$0.98	$0.77
DILUTED EARNINGS PER COMMON SHARE ATTRIBUTABLE TO OWENS CORNING COMMON STOCKHOLDERS	$0.49	$1.19	$0.97	$0.76

(a) Income tax expense for the fourth quarter of 2017 includes a provisional charge of $82 million related to the Tax Act. Please refer to Note 19 for additional details on this charge.

21. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS

The following Condensed Consolidating Financial Statements present the financial information required with respect to those entities which guarantee certain of the Company's debt. The Condensed Consolidating Financial Statements are presented on the equity method. Under this method, the investments in subsidiaries are recorded at cost and adjusted for the Company's share of the subsidiaries' cumulative results of operations, capital contributions, distributions and other equity changes. The principal elimination entries eliminate investment in subsidiaries and intercompany balances and transactions.

Guarantor and Nonguarantor Financial Statements

The Senior Notes and the Senior Revolving Credit Facility are guaranteed, fully, unconditionally and jointly and severally, by certain of Owens Corning's current and future wholly-owned material domestic subsidiaries that are borrowers or guarantors under the Credit Agreement, which permits changes to the named guarantors in certain situations (collectively, the "Guarantor Subsidiaries"). The remaining subsidiaries have not guaranteed the Senior Notes and the Senior Revolving Credit Facility (collectively, the "Nonguarantor Subsidiaries").

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21. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS (continued)

OWENS CORNING AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF EARNINGS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2017
(in millions)

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
NET SALES	$—	$ 4,639	$ 2,250	$ (505)	$ 6,384
COST OF SALES	—	3,572	1,745	(505)	4,812
Gross margin	—	1,067	505	—	1,572
OPERATING EXPENSES					
Marketing and administrative expenses	153	325	142	—	620
Science and technology expenses	—	69	16	—	85
Other expenses, net	32	2	96	—	130
Total operating expenses	185	396	254	—	835
EARNINGS BEFORE INTEREST AND TAXES	(185)	671	251	—	737
Interest expense, net	96	(1)	12	—	107
Loss (gain) on extinguishment of debt	71	—	—	—	71
EARNINGS BEFORE TAXES	(352)	672	239	—	559
Income tax expense	(139)	334	74	—	269
Equity in net earnings of subsidiaries	502	164	—	(666)	—
Equity in net earnings (loss) of affiliates	—	—	—	—	—
NET EARNINGS	289	502	165	(666)	290
Net earnings attributable to noncontrolling interests	—	—	1	—	1
NET EARNINGS ATTRIBUTABLE TO OWENS CORNING	$289	$ 502	$ 164	$ (666)	$ 289

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21. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS (continued)

OWENS CORNING AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF EARNINGS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2016
(in millions)

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
NET SALES	$—	$ 4,103	$ 2,046	$ (472)	$ 5,677
COST OF SALES	1	3,203	1,564	(472)	4,296
Gross margin	(1)	900	482	—	1,381
OPERATING EXPENSES					
Marketing and administrative expenses	148	316	120	—	584
Science and technology expenses	—	68	14	—	82
Other expenses, net	(14)	24	6	—	16
Total operating expenses	134	408	140	—	682
EARNINGS BEFORE INTEREST AND TAXES	(135)	492	342	—	699
Interest expense, net	99	(2)	11	—	108
Loss (gain) on extinguishment of debt	1	—	—	—	1
EARNINGS BEFORE TAXES	(235)	494	331	—	590
Income tax expense	(89)	206	71	—	188
Equity in net earnings of subsidiaries	539	251	—	(790)	—
Equity in net earnings (loss) of affiliates	—	—	(3)	—	(3)
NET EARNINGS	393	539	257	(790)	399
Net earnings attributable to noncontrolling interests	—	—	6	—	6
NET EARNINGS ATTRIBUTABLE TO OWENS CORNING	$393	$ 539	$ 251	$ (790)	$ 393

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)
21. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS (continued)

OWENS CORNING AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF EARNINGS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2015
(in millions)

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
NET SALES	$—	$ 3,826	$ 1,892	$ (368)	$ 5,350
COST OF SALES	1	3,095	1,469	(368)	4,197
Gross margin	(1)	731	423	—	1,153
OPERATING EXPENSES					
Marketing and administrative expenses	126	285	114	—	525
Science and technology expenses	—	60	13	—	73
Other expenses, net	(48)	26	29	—	7
Total operating expenses	78	371	156	—	605
EARNINGS BEFORE INTEREST AND TAXES	(79)	360	267	—	548
Interest expense, net	95	3	2	—	100
Loss (gain) on extinguishment of debt	(5)	—	—	—	(5)
EARNINGS BEFORE TAXES	(169)	357	265	—	453
Income tax expense	(71)	159	32	—	120
Equity in net earnings of subsidiaries	428	230	—	(658)	—
Equity in net earnings (loss) of affiliates	—	—	1	—	1
NET EARNINGS	330	428	234	(658)	334
Net earnings attributable to noncontrolling interests	—	—	4	—	4
NET EARNINGS ATTRIBUTABLE TO OWENS CORNING	$330	$ 428	$ 230	$ (658)	$ 330

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OWENS CORNING AND SUBSIDIARIES
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21. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS (continued)

OWENS CORNING AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF COMPREHENSIVE EARNINGS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2017
(in millions)

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
NET EARNINGS	$289	$ 502	$ 165	$ (666)	$ 290
Currency translation adjustment (net of tax)	101	2	123	(125)	101
Pension and other postretirement adjustment (net of tax)	98	1	40	(41)	98
Hedging adjustment (net of tax)	(3)	—	—	—	(3)
COMPREHENSIVE EARNINGS	485	505	328	(832)	486
Comprehensive earnings attributable to noncontrolling interests	—	—	1	—	1
COMPREHENSIVE EARNINGS ATTRIBUTABLE TO OWENS CORNING	$485	$ 505	$ 327	$ (832)	$ 485

OWENS CORNING AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF COMPREHENSIVE EARNINGS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2016
(in millions)

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
NET EARNINGS	$393	$ 539	$ 257	$ (790)	$ 399
Currency translation adjustment (net of tax)	(37)	(7)	(33)	40	(37)
Pension and other postretirement adjustment (net of tax)	(10)	41	(30)	(11)	(10)
Hedging adjustment (net of tax)	7	1	1	(2)	7
COMPREHENSIVE EARNINGS	353	574	195	(763)	359
Comprehensive earnings attributable to noncontrolling interests	—	—	6	—	6
COMPREHENSIVE EARNINGS ATTRIBUTABLE TO OWENS CORNING	$353	$ 574	$ 189	$ (763)	$ 353

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OWENS CORNING AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF COMPREHENSIVE EARNINGS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2015
(in millions)

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
NET EARNINGS	$330	$ 428	$ 234	$ (658)	$ 334
Currency translation adjustment (net of tax)	(115)	(5)	(118)	123	(115)
Pension and other postretirement adjustment (net of tax)	(6)	(2)	8	(6)	(6)
Hedging adjustment (net of tax)	1	4	(1)	(3)	1
COMPREHENSIVE EARNINGS	210	425	123	(544)	214
Comprehensive earnings attributable to noncontrolling interests	—	—	4	—	4
COMPREHENSIVE EARNINGS ATTRIBUTABLE TO OWENS CORNING	$210	$ 425	$ 119	$ (544)	$ 210

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OWENS CORNING AND SUBSIDIARIES
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21. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS (continued)

OWENS CORNING AND SUBSIDIARIES
CONDENSED CONSOLIDATING BALANCE SHEET
AS OF DECEMBER 31, 2017
(in millions)

ASSETS	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
CURRENT ASSETS					
Cash and cash equivalents	$137	$ 2	$ 107	$ —	$ 246
Receivables, net	—	—	806	—	806
Due from affiliates	—	3,403	—	(3,403)	—
Inventories	—	475	366	—	841
Other current assets	22	28	42	—	92
Total current assets	159	3,908	1,321	(3,403)	1,985
Investment in subsidiaries	8,777	2,040	—	(10,817)	—
Property, plant and equipment, net	465	1,699	1,261	—	3,425
Goodwill and intangible assets, net	—	2,383	553	(69)	2,867
Other non-current assets	(24)	221	158	—	355
TOTAL ASSETS	$9,377	$ 10,251	$ 3,293	$ (14,289)	$ 8,632
LIABILITIES AND EQUITY					
CURRENT LIABILITIES					
Accounts and notes payable and other current liabilities	$87	$ 1,083	$ 112	$ —	$ 1,282
Due to affiliates	2,529	—	874	(3,403)	—
Total current liabilities	2,616	1,083	986	(3,403)	1,282
Long-term debt, net of current portion	2,378	10	17	—	2,405
Deferred income taxes	—	—	37	—	37
Other liabilities	221	381	171	(69)	704
Redeemable equity	—	—	—	—	—
OWENS CORNING STOCKHOLDERS' EQUITY					
Total Owens Corning stockholders' equity	4,162	8,777	2,040	(10,817)	4,162
Noncontrolling interests	—	—	42	—	42
Total equity	4,162	8,777	2,082	(10,817)	4,204
TOTAL LIABILITIES AND EQUITY	$9,377	$ 10,251	$ 3,293	$ (14,289)	$ 8,632

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OWENS CORNING AND SUBSIDIARIES
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21. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS (continued)

OWENS CORNING AND SUBSIDIARIES
CONDENSED CONSOLIDATING BALANCE SHEET
AS OF DECEMBER 31, 2016
(in millions)

ASSETS	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
CURRENT ASSETS					
Cash and cash equivalents	$—	$ 55	$ 57	$—	$ 112
Receivables, net	—	—	678	—	678
Due from affiliates	—	2,612	—	(2,612)	—
Inventories	—	422	288	—	710
Other current assets	24	29	33	—	86
Total current assets	24	3,118	1,056	(2,612)	1,586
Investment in subsidiaries	7,745	1,653	—	(9,398)	—
Property, plant and equipment, net	470	1,600	1,042	—	3,112
Goodwill and intangible assets, net	—	2,197	394	(117)	2,474
Other non-current assets	(23)	424	168	—	569
TOTAL ASSETS	$8,216	$ 8,992	$ 2,660	$ (12,127)	$ 7,741
LIABILITIES AND EQUITY					
CURRENT LIABILITIES					
Accounts and notes payable and other current liabilities	$75	$ 834	$ 54	$—	$ 963
Due to affiliates	1,941	—	671	(2,612)	—
Total current liabilities	2,016	834	725	(2,612)	963
Long-term debt, net of current portion	2,069	12	18	—	2,099
Deferred income taxes	—	—	36	—	36
Other liabilities	282	401	186	(117)	752
Redeemable equity	—	—	2	—	2
OWENS CORNING STOCKHOLDERS' EQUITY					
Total Owens Corning stockholders' equity	3,849	7,745	1,653	(9,398)	3,849
Noncontrolling interests	—	—	40	—	40
Total equity	3,849	7,745	1,693	(9,398)	3,889
TOTAL LIABILITIES AND EQUITY	$8,216	$ 8,992	$ 2,660	$ (12,127)	$ 7,741

OWENS CORNING AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2017
(in millions)

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
NET CASH FLOW PROVIDED BY OPERATING ACTIVITIES	$(101)	$ 774	$ 343	$ —	$ 1,016
NET CASH FLOW USED FOR INVESTING ACTIVITIES					
Cash paid for property, plant and equipment	(16)	(240)	(81)	—	(337)
Proceeds from the sale of assets or affiliates	—	3	—	—	3
Investment in subsidiaries and affiliates, net of cash acquired	—	(373)	(197)	—	(570)
Other	3	—	—	—	3
Net cash flow used for investing activities	(13)	(610)	(278)	—	(901)
NET CASH FLOW PROVIDED BY (USED FOR) FINANCING ACTIVITIES					
Proceeds from senior revolving credit and receivables securitization facilities	313	—	820	—	1,133
Payments on senior revolving credit and receivables securitization facilities	(313)	—	(820)	—	(1,133)
Proceeds from long-term debt	588	—	—	—	588
Payments on long-term debt	(351)	—	—	—	(351)
Proceeds from term loan borrowing	—	—	—	—	—
Payments on term loan borrowing	—	—	—	—	—
Dividends paid	(89)	—	—	—	(89)
Net increase (decrease) in short-term debt	—	—	1	—	1
Purchases of treasury stock	(159)	—	—	—	(159)
Intercompany dividends paid	—	—	—	—	—
Other	13	—	—	—	13
Other intercompany loans	249	(217)	(32)	—	—
Net cash flow provided by (used for) financing activities	251	(217)	(31)	—	3
Effect of exchange rate changes on cash	—	—	17	—	17
Net increase in cash, cash equivalents and restricted cash	137	(53)	51	—	135
Cash, cash equivalents and restricted cash at beginning of period	6	55	57	—	118
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT END OF PERIOD	$143	$ 2	$ 108	$ —	$ 253

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OWENS CORNING AND SUBSIDIARIES
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21. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS (continued)

OWENS CORNING AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2016
(in millions)

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
NET CASH FLOW PROVIDED BY OPERATING ACTIVITIES	$(113)	$ 497	$ 584	$ (25)	$ 943
NET CASH FLOW USED FOR INVESTING ACTIVITIES					
Cash paid for property, plant and equipment	(20)	(281)	(72)	—	(373)
Proceeds from the sale of assets or affiliates	—	—	—	—	—
Investment in subsidiaries and affiliates, net of cash acquired	—	—	(452)	—	(452)
Other	10	—	—	—	10
Net cash flow used for investing activities	(10)	(281)	(524)	—	(815)
NET CASH FLOW PROVIDED BY (USED FOR) FINANCING ACTIVITIES					
Proceeds from senior revolving credit and receivables securitization facilities	—	—	669	—	669
Payments on senior revolving credit and receivables securitization facilities	—	—	(669)	—	(669)
Proceeds from term loan borrowing	300	—	—	—	300
Payments on term loan borrowing	(300)	—	—	—	(300)
Proceeds from long-term debt	395	—	—	—	395
Payments on long-term debt	(160)	(1)	(2)	—	(163)
Dividends paid	(81)	—	—	—	(81)
Net increase (decrease) in short-term debt	—	—	(6)	—	(6)
Purchases of treasury stock	(247)	—	—	—	(247)
Other	14	—	—	—	14
Intercompany dividends paid	—	—	(25)	25	—
Other intercompany loans	208	(208)	—	—	—
Net cash flow provided by (used for) financing activities	129	(209)	(33)	25	(88)
Effect of exchange rate changes on cash	—	—	(18)	—	(18)
Net increase in cash, cash equivalents and restricted cash	6	7	9	—	22
Cash, cash equivalents and restricted cash at beginning of period	—	48	48	—	96
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT END OF PERIOD	$6	$ 55	$ 57	$ —	$ 118

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21. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS (continued)

OWENS CORNING AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2015
(in millions)

	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated
NET CASH FLOW PROVIDED BY OPERATING ACTIVITIES	$(106)	$ 465	$ 388	$ (5)	$ 742
NET CASH FLOW USED FOR INVESTING ACTIVITIES					
Cash paid for property, plant and equipment	(21)	(271)	(109)	—	(401)
Proceeds from the sale of assets or affiliates	—	—	28	—	28
Investment in subsidiaries and affiliates, net of cash required	—	—	—	—	—
Other	4	—	—	—	4
Net cash flow used for investing activities	(17)	(271)	(81)	—	(369)
NET CASH FLOW PROVIDED BY (USED FOR) FINANCING ACTIVITIES					
Proceeds from senior revolving credit and receivables securitization facilities	1,236	—	310	—	1,546
Payments on senior revolving credit and receivables securitization facilities	(1,236)	—	(416)	—	(1,652)
Proceeds from term loan borrowings	—	—	—	—	—
Payments on term loan borrowings	—	—	—	—	—
Proceeds from long-term debt	—	—	—	—	—
Payments on long-term debt	(5)	(1)	(2)	—	(8)
Dividends paid	(78)	—	—	—	(78)
Net increase (decrease) in short-term debt	—	(25)	3	—	(22)
Purchases of treasury stock	(138)	—	—	—	(138)
Other	19	—	—	—	19
Intercompany dividends paid	—	—	(5)	5	—
Other intercompany loans	325	(121)	(204)	—	—
Net cash flow provided by (used for) financing activities	123	(147)	(314)	5	(333)
Effect of exchange rate changes on cash	—	—	(11)	—	(11)
Net increase in cash, cash equivalents and restricted cash	—	47	(18)	—	29
Cash, cash equivalents and restricted cash at beginning of period	—	1	66	—	67
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT END OF PERIOD	$—	$ 48	$ 48	$ —	$ 96

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OWENS CORNING AND SUBSIDIARIES
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OWENS CORNING AND SUBSIDIARIES
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS AND RESERVES FOR THE YEARS ENDED December 31, 2017, 2016 AND 2015
(in millions)

	Balance at Beginning of Period	Charged to Costs and Expenses	Charged to Other Accounts	Deductions	Acquisitions and Divestitures	Balance at End of Period
FOR THE YEAR ENDED DECEMBER 31, 2017						
Allowance for doubtful accounts	$ 9	$ 12	$ —	$ (2) (a)	$ —	$ 19
Tax valuation allowance	$ 103	$ 9	$ 7	$ (25)	$ —	$ 94
FOR THE YEAR ENDED DECEMBER 31, 2016						
Allowance for doubtful accounts	$ 8	$ 2	$ —	$ (1) (a)	$ —	$ 9
Tax valuation allowance	$ 135	$ (27)	$ (5)	$ —	$ —	$ 103
FOR THE YEAR ENDED DECEMBER 31, 2015						
Allowance for doubtful accounts	$ 10	$ —	$ —	$ (2) (a)	$ —	$ 8
Tax valuation allowance	$ 227	$ (73)	$ (18)	$ (1)	$ —	$ 135

(a) Uncollectible accounts written off, net of recoveries.