

# Tredegar

---

CORPORATION



2016 ANNUAL REPORT

# Tredegar

## AT A GLANCE

### PE FILMS:



#### **Personal Care**

Tredegar is a global leader in supplying the rapidly growing categories of adult incontinence, baby diapers and feminine hygiene. Our innovation, local supply capability and product quality lead to unique product offerings that help our customers meet global consumers' increasing demands for softness, comfort, fit and fluid management.



#### **Surface Protection**

As the global leader in quality, technology and service, Tredegar's surface protection films are used by the world's leading manufacturers of components used in displays, including optical films and engineered substrates, ensuring that their products remain defect-free and their yield efficiencies are maximized during the manufacturing and transportation processes. As the number and size of display screens increase and quality requirements become more demanding, technology leaders in the flat panel display industry consistently rely on Tredegar's portfolio of high performance surface protection films.



#### **Bright View Technologies**

Bright View Technologies designs and manufactures a broad portfolio of highly-advanced optical management products for the rapidly expanding LED and fluorescent lighting markets. Combining microstructure expertise with films capabilities, Bright View Technologies leverages multiple technology platforms for application-specific functionalities.

### FLEXIBLE PACKAGING:



Tredegar's flexible packaging films business, Terphane, produces bi-oriented polyester films with specialized properties, such as heat resistance, strength, and barrier protection. Predominantly sold in Latin America and the U.S. to serve the demand for sophisticated packaging of consumer products, these high-value films are primarily used in food packaging and industrial applications.

### ALUMINUM EXTRUSIONS:



Bonnell Aluminum is one of North America's leading manufacturers of custom finished aluminum extrusions serving the building and construction, automotive, and specialty markets. With highly comprehensive capabilities in aluminum extruding, fabricating and finishing, Bonnell Aluminum and its operating divisions, AACOA and Futura Industries, serve many of the nation's largest and most respected manufacturing companies.

# DEAR SHAREHOLDERS,

I received a very helpful letter from a shareholder last summer. In a very polite manner, he suggested that my 2015 letter to shareholders needed a little bumping up on Vision. There is no doubt that historically I have disappointed some on what President George H. W. Bush called “the vision thing.”

I continue to search for an awe-inspiring, textbook-compliant Vision Statement. I am certain that epiphany will occur on my deathbed, along with other insights like “I should have flossed and asked my wife about her feelings more often.” Nevertheless, I thought I would offer my latest ruminations on the topic in this year’s letter.

Most weeks I share a quote with my team. One by Warren Bennis stuck with me: “Leadership is bringing vision into reality.” The confluence of the shareholder’s

prod and Warren’s wisdom got me thinking: *I consider myself a leader, so what is my preferred reality?*

In a nutshell, I would like for all shareholders, employees, and customers to sleep well at night. From my experience, a good night’s sleep depends on a mattress of confidence. With that premise in mind, I offer my prerequisites for stakeholders’ confidence, and my assessment of our progress toward that goal.

### SHAREHOLDERS

A shareholder’s confidence depends on the following.

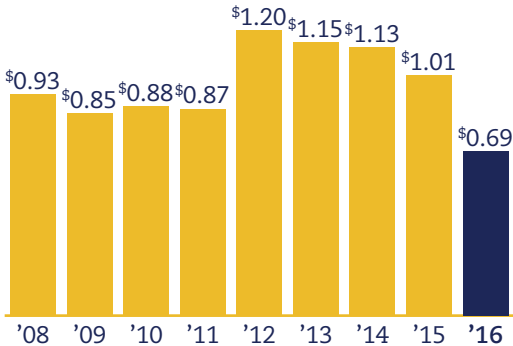
- 1) A strong management team that is honest, transparent, and competent.

**Status:** We have worked hard to earn your trust. Transparency is a top priority. We have provided timely and pointed disclosures on a number of significant risks and

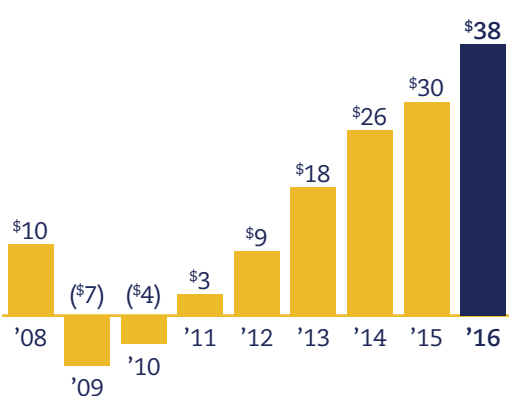
unfavorable developments. For example, a reasonably alert shareholder knows that we have not only lost a substantial amount of sales with top customers in our polyethylene films business units over recent years, but we are vulnerable to continued losses as customers seek to substitute lower cost materials (in Surface Protection) or alternative designs that could reduce our market share (in Personal Care). Our response to this downward trend has been to listen carefully to our customers, increase product development investment (spending), strengthen our commercialization capability, and broaden our customer base.

Regarding competency, other than the consistently excellent results from our Bonnell team (see the Aluminum Extrusions profit trend chart), I cannot yet demonstrate as compelling a case as I would

**Diluted Earnings Per Share Ongoing Operations\***



**Aluminum Extrusions Profit Ongoing Operations\* In Millions**



like across the whole company. Earnings have declined for four straight years (see chart on page 1) in large part due to the previously mentioned sales losses. As we spend more to enhance our capabilities and rejuvenate our new product offerings in the Personal Care unit, profits continue to weaken. But we are encouraged by several new projects that are gathering momentum. These projects are the keys to demonstrating healthy profit growth in 2018 and beyond.

2) A sustainable competitive advantage.

**Status:** In three words, this is a work in progress. Our Bonnell Aluminum team is pushing themselves to become increasingly indispensable to our customers by targeting technically challenging opportunities and providing superior service. A significant positive step toward this goal has been achieved with

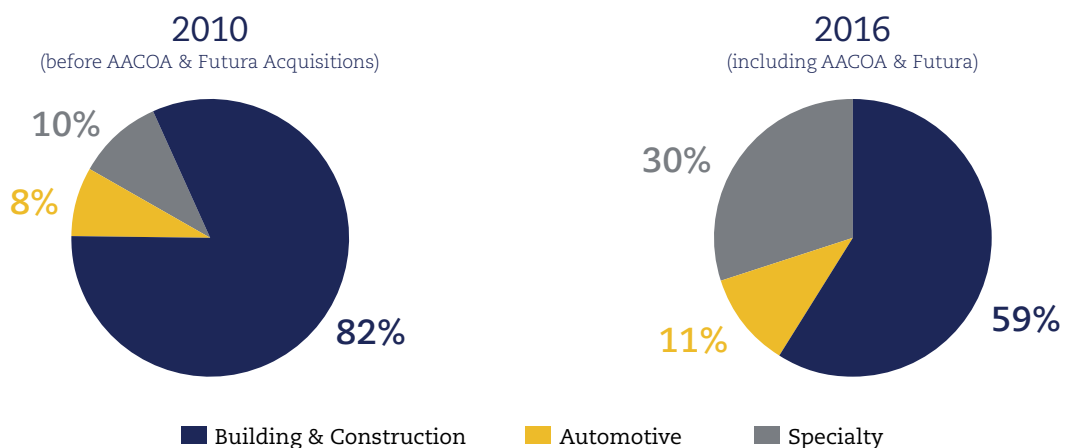
the recently announced acquisition of Futura Industries. Futura is a well-managed aluminum extruder and fabricator located in Clearfield, Utah. We believe that Futura will help our entire organization become even more customer-oriented and will contribute innovative approaches to improve productivity. Our plastic film business units utilize a number of unique technologies, which provide opportunities for customer and consumer-directed new product development. Some of these potential new products are in areas where no competitor can duplicate our offerings. I am hopeful that our management teams will be able to capture the value of our solutions such that shareholders will benefit from meaningful growth down the road.

3) A reasonable balance of risks and rewards through customer and market diversification.

**Status:** Bonnell remains vulnerable to economic cycles. Demand for most products that incorporate aluminum decline when a recession occurs. However, we have reduced our exposure over the last few years through market diversification. In 2010, 82% of our sales were tied to the construction market (see chart below). Today, our participation in the automotive and specialty segments has grown significantly, lessening our dependence on one principal market. One contributor to this shift was the 2012 acquisition of AACOA. Now, with the addition of Futura, we expect additional market diversification benefits, further reducing our exposure to building and construction markets to approximately 59%. Futura also provides a geographic presence in the western United States which we previously did not have.

Two of our business units in polyethylene films are dependent on relatively few customers. The top

### Aluminum Extrusions Sales by End Market



three Surface Protection customers account for a significant portion of Surface Protection sales. One of those customers is actively pursuing a strategy to diversify its supply base, while another has a program directed at replacing some of our film with an alternative material. In response, we are diversifying our customer base as rapidly as possible and developing new products that we believe bring substantial value to our customers. Our challenge is to gain traction quickly with a greater diversity of products and customers. We are applying the same approach in Personal Care, Bright View and Terphane.

4) A solid balance sheet and ability to consistently generate cash.

**Status:** In March 2016, we completed a refinancing of our revolving credit facility. This facility has four more years until maturity and permits us to borrow up to \$400 million. The combination of this credit

facility and our solid balance sheet allowed us to quickly take advantage of the opportunity to acquire Futura. Our pro forma post-acquisition leverage ratio (indebtedness-to-adjusted EBITDA) at December 31, 2016 is 2.25x, which is well below the 3.5x level at which dividend restrictions could occur.\* With \$13.6 million of EBITDA in 2016, Futura should add to our cash generation.

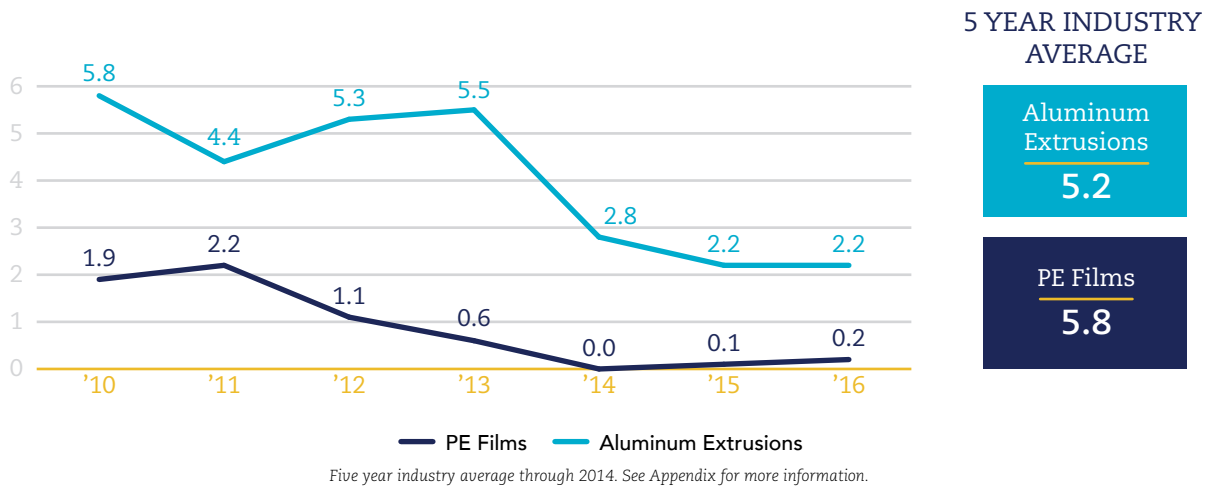
**CUSTOMERS**

Regardless of country, region, culture, material, or market, customers tend to express very similar needs. Customers place a high value on integrity. Remarkably, as important as trust is, a supplier that is honest and open can often differentiate itself from its competitors. Tredegar aspires to be seen as the most principled supplier by all of our customers. Have we been difficult to work with at times? Yes. Can we tell our customers everything they

want to know about our unique technologies? No. Have we always provided immediate notification of potential issues? No. However, every shortcoming is recognized as an opportunity for us to improve. And, despite the lapses, given our demonstrated efforts to be the best supplier possible, I believe we are seen as a supplier that exemplifies the highest integrity. Our leaders must continue to reinforce this value throughout the entire organization every day.

Most customers state very plainly that quality of product and reliability of supply are “givens.” They should be, yet differentials between suppliers continue to exist, and sometimes we come up short of expectations. Too often we’ve had service and supply issues. Reliability of delivery for all customers is critical. World-class organizations continuously improve their manufacturing, sales and service systems to optimize the supply chain.

**Aluminum Extrusions & PE Films Safety Performance Total Recordable Incident Rate (TRIR)**



Tredegar, like many manufacturers, has plenty of room for improvement in our systems. This is a priority that is receiving added resources.

All business is based on value propositions. Tredegar prefers to participate in markets where we can bring solutions that are not only preferred by the ultimate consumer through best-in-class performance, but also provide our customers with improved market share. Consequently, we are placing a substantial emphasis on innovation. Specifically, our PE Films' R&D expenses in 2017 are expected to be approximately \$20 million or 30% higher than we experienced in 2015. The type of value proposition that we like to pursue might be better understood through examples. When we supply manufacturers of electronic display screens with a product that reduces their operating scrap rates or machine downtimes, then the value of our product far exceeds its cost. In personal hygiene markets, if we can provide a woman with the softest product that keeps her drier than other alternatives, then our customer benefits from a powerful increase in market share (i.e. their sales and profits grow).

## **EMPLOYEES**

I'm a baby boomer. I have to confess that younger generations confound me. A Millennial has a very different perspective of the world and

employment than I. Regardless, Tredegar employees' confidence is improved if we can deliver on a few fundamental needs and expectations.

We believe that when an employee comes to work at a Tredegar location he or she should be in an environment that is not only safer than any other employer in our industry, but safer than when he or she is at home. Tredegar's safety performance has been outstanding over the past several years (see chart on previous page). However, we experienced an explosion in one of our aluminum cast houses this summer. Thankfully, there were no fatalities, but this incident reinforces the need to constantly improve our safety practices and policies.

Most people strongly value opportunity and self-fulfillment. This is an area where the generation gaps might be the most significant in terms of definition as well as expectations. Every business is seeking the magic potion that allows it to succeed in the marketplace of human talent. This is an area where Tredegar must show meaningful improvement. If we fail to provide an environment that attracts and keeps brain power, then no strategy or vision can be realized. While there has been a large reduction (33%) since mid-2015 in the number of employees that responded "needs improvement" to

a survey regarding Talent Retention and Talent Development, the current level of apparent dissatisfaction is large (36%). This is an alarm that must be addressed.

I suspect I failed to meet the shareholder's Vision Statement expectation once again, but hopefully you have a little better insight as to what we are doing to improve your sleep.

At this year's Annual Meeting we will commemorate George Newbill's retirement from Tredegar's Board. On behalf of all directors and employees, I'd like to express our deep appreciation for George's service to the company. Fortunately, we have successfully recruited John Steitz to join the Board. John is CEO of a chemical firm, Addivant Corporation. He and George worked together for many years at Albemarle Corporation when John was its COO. John is a great addition to the Board, bringing extensive operating and commercial experience. Thank you, George and John!



**John D. Gottwald**

*President and Chief Executive Officer*

*\*See Appendix for footnotes. All statements other than statements of historical facts contained in this letter, including statements regarding our plans, objectives and goals, and future events or results, are forward-looking statements. See "Forward-looking and Cautionary Statements" on page 20 of the accompanying Annual Report on Form 10-K.*

# 2016 FORM 10-K

## TABLE OF CONTENTS

### Part I

Item 1.	Business	1-4
Item 1A.	Risk Factors	5-10
Item 1B.	Unresolved Staff Comments	11
Item 2.	Properties	11
Item 3.	Legal Proceedings	11
Item 4.	Mine Safety Disclosures	11

### Part II

Item 5.	Market for Tredegar's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	12-13
Item 6.	Selected Financial Data	14-19
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	20-43
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	43
Item 8.	Financial Statements and Supplementary Data	43
Item 9.	Changes In and Disagreements With Accountants on Accounting and Financial Disclosure	43
Item 9A.	Controls and Procedures	44
Item 9B.	Other Information	44

### Part III

Item 10.	Directors, Executive Officers and Corporate Governance*	45
Item 11.	Executive Compensation	46
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*	46
Item 13.	Certain Relationships and Related Transactions, and Director Independence	46
Item 14.	Principal Accounting Fees and Services	46

### Part IV

Item 15.	Exhibits and Financial Statement Schedules	47
Item 16.	Form 10-K Summary	89

\*Items 11, 13 and 14 and portions of Items 10 and 12 are incorporated by reference from the Proxy Statement.

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

---

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2016

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 1-10258

---

**TREDEGAR CORPORATION**  
(Exact name of registrant as specified in its charter)

Virginia  
(State or other jurisdiction  
of incorporation or organization)

54-1497771  
(I.R.S. Employer  
Identification No.)

1100 Boulders Parkway,  
Richmond, Virginia  
(Address of principal executive offices)

23225  
(Zip Code)

Registrant's telephone number, including area code: 804-330-1000  
Securities registered pursuant to Section 12(b) of the Act:

<u>Title of Each Class</u>	<u>Name of Each Exchange on Which Registered</u>
Common Stock	New York Stock Exchange
Preferred Stock Purchase Rights	New York Stock Exchange

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

---

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for at least the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

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

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

Large accelerated filer  Accelerated filer

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

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

Aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2016 (the last business day of the registrant's most recently completed second fiscal quarter): \$411,286,270\*

Number of shares of Common Stock outstanding as of January 31, 2017: 32,963,939 (32,795,168 as of June 30, 2016)

\* In determining this figure, an aggregate of 7,281,133 shares of Common Stock beneficially owned by Floyd D. Gottwald, Jr., John D. Gottwald, William M. Gottwald and the members of their immediate families has been excluded because the shares are deemed to be held by affiliates. The aggregate market value has been computed based on the closing price in the New York Stock Exchange on June 30, 2016.



## Documents Incorporated By Reference

Portions of the Tredegar Corporation Proxy Statement for the 2017 Annual Meeting of Shareholders (the “Proxy Statement”) are incorporated by reference into Part III of this Form 10-K.

### Index to Annual Report on Form 10-K Year Ended December 31, 2016

	<u>Page</u>
<b>Part I</b>	
Item 1. Business	1-4
Item 1A. Risk Factors	5-9
Item 1B. Unresolved Staff Comments	11
Item 2. Properties	11
Item 3. Legal Proceedings	11
Item 4. Mine Safety Disclosures	11
<b>Part II</b>	
Item 5. Market for Tredegar’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	12-13
Item 6. Selected Financial Data	14-19
Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations	20-43
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	43
Item 8. Financial Statements and Supplementary Data	43
Item 9. Changes In and Disagreements With Accountants on Accounting and Financial Disclosure	43
Item 9A. Controls and Procedures	44
Item 9B. Other Information	44
<b>Part III</b>	
Item 10. Directors, Executive Officers and Corporate Governance*	45
Item 11. Executive Compensation	46
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*	46
Item 13. Certain Relationships and Related Transactions, and Director Independence	46
Item 14. Principal Accounting Fees and Services	46
<b>Part IV</b>	
Item 15. Exhibits and Financial Statement Schedules	47
Item 16. Form 10-K Summary	89

\*Items 11, 13 and 14 and portions of Items 10 and 12 are incorporated by reference from the Proxy Statement.

## PART I

### Item 1. BUSINESS

#### Description of Business

Tredegar Corporation (“Tredegar”), a Virginia corporation incorporated in 1988, is engaged, through its subsidiaries, in the manufacture of polyethylene (“PE”) plastic films, polyester (“PET”) films and aluminum extrusions. The financial information related to Tredegar’s PE films, polyester films and aluminum extrusions segments and related geographical areas included in Note 5 of the *Notes to Financial Statements* is incorporated herein by reference. Unless the context requires otherwise, all references herein to “Tredegar,” “the Company,” “we,” “us” or “our” are to Tredegar Corporation and its consolidated subsidiaries.

Prior to the third quarter of 2015, Tredegar reported two business segments: Film Products and Aluminum Extrusions. In the third quarter of 2015, the Company divided Film Products into two separate reportable segments: PE Films and Flexible Packaging Films. In separating PE Films and Flexible Packaging Films, the Company’s management believes that it is able to more effectively manage the distinct opportunities and challenges that each of these businesses face. The Company’s current reportable business segments are PE Films, Flexible Packaging Films and Aluminum Extrusions.

#### PE Films

PE Films manufactures plastic films, elastics and laminate materials primarily utilized in personal care materials, surface protection films and specialty and optical lighting applications. These products are manufactured at facilities in the United States (“U.S.”), The Netherlands, Hungary, China, Brazil and India. PE Films competes in all of its markets on the basis of product innovation, quality, price and service.

**Personal Care.** Tredegar’s Personal Care unit is one of the largest global suppliers of apertured, breathable, elastic and embossed films, laminate materials, and polyethylene and polypropylene overwrap films for personal care markets, including:

- Apertured film and laminate materials for use as topsheet in feminine hygiene products, baby diapers and adult incontinence products (including materials sold under the ComfortAire™, ComfortFeel™ and FreshFeel™ brand names);
- Breathable, embossed and elastic materials for use as components for baby diapers, adult incontinence products and feminine hygiene products (including elastic components sold under the ExtraFlex™, FabriFlex™, FlexAire™ and FlexFeel™ brand names);
- Absorbent transfer layers for baby diapers and adult incontinence products sold under the Aquidry® and Aquidry Plus™ brand names;
- Thin-gauge films that are readily printable and convertible on conventional processing equipment for overwrap for bathroom tissue and paper towels; and
- Polypropylene films for various industrial applications, including tape and automotive protection.

In 2016, 2015 and 2014, personal care materials accounted for approximately 30%, 33% and 40% of Tredegar’s consolidated net sales (sales less freight) from continuing operations, respectively.

**Surface Protection.** Tredegar’s Surface Protection unit produces single- and multi-layer surface protection films sold under the UltraMask®, ForceField™ and ForceField PEARL™ brand names. These films are used in high-technology applications, most notably protecting high-value components of flat panel displays used in televisions, monitors, notebooks, smart phones, tablets, e-readers and digital signage, during the manufacturing and transportation process. In 2016, 2015 and 2014, surface protection films accounted for approximately 11%, 10% and 10%, respectively, of Tredegar’s consolidated net sales from continuing operations.

**Bright View Technologies (formerly Engineered Polymer Solutions).** Tredegar’s Bright View unit makes a variety of specialty films and film-based products that provide tailored functionality for the illumination market. Bright View is a developer and producer of advanced optical management products for the LED (light-emitting diode) and fluorescent lighting markets. By leveraging multiple technology platforms, including film capabilities and its patented microstructure technology, Bright View offers engineered solutions for a wide range of applications.

PE Films' net sales by market segment over the last three years is shown below:

<i>% of PE Films Net Sales by Market Segment *</i>			
	2016	2015	2014
Personal Care	72%	75%	79%
Surface Protection	25%	23%	19%
Bright View	3%	2%	2%
Total	100%	100%	100%

\* See previous discussion by market segment for comparison of net sales to the Company's consolidated net sales from continuing operations for significant market segments for each of the years presented.

**Raw Materials.** The primary raw materials used by PE Films in polyethylene and polypropylene films are low density, linear low density and high density polyethylene and polypropylene resins. These raw materials are obtained from domestic and foreign suppliers at competitive prices. PE Films believes that there will be an adequate supply of polyethylene and polypropylene resins in the foreseeable future. PE Films also buys polypropylene-based nonwoven fabrics based on the resins previously noted and styrenic block copolymers, and it believes there will be an adequate supply of these raw materials in the foreseeable future.

**Customers.** PE Films sells to many branded product producers throughout the world, with the top five customers, collectively, comprising 69%, 73% and 76% of its net sales in 2016, 2015 and 2014, respectively. Its largest customer is The Procter & Gamble Company ("P&G"). Net sales to P&G totaled \$129 million in 2016, \$164 million in 2015 and \$221 million in 2014 (these amounts include film sold to third parties that converted the film into materials used with products manufactured by P&G). For additional information, see "Item 1A. Risk Factors".

### **Flexible Packaging Films**

Flexible Packaging Films is comprised of Terphane Holdings LLC ("Terphane"), which the Company acquired in October 2011. Flexible Packaging Films produces PET-based films for use in packaging applications that have specialized properties, such as heat resistance, strength, barrier protection and the ability to accept high-quality print graphics. These differentiated, high-value films are primarily manufactured in Brazil and sold in Latin America and the U.S. under the Terphane® and Sealphane® brand names. Major end uses include food packaging and industrial applications. In 2016, 2015 and 2014, Flexible Packaging Films accounted for approximately 14%, 12% and 12%, respectively, of Tredegar's consolidated net sales from continuing operations. Flexible Packaging Films competes in all of its markets on the basis of product quality, price and service.

**Raw Materials.** The primary raw materials used by Flexible Packaging Films in PET films are purified terephthalic acid ("PTA") and monoethylene glycol ("MEG") to produce the polyester resins. Flexible Packaging Films also purchases additional polyester resins directly from suppliers. All of these raw materials are obtained from domestic Brazilian suppliers and foreign suppliers at competitive prices, and Flexible Packaging Films believes that there will be an adequate supply of polyester resins as well as PTA and MEG in the foreseeable future.

### **Aluminum Extrusions**

The William L. Bonnell Company, Inc., known in the industry as Bonnell Aluminum, and AACOA, Inc., a division of Bonnell Aluminum (together, "Aluminum Extrusions"), produce high-quality, soft-alloy and medium-strength aluminum extrusions primarily for building and construction, automotive, consumer durables, machinery and equipment, electrical and distribution markets. Aluminum Extrusions manufactures mill (unfinished), anodized (coated) and painted and fabricated aluminum extrusions for sale directly to fabricators and distributors, and it competes primarily on the basis of product quality, service and price. Sales are made predominantly in the U.S.

The end-uses in each of Aluminum Extrusions' primary market segments include:

Major Markets	End-Uses
Building & construction -nonresidential	Commercial windows and doors, curtain walls, storefronts and entrances, walkway covers, ducts, louvers and vents, office wall panels, partitions and interior enclosures, acoustical walls and ceilings, point of purchase displays and pre-engineered structures
Building & construction -residential	Shower and tub enclosures, railing and support systems, venetian blinds, swimming pools and storm shutters
Automotive	Automotive and light truck structural components, spare parts, after-market automotive accessories, travel trailers and recreation vehicles
Consumer durables	Furniture, pleasure boats, refrigerators and freezers, appliances and sporting goods
Machinery & equipment	Material handling equipment, conveyors and conveying systems, industrial modular assemblies and medical equipment
Distribution (metal service centers specializing in stock and release programs and custom fabrications to small manufacturers)	Various custom profiles including storm shutters, pleasure boat accessories, theater set structures and various standard profiles (including rod, bar, tube and pipe)
Electrical	Lighting fixtures, solar panels, electronic apparatus and rigid and flexible conduits

Aluminum Extrusions' sales volume from continuing operations by market segment over the last three years is shown below:

<i>% of Aluminum Extrusions Sales Volume by Market Segment (Continuing Operations)</i>			
	2016	2015	2014
Building and construction:			
Nonresidential	<b>58%</b>	58%	59%
Residential	<b>5%</b>	6%	6%
Automotive	<b>11%</b>	10%	7%
Specialty:			
Consumer durables	<b>11%</b>	10%	12%
Machinery & equipment	<b>5%</b>	7%	7%
Distribution	<b>6%</b>	5%	5%
Electrical	<b>4%</b>	4%	4%
Total	<b>100%</b>	100%	100%

In 2016, 2015 and 2014, nonresidential building and construction accounted for approximately 27%, 26% and 22% of Tredegar's consolidated net sales from continuing operations, respectively.

**Raw Materials.** The primary raw materials used by Aluminum Extrusions consist of aluminum ingot, aluminum scrap and various alloys, which are purchased from domestic and foreign producers in open-market purchases and under short-term contracts. Aluminum Extrusions believes that it has adequate long-term supply agreements for aluminum and other required raw materials and supplies in the foreseeable future.

**Futura Acquisition.** On February 15, 2017, Bonnell Aluminum completed its previously announced acquisition of Futura Industries Corporation ("Futura") on a net debt-free basis for approximately \$92 million. The acquisition, which was funded

using Tredegar's secured revolving credit agreement and will be treated as an asset purchase for U.S. federal income tax purposes, is expected to be immediately accretive to Tredegar's consolidated ongoing earnings.

Futura, headquartered in Clearfield, Utah, with a national sales presence and particular strength in the western U.S., designs and manufactures a wide range of extruded aluminum products for a number of industries and end markets, including branded flooring trims and TSLOTS™, as well as OEM (original equipment manufacturer) components for truck grills, solar panels, fitness equipment and other applications. Futura has approximately 350 employees.

## **General**

***Intellectual Property.*** Tredegar considers patents, licenses and trademarks to be significant to PE Films. As of December 31, 2016, PE Films held 267 issued patents (63 of which are issued in the U.S.) and 116 trademarks (9 of which are issued in the U.S.). Flexible Packaging Films held 1 patent, which is issued in the U.S. and 13 trademarks (2 of which are issued in the U.S.). Aluminum Extrusions held no U.S. patents and 2 U.S. trademarks (1 of which is issued in the U.S.). These patents have remaining terms ranging from 1 to 20 years. Tredegar also has licenses under patents owned by third parties.

***Research and Development.*** Tredegar's spending for research and development ("R&D") activities in 2016, 2015 and 2014 was primarily related to PE Films. PE Films has technical centers in Durham, North Carolina; Richmond, Virginia; and Terre Haute, Indiana. Flexible Packaging has a technical center in Bloomfield, New York. R&D spending by the Company was approximately \$19.1 million, \$16.2 million and \$12.1 million in 2016, 2015 and 2014, respectively.

***Backlog.*** Backlogs are not material to the operations in PE Films or Flexible Packaging Films. Overall backlog for continuing operations in Aluminum Extrusions was approximately 13.5 million pounds at December 31, 2016 compared to approximately 11.8 million pounds at December 31, 2015, an increase of 1.6 million pounds, or approximately 14%. Volume for Aluminum Extrusions, which the Company believes is cyclical in nature, was 173.0 million pounds in 2016, 170.0 million pounds in 2015 and 153.8 million pounds in 2014.

***Government Regulation.*** U.S. laws concerning the environment to which the Company's domestic operations are or may be subject include, among others, the Clean Water Act, the Clean Air Act, the Resource Conservation and Recovery Act, the Occupational Safety and Health Act, the National Environmental Policy Act, the Toxic Substances Control Act, the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), all as amended, regulations promulgated under these acts, and any other federal, state or local laws or regulations governing environmental matters. Compliance with these laws is an important consideration because Tredegar uses hazardous materials in some of its operations, is a generator of hazardous waste, and wastewater from the Company's operations is discharged to various types of wastewater management systems. Under CERCLA and other laws, Tredegar may be subject to financial exposure for costs associated with waste management and disposal, even if the Company fully complies with applicable environmental laws.

The U.S. Environmental Protection Agency has adopted regulations under the Clean Air Act relating to emissions of carbon dioxide and other greenhouse gases ("GHG"), including mandatory reporting and permitting requirements. Several of the Company's manufacturing operations result in emissions of carbon dioxide or GHG and are subject to the current GHG regulations. The Company's compliance with these regulations has yet to require significant expenditures. The cost of compliance with any future GHG legislation or regulations is not presently determinable, but Tredegar does not anticipate compliance to have a material adverse effect on its consolidated financial condition, results of operations and cash flows based on information currently available.

Tredegar is also subject to the governmental regulations in the countries where it conducts business.

At December 31, 2016, the Company believes that it was in substantial compliance with all applicable environmental laws, regulations and permits in the U.S. and other countries where it conducts business. Environmental standards tend to become more stringent over time. In order to maintain substantial compliance with such standards, the Company may be required to incur additional expenditures, the amounts and timing of which are not presently determinable but which could be significant, in constructing new facilities or in modifying existing facilities. Furthermore, failure to comply with current or future laws and regulations could subject Tredegar to substantial penalties, fines, costs and expenses.

***Employees.*** Tredegar employed approximately 2,800 people at December 31, 2016.

***Available Information and Corporate Governance Documents.*** Tredegar's Internet address is [www.tredegar.com](http://www.tredegar.com). The Company makes available, free of charge through its website, its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as soon as reasonably practicable after such documents are electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). Information filed electronically

with the SEC can be accessed on its website at [www.sec.gov](http://www.sec.gov). In addition, the Company's Corporate Governance Guidelines, Code of Conduct and the charters of the Audit, Executive Compensation, and Nominating and Governance Committees are available on Tredegar's website and are available in print, without charge, to any shareholder upon request by contacting Tredegar's Corporate Secretary at 1100 Boulders Parkway, Richmond, Virginia 23225. The information on or that can be accessed through the Company's website is not, and shall not be deemed to be, a part of this Annual Report on Form 10-K for the year ended December 31, 2016 ("Form 10-K") or incorporated into other filings it makes with the SEC.

## **Item 1A. RISK FACTORS**

There are a number of risks and uncertainties that could have a material adverse effect on the Company's consolidated financial condition, results of operations, or cash flows. The following risk factors should be considered, in addition to the other information included in this Form 10-K, when evaluating Tredegar and its businesses:

### **PE Films**

- ***PE Films is highly dependent on sales associated with its top five customers, the largest of which is P&G.*** PE Films' top five customers comprised approximately 29%, 32% and 38% of Tredegar's consolidated net sales from continuing operations, in 2016, 2015 and 2014, respectively, with net sales to P&G alone comprising approximately 16%, 19% and 24% in 2016, 2015 and 2014, respectively. The loss or significant reduction of sales associated with one or more of these customers could have a material adverse effect on the Company's business. Other factors that could adversely affect the business include, by way of example, (i) failure by a key customer to achieve success or maintain share in markets in which they sell products containing PE Films' materials, (ii) key customers rolling out products utilizing technologies developed by others that replace PE Films' business with such customer, (iii) delays in a key customer rolling out products utilizing new technologies developed by PE Films and (iv) operational decisions by a key customer that result in component substitution, inventory reductions and similar changes. While PE Films has undertaken efforts to expand its customer base, there can be no assurance that such efforts will be successful, or that they will offset any delay or loss of sales and profits associated with these large customers.

In recent years, PE Films lost substantial sales volume due to product transitions and suffered other sales losses associated with various customers (see further discussion in the *Executive Summary*, PE Films section).

PE Films anticipates further exposure to product transitions and lost business in certain personal care and surface protection materials that could negatively affect future operating profit from ongoing operations by, in the case of personal care materials, approximately \$10 million annually, possibly beginning after 2018, and in the case of surface protection materials, estimated to be in the range of up to \$5 to \$10 million, although the timing and ultimate amount of the possible transitions for surface protection are uncertain. While it continues to identify new business opportunities with its existing customers, PE Films is also working to expand its customer base in order to create long-term growth and profitability by actively competing for new business with various customers across its full product portfolio and introducing new products and/or improvements to existing applications. There is no assurance that these efforts to expand the revenue base and mitigate this or any future loss of sales and profits from significant customers will be successful.

- ***PE Films depends on its ability to develop and deliver new products at competitive prices.*** Personal Care, Surface Protection and Bright View applications are now being made with a variety of new innovative materials and the overall cycle for bringing new films products to market has accelerated. While PE Films has substantial technological resources, there can be no assurance that its new products can be brought to market successfully, or if brought to market successfully, at the same level of profitability and market share of replaced films. The competitive dynamics in the personal care business require continuous development of new materials for customers. The product development process for personal care materials, which spans from idea inception to product commercialization, is typically 24 to 48 months. A shift in customer preferences away from PE Films' technologies, its inability to develop and deliver new profitable products, or delayed acceptance of its new products in domestic or foreign markets, could have a material adverse effect on its consolidated financial condition, results of operations and cash flows. In the long term, growth will depend on PE Films' ability to provide innovative products at a price that meets the customers' needs.
- ***PE Films and its customers operate in highly competitive markets.*** PE Films competes on product innovation, quality, price and service, and its businesses and their customers operate in highly competitive markets. Global market conditions continue to exacerbate the Company's exposure to margin compression due to competitive forces, especially as certain products move into the later stages of their product life cycles. While PE Films continually works to identify new business opportunities with existing and new customers, primarily through the development of new products with improved performance and/or cost characteristics, there can be no assurances that such efforts will be successful, or that they will offset business lost from competitive dynamics or customer product transitions.

- ***Failure of PE Films’ customers, who are subject to cyclical downturns, to achieve success or maintain market share could adversely impact PE Films’ sales and operating margins.*** PE Films’ plastic films serve as components for various consumer products sold worldwide. A customer’s ability to successfully develop, manufacture and market those products is integral to PE Films’ success. In addition, many customers are in industries that are cyclical in nature and sensitive to changes in general economic conditions. During weak economic cycles, consumers of premium products made with or using PE Films’ components may shift to less premium, less expensive products, reducing the demand for PE Films’ plastic films. Cyclical downturns may negatively affect businesses that use PE Films’ plastic film products, which could adversely affect sales and operating margins.
- ***The Company’s inability to protect its intellectual property rights or its infringement of the intellectual property rights of others could have a material adverse impact on PE Films.*** PE Films operates in an industry where its significant customers and competitors have substantial intellectual property portfolios. The continued success of PE Films’ business depends on its ability not only to protect its own technologies and trade secrets, but also to develop and sell new products that do not infringe upon existing patents or threaten existing customer relationships. Intellectual property litigation is very costly and could result in substantial expense and diversions of Company resources, both of which could adversely affect its consolidated financial condition, results of operations and cash flows. In addition, there may be no effective legal recourse against infringement of the Company’s intellectual property by third parties, whether due to limitations on enforcement of rights in foreign jurisdictions or as a result of other factors. An unfavorable outcome in any intellectual property litigation or similar proceeding could have a material adverse effect on the consolidated financial condition, results of operations and cash flows of PE Films.
- ***An unstable economic environment could have a disruptive impact on PE Films’ supply chain.*** Certain raw materials used in manufacturing PE Films’ products are sourced from single suppliers, and PE Films may not be able to quickly or inexpensively re-source from other suppliers. The risk of damage or disruption to its supply chain may increase if and when different suppliers consolidate their product portfolios or experience financial distress. Failure to take adequate steps to effectively manage such events, which are intensified when a product is procured from a single supplier or location, could adversely affect PE Films’ consolidated financial condition, results of operations and cash flows, as well as require additional resources to restore its supply chain.
- ***Our restructuring activities and cost saving initiatives may not achieve the results we anticipate.*** PE Films has undertaken and will continue to undertake restructuring activities and cost reduction initiatives to consolidate certain domestic production, improve operating efficiencies and generate cost savings. PE Films cannot be certain that it will be able to complete these initiatives as planned or that the estimated operating efficiencies or cost savings from such activities will be fully realized or maintained over time. In addition, PE Films may not be successful in moving production to other facilities or timely qualifying new production equipment. Failure to complete these initiatives could adversely affect PE Films’ financial condition, results of operations and cash flows.

### **Flexible Packaging Films**

- ***Uncertain economic conditions in Brazil and overcapacity in Latin American polyester film production could adversely impact the financial condition, results of operations and cash flows of Flexible Packaging Films.*** Flexible Packaging Films and its customers operate in a highly competitive global market for polyester films. Competition in Brazil, Terphane’s primary market, has been exacerbated by global overcapacity in the polyester industry, in general, and by particularly acute overcapacity in Latin America. Additional PET capacity from a competitor in Latin America is expected to come on line in the second quarter of 2017. In addition, Flexible Packaging Films operations have been adversely impacted by ongoing unfavorable economic and political conditions in Brazil, which accounted for approximately 52% of its overall sales in 2016. These combined factors have resulted in significant competitive pricing pressures and U.S. Dollar equivalent margin compression. Moreover, variable conversion, fixed conversion and general, sales and administrative (“GS&A”) costs for operations in Brazil (“Operating Costs”) are expected to be adversely impacted by inflation that is higher than in the U.S. The possible offsetting impact on U.S. Dollar equivalent Operating Costs from higher Brazilian Real inflation of depreciation in the value of the Real relative to the U.S. Dollar (i.e., purchasing power parity) may not occur. There are many economic variables impacting currency exchange rates, and the Real could appreciate in value relative to the U.S. Dollar despite higher inflation resulting in U.S. Dollar equivalent Operating Costs being adversely affected by both higher Real inflation and Real appreciation. Accordingly, the U.S. Dollar equivalent pricing/product margins related to the underlying Operating Costs may not move in the same direction with the combined result being a whipsaw of the U.S. Dollar equivalent operating profit for Flexible Packaging Films.

Tredegar has attempted to mitigate these impacts through new product offerings, cost saving measures and manufacturing efficiency initiatives, but these efforts to-date have not been sufficient to prevent a significant decline in the operating profit for Flexible Packaging Films since the acquisition of Terphane in October 2011 and continuing efforts may not be

successful, which could further adversely impact Flexible Packaging Films' financial condition, results of operations and cash flows.

- ***Governmental failure to extend anti-dumping duties in Brazil on imported products or prevent competitors from circumventing such duties could adversely impact Flexible Packaging Films.*** In recent years, excess global capacity in the industry has led to increased competitive pressures from imports into Brazil. The Company believes that these conditions have shifted the competitive environment from a regional to a global landscape and have driven price convergence and lower product margins for Flexible Packaging Films. Recent favorable anti-dumping rulings have been issued against China, Egypt and India. Competitors not currently subject to anti-dumping duties may choose to utilize their excess capacity by selling product in Brazil, which may result in pricing pressures that Flexible Packaging Films may not be able to offset with cost savings measures and/or manufacturing efficiency initiatives. There can be no assurance that efforts to impose anti-dumping constraints on these competitors will be successful.

### **Aluminum Extrusions**

- ***Sales volume and profitability of Aluminum Extrusions is seasonal and cyclical and highly dependent on economic conditions of end-use markets in the U.S., particularly in the construction sector.*** Aluminum Extrusions' end-use markets can be subject to seasonality as well as large cyclical swings in volume. Because of the capital intensive nature and level of fixed costs inherent in the aluminum extrusions business, the percentage drop in operating profits in a cyclical downturn will likely exceed the percentage drop in volume. In addition, during an economic slowdown, excess industry capacity often drives increased pricing pressure in many end-use markets as competitors protect their position with key customers. Any benefits associated with cost reductions and productivity improvements may not be sufficient to offset the adverse effects on profitability from pricing and margin pressure and higher bad debts (including a greater chance of loss associated with customers defaulting on fixed-price forward sales contracts) that usually accompany a downturn. In addition, higher energy costs can further reduce profits unless offset by price increases or cost reductions and productivity improvements.
- ***Failure to extend anti-dumping and countervailing duties on imported products or prevent competitors from circumventing such duties, or a reduction in such duties, could adversely impact Aluminum Extrusions.*** In years prior to 2011, imports into the U.S., primarily from China, represented an increasing portion of the U.S. aluminum extrusion market. However, due to an affirmative determination by the U.S. International Trade Commission in April 2011 that asserted that dumped and subsidized imports of aluminum extrusion from China unfairly and negatively impacted the domestic industry, the U.S. Department of Commerce has applied anti-dumping and countervailing duties to these imported products. As a result, aluminum extrusion imports from China have decreased significantly. While the risk to the domestic industry had been abated for a period of time, these protective duties were scheduled to expire in November 2016 but have been extended until a hearing can be held and a subsequent decision can be made on further extending the duties. A final decision on extending these duties is expected in March 2017. There are ongoing efforts within the U.S. aluminum extrusions industry supporting the extension of these protective duties. Chinese and other overseas manufacturers continue to try to circumvent anti-dumping duties, by both legal and illegal means. An unfavorable outcome on the continuation of U.S. anti-dumping duties, or a failure by U.S. trade officials to curtail efforts to circumvent those duties, could have a material adverse effect on the financial condition, results of operations and cash flows of Aluminum Extrusions.
- ***Competition from China could increase significantly if China is granted market economy status by the World Trade Organization.*** As of December 11, 2016 China's automatic status as a non-market economy under World Trade Organization rules ended. As a result, China believes with respect to all Chinese-made products that it should receive market economy status and the rights attendant to that status under World Trade Organization rules. The United States and the European Union have each rejected that interpretation with respect to at least certain products, and are expected to do so with respect to aluminum extrusions. If China is granted market economy status by the United States government with respect to aluminum extrusions, that would likely create substantial pricing pressure on Aluminum Extrusions products and could have a material adverse effect on the financial condition, results of operations and cash flows of Aluminum Extrusions.
- ***The markets for Aluminum Extrusions' products are highly competitive with product quality, service, delivery performance and price being the principal competitive factors.*** Aluminum Extrusions has approximately 1,500 customers that are in a variety of end-use markets within the broad categories of building and construction, distribution, automotive and other transportation, machinery and equipment, electrical and consumer durables. No single customer exceeds 4% of Aluminum Extrusions' net sales. Future success and prospects depend on its ability to provide superior service, high quality products, timely delivery and competitive pricing to retain existing customers and participate in overall industry cross-cycle growth. Failure in any of these areas could lead to a loss of customers, which could have an adverse material effect on the financial condition, results of operations and cash flows of Aluminum Extrusions.



- ***Aluminum Extrusions may not have sufficient capacity to meet its growth targets and service all of its customers.*** In recent years, increased demand, primarily from the nonresidential building and construction sector, has pushed Aluminum Extrusions' average capacity utilization in excess of 90%. Aluminum Extrusions' ability to grow and service existing customers is closely tied to having sufficient capacity.
- ***Aluminum Extrusions' efforts to expand the Company's presence in the automotive market may not be successful.*** Aluminum Extrusions has made significant capital investments in recent years to increase sales to automotive and light truck tier suppliers. Efforts to expand product offerings and broaden the customer base are tied to successfully substituting the Company's aluminum extrusions for current market alternatives. New Corporate Average Fuel Economy ("CAFE") standards requiring material improvements in the automotive and light truck MPG (miles per gallon) by 2025, are expected to increase demand for lighter materials used in the vehicle's body, some of which can be supplied by Aluminum Extrusions. If the demand does not increase and/or the alternative products offered by Aluminum Extrusions are not accepted by its customers or if CAFE standards are reduced or delayed, Aluminum Extrusions may not generate expected returns on its capital investments, which could have a material adverse effect on its consolidated financial condition, results of operations and cash flows.

## General

- ***Tredegar has an underfunded defined benefit (pension) plan.*** Tredegar sponsors a pension plan that covers certain hourly and salaried employees in the U.S. The plan was substantially frozen to new participants in 2007, and frozen to benefit accruals for active participants in 2014. As of December 31, 2016, the plan was underfunded under U.S. generally accepted accounting principles ("GAAP") measures by \$88.6 million. Tredegar expects that it will be required to make a cash contribution of approximately \$5.5 million to its underfunded pension plan in 2017, and may be required to make higher cash contributions in future periods depending on the level of interest rates and investment returns on plan assets.
- ***An impairment of our long-lived intangible assets, including goodwill, could have a material non-cash adverse impact on our results of operations.*** As of December 31, 2016, reporting units in PE Films and Aluminum Extrusions carried goodwill balances of \$104.1 million and \$13.7 million, respectively. PE Films' goodwill balance was carried by its operating units, Personal Care Films and Surface Protection Films, at \$46.8 million and \$57.3 million, respectively. The Company assesses goodwill for impairment when events or circumstances indicate that the carrying value may not be recoverable, or, at a minimum, on an annual basis. The valuation of goodwill depends on a variety of factors, including the success in achieving the Company's business goals, global market and economic conditions, earnings growth and expected cash flows, and goodwill impairment valuations can be sensitive to assumptions associated with such factors. Failure to successfully achieve projections could result in future impairments. Impairments to goodwill and other intangible assets may also be caused by factors outside the Company's control, such as increasing competitive pricing pressures, changes in foreign exchange rates, lower than expected sales and profit growth rates, and various other factors. Significant and unanticipated changes could require a non-cash charge for impairment in a future period, which may significantly affect the Company's results of operations in the period of such charge.
- ***Noncompliance with any of the covenants in the Company's \$400 million secured revolving credit facility, which matures in March of 2021, could result in all debt under the agreement outstanding at such time becoming due and limiting its borrowing capacity, which could have a material adverse effect on consolidated financial condition and liquidity.*** The credit agreement governing Tredegar's secured revolving credit facility contains restrictions and financial covenants that, if violated, could restrict the Company's operational and financial flexibility. Failure to comply with these covenants could result in an event of default, which if not cured or waived, would result in all outstanding debt under the credit facility at such time becoming due, which could have a material adverse effect on the Company's consolidated financial condition and liquidity.
- ***Tredegar's performance is influenced by costs incurred by its operating companies, including, for example, the cost of raw materials and energy.*** These costs include, without limitation, the cost of resin (the raw material on which PE Films primarily depends), PTA and MEG (the raw materials on which Flexible Packaging Films primarily depends), aluminum (the raw material on which Aluminum Extrusions primarily depends), natural gas (the principal fuel necessary for Aluminum Extrusions' plants to operate), electricity and diesel fuel. Resin, aluminum and natural gas prices are extremely volatile as shown in the charts in the ***Quantitative and Qualitative Disclosures*** section. The Company attempts to mitigate the effects of increased costs through price increases and contractual pass-through provisions, but there are no assurances that higher prices can effectively be passed through to customers or that Tredegar will be able to offset fully or on a timely basis the effects of higher raw material and energy costs through price increases or pass-through arrangements. Further, the Company's cost control efforts may not be sufficient to offset any increases in raw material, energy or other costs.

- ***Tredegar is subject to credit risk that is inherent with efforts to increase market share as the Company attempts to broaden its customer base.*** In the event of the deterioration of operating cash flows or diminished borrowing capacity of Tredegar’s customers, the collection of trade receivable balances may be delayed or deemed unlikely. The Company’s credit risk exposure could increase as business is expanded, including on export sales which generally have longer payment terms than domestic sales. In addition, the operations of the customers for Aluminum Extrusions generally follow the cycles within the economy, resulting in increased credit risk from diminished operating cash flows and greater risk of bankruptcy when the economy is deteriorating or in recession. In addition, difficult economic conditions in Brazil have resulted in increased credit risk to Flexible Packaging from customers whose businesses are detrimentally affected by those conditions.
- ***Tredegar may not be able to successfully identify, complete or integrate strategic acquisitions.*** From time to time, the Company evaluates acquisition candidates that fit its business objectives. Acquisitions, including our recent acquisition of Futura, involve special risks, including, without limitation, meeting revenue, margin, working capital and capital expenditure expectations that substantially drive valuation, diversion of management’s time and attention from existing businesses, the potential assumption of unanticipated liabilities and contingencies and potential difficulties in integrating acquired businesses and achieving anticipated operational improvements. Acquired businesses may not achieve expected results.
- ***Tredegar is subject to various environmental laws and regulations and could become exposed to material liabilities and costs associated with such laws.*** The Company is subject to various environmental obligations and could become subject to additional obligations in the future. Changes in environmental laws and regulations, or their application, including, but not limited to, those relating to global climate change, could subject Tredegar to significant additional capital expenditures and operating expenses. Moreover, future developments in federal, state, local and international environmental laws and regulations are difficult to predict. Environmental laws have become and are expected to continue to become increasingly strict. As a result, Tredegar expects to be subject to new environmental laws and regulations. However, any such changes are uncertain and, therefore, it is not possible for the Company to predict with certainty the amount of additional capital expenditures or operating expenses that could be necessary for compliance with respect to any such changes. See ***Government Regulation*** in “Item 1. Business” for a further discussion of this risk factor.
- ***Material disruptions at one of the Company’s major manufacturing facilities could negatively impact financial results.*** Tredegar believes its facilities are operated in compliance with applicable local laws and regulations and that the Company has implemented measures to minimize the risks of disruption at its facilities. Such a disruption could be a result of any number of events, including but not limited to: an equipment failure with repairs requiring long lead times, labor stoppages or shortages, utility disruptions, constraints on the supply or delivery of critical raw materials, and severe weather conditions. A material disruption in one of the Company’s operating locations could negatively impact production and its consolidated financial condition, results of operations and cash flows.
- ***An information technology system failure may adversely affect the business.*** Tredegar relies on information technology systems to transact its business. An information technology system failure due to computer viruses, internal or external security breaches, cybersecurity attacks, power interruptions, hardware failures, fire, natural disasters, human error, or other causes could disrupt its operation and prevent it from being able to process transactions with its customers, operate its manufacturing facilities, and properly report transactions in a timely manner. A significant, protracted information technology system failure may adversely affect Tredegar’s results of operations, financial condition, or cash flows.
- ***An inability to renegotiate the Company’s collective bargaining agreements could adversely impact its consolidated financial condition, results of operations and cash flows.*** Some of the Company’s employees are represented by labor unions under various collective bargaining agreements with varying durations and expiration dates. Tredegar may not be able to satisfactorily renegotiate collective bargaining agreements when they expire, which could result in strikes or work stoppages or higher labor costs. In addition, existing collective bargaining agreements may not prevent a strike or work stoppage at the Company’s facilities in the future. Any such work stoppages (or potential work stoppages) could negatively impact Tredegar’s ability to manufacture its products and adversely affect its consolidated financial condition, results of operations and cash flows.
- ***Tredegar’s valuation of its \$7.5 million cost-basis investment in kaléo is volatile and uncertain.*** Tredegar uses the fair value method to account for its ownership interest of approximately 19% in kaleo, Inc. (“kaléo”), a privately held specialty pharmaceutical company. There is no active secondary market for buying or selling stock in kaléo. The Company’s fair value estimates can fluctuate materially between reporting periods, primarily due to variances in performance versus expectations, and kaléo’s ability to meet developmental and commercialization milestones within an anticipated time frame. Commercial sales of kaléo’s first licensed product, an epinephrine auto-injector, commenced in the first quarter of 2013, and commercial sales of its second product, a naloxone auto-injector, commenced in the third quarter of 2014.

In 2009, kaléo licensed exclusive rights to sanofi-aventis U.S. LLC (“Sanofi”) to commercialize the epinephrine auto-injector in the U.S. and Canada. Sanofi announced on October 28, 2015, a voluntary recall of all Auvi-Q and Allerject epinephrine auto-injectors that were on the market. In January 2017, kaléo announced that it would recommence sales of Auvi-Q in the U.S. in February 2017.

Kaléo may be unsuccessful in its attempt to re-enter the epinephrine market due to lack of customer acceptance, competition or other market factors beyond its control. If kaléo is unsuccessful re-entering the epinephrine market, it may require additional funding to support its other products and its development of new products.

Additionally, the estimated fair value of the Company’s investment in kaléo could decline. See Note 4 to the *Notes to Financial Statements* for more information.

**Item 1B. UNRESOLVED STAFF COMMENTS**

None.

**Item 2. PROPERTIES**

**General**

Most of the improved real property and the other assets used in the Company's operations are owned, and certain of the owned property is subject to an encumbrance under the Company's secured revolving credit facility (see Note 11 in the *Notes to Financial Statements* for more information). Tredegar considers the manufacturing facilities, warehouses and other properties and assets that it owns or leases to be in generally good condition. Capacity utilization at its various manufacturing facilities can vary with product mix and normal fluctuations in sales levels. The Company believes that its PE Films and Flexible Packaging Films manufacturing facilities have sufficient capacity to meet its current production requirements. Increased demand, primarily from the nonresidential building and construction sector, pushed Aluminum Extrusions' average capacity utilization in excess of 90% in 2016. Tredegar's corporate headquarters, which is leased, is located at 1100 Boulders Parkway, Richmond, Virginia 23225.

The Company's principal manufacturing plants and facilities as of December 31, 2016 are listed below:

**PE Films**

Locations in the U.S.

Lake Zurich, Illinois  
Durham, North Carolina (technical center and production facility) (leased)  
Pottsville, Pennsylvania  
Richmond, Virginia (technical center) (leased)  
Terre Haute, Indiana (technical center and production facility)

Locations Outside the U.S.

Guangzhou, China  
Kerkrade, The Netherlands  
Pune, India  
Rétság, Hungary  
São Paulo, Brazil  
Shanghai, China

Principal Operations

Production of plastic films and laminate materials

**Flexible Packaging Films**

Locations in the U.S.

Bloomfield, New York (technical center and production facility)

Locations Outside the U.S.

Cabo de Santo Agostinho, Brazil

Principal Operations

Production of polyester films

**Aluminum Extrusions**

Locations in the U.S.

Carthage, Tennessee  
Elkhart, Indiana  
Newnan, Georgia  
Niles, Michigan

Principal Operations

Production of aluminum extrusions, fabrication and finishing

Note: On February 15, 2017, Bonnell Aluminum acquired Futura, which is located in Clearfield, Utah. Futura's principal operations are the design and manufacturing of extruded aluminum products.

**Item 3. LEGAL PROCEEDINGS**

None.

**Item 4. MINE SAFETY DISCLOSURES**

None.

## PART II

### Item 5. MARKET FOR TREDEGAR'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

#### Market Prices of Common Stock and Shareholder Data

Tredegar's common stock is traded on the New York Stock Exchange ("NYSE") under the ticker symbol "TG". There were 32,933,807 shares of common stock held by 2,123 shareholders of record on December 31, 2016.

The following table shows the reported high and low closing prices of Tredegar's common stock by quarter for the past two years.

	2016		2015	
	High	Low	High	Low
First quarter	\$ 16.01	\$ 11.68	\$ 23.07	\$ 18.87
Second quarter	17.37	14.80	23.16	19.75
Third quarter	19.39	16.30	23.76	12.63
Fourth quarter	25.55	17.30	16.17	13.09

The closing price of Tredegar's common stock on February 17, 2017 was \$22.45.

#### Dividend Information

Tredegar has paid a dividend every quarter since becoming a public company in July 1989. During the past three years, the Company paid quarterly dividends as follows:

- 11 cents per share in the last three quarters of 2015 and each of the quarters of 2016;
- 9 cents per share in each of the final three quarters of 2014 and first quarter of 2015;
- 7 cents per share in the first quarter of 2014.

All decisions with respect to the declaration and payment of dividends will be made by the Board of Directors in its sole discretion based upon earnings, financial condition, anticipated cash needs, restrictions in the Company's secured revolving credit facility and other such considerations as the Board deems relevant. See Note 11 of the *Notes to Financial Statements* for the restrictions on the payment of dividends contained in the Company's secured revolving credit agreement related to aggregate dividends permitted.

#### Issuer Purchases of Equity Securities

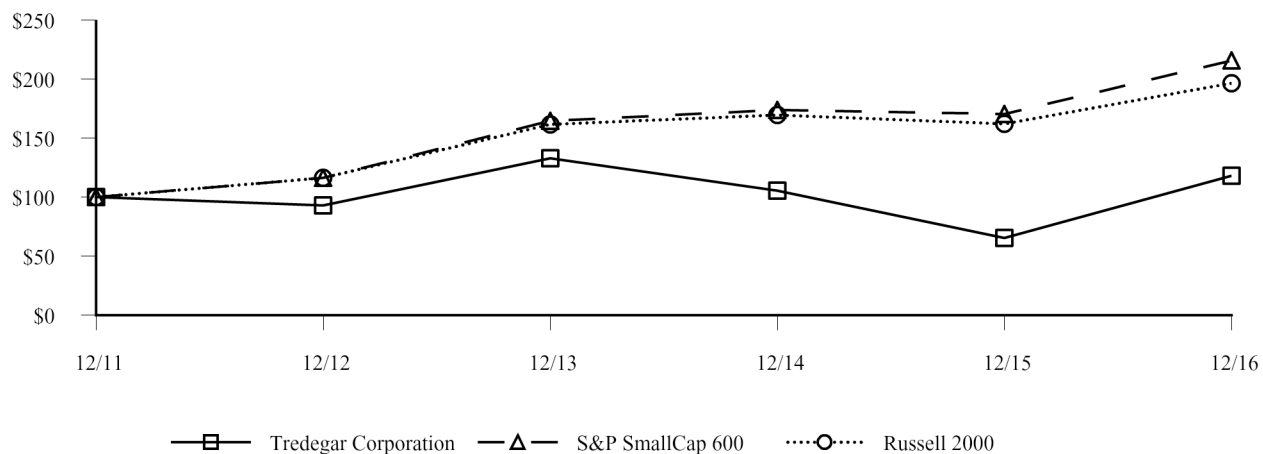
On January 7, 2008, Tredegar announced that its Board of Directors approved a share repurchase program whereby management is authorized at its discretion to purchase, in the open market or in privately negotiated transactions, up to 5 million shares of the Company's outstanding common stock. The authorization has no time limit. Tredegar did not repurchase any shares in the open market or otherwise in 2016, 2015 and 2014 under this standing authorization. The maximum number of shares remaining under this standing authorization was 1,732,003 at December 31, 2016.

## Comparative Tredegar Common Stock Performance

The following graph compares cumulative total shareholder returns for Tredegar, the S&P SmallCap 600 Stock Index (an index comprised of companies with market capitalizations similar to Tredegar) and the Russell 2000 Index for the five years ended December 31, 2016. Tredegar is part of both the S&P SmallCap 600 Index and Russell 2000 Index.

### **COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN\***

Among Tredegar Corporation, the S&P SmallCap 600 Index, and the Russell 2000 Index



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

Copyright© 2017 Standard & Poor's, a division of S&P Global. All rights reserved.  
Copyright© 2017 Russell Investment Group. All rights reserved.

## Inquiries

Inquiries concerning stock transfers, dividends, dividend reinvestment, consolidating accounts, changes of address, or lost or stolen stock certificates should be directed to Computershare Investor Services, the transfer agent and registrar for the Company's common stock:

Computershare Investor Services  
P.O. Box 30170  
College Station, TX 77842-3170  
Phone: 800-622-6757  
[www.computershare.com/us/contact](http://www.computershare.com/us/contact)

All other inquiries should be directed to:

Tredegar Corporation  
Investor Relations Department  
1100 Boulders Parkway  
Richmond, Virginia 23225  
Phone: 800-411-7441  
E-mail: [invest@tredegar.com](mailto:invest@tredegar.com)  
Website: [www.tredegar.com](http://www.tredegar.com)

## Quarterly Information

Tredegar does not generate or distribute quarterly reports to its shareholders. Information on quarterly results can be obtained from the Company's website. In addition, Tredegar files quarterly, annual and other information electronically with the SEC, which can be accessed on its website at [www.sec.gov](http://www.sec.gov).

**Item 6. SELECTED FINANCIAL DATA**

The tables that follow on pages 14-19 present certain selected financial and segment information for the five years ended December 31, 2016.

**FIVE-YEAR SUMMARY**

Tredegar Corporation and Subsidiaries

Years Ended December 31	2016	2015	2014	2013	2012
(In Thousands, Except Per-Share Data)					
<b>Results of Operations (g):</b>					
Sales	\$ 828,341	\$ 896,177	\$ 951,826	\$ 959,346	\$ 882,188
Other income (expense), net	2,381 (a)	(20,113) (c)	(6,697) (d)	1,776 (e)	18,119 (f)
	<b>830,722</b>	<b>876,064</b>	<b>945,129</b>	<b>961,122</b>	<b>900,307</b>
Cost of goods sold	668,626 (a)	725,459 (c)	778,113 (d)	784,675 (e)	712,660 (f)
Freight	29,069	29,838	28,793	28,625	24,846
Selling, general & administrative expenses	75,754 (a)	71,911 (c)	69,526 (d)	71,195 (e)	73,717 (f)
Research and development expenses	19,122	16,173	12,147	12,669	13,162
Amortization of intangibles	3,978	4,073	5,395	6,744	5,806
Interest expense	3,806	3,502	2,713	2,870	3,590
Asset impairments and costs associated with exit and disposal activities	2,684 (a)	3,850 (c)	3,026 (d)	1,412 (e)	5,022 (f)
Goodwill impairment charge	—	44,465 (b)	—	—	—
	<b>803,039</b>	<b>899,271</b>	<b>899,713</b>	<b>908,190</b>	<b>838,803</b>
Income (loss) from continuing operations before income taxes	27,683	(23,207)	45,416	52,932	61,504
Income taxes	3,217 (a)	8,928 (c)	9,387 (d)	16,995 (e)	18,319 (f)
Income (loss) from continuing operations (g)	24,466	(32,135)	36,029	35,937	43,185
Income (loss) from discontinued operations, net of tax (g)	—	—	850 (g)	(13,990) (g)	(14,934) (g)
Net income (loss)	\$ 24,466	\$ (32,135)	\$ 36,879	\$ 21,947	\$ 28,251
Diluted earnings (loss) per share (g):					
Continuing operations	\$ 0.75	\$ (0.99)	\$ 1.11	\$ 1.10	\$ 1.34
Discontinued operations	—	—	0.02 (g)	(0.43) (g)	(0.46) (g)
Net income (loss)	\$ 0.75	\$ (0.99)	\$ 1.13	\$ 0.67	\$ 0.88

Refer to **Notes to Financial Tables** on page 19.

## FIVE-YEAR SUMMARY

Tredegar Corporation and Subsidiaries

Years Ended December 31	2016	2015	2014	2013	2012
(In Thousands, Except Per-Share Data)					
<b>Share Data:</b>					
Equity per share (m)	\$ 9.44	\$ 8.35	\$ 11.47	\$ 12.46	\$ 11.61
Cash dividends declared per share	\$ 0.44	\$ 0.42	\$ 0.34	\$ 0.28	\$ 0.96 (k)
Weighted average common shares outstanding during the period	32,762	32,578	32,302	32,172	32,032
Shares used to compute diluted earnings (loss) per share during the period	32,775	32,578	32,554	32,599	32,193
Shares outstanding at end of period	32,934	32,682	32,422	32,305	32,069
Closing market price per share:					
High	\$ 25.55	\$ 23.76	\$ 28.45	\$ 30.73	\$ 26.29
Low	\$ 11.68	\$ 12.63	\$ 16.76	\$ 21.06	\$ 13.49
End of year	\$ 24.00	\$ 13.62	\$ 22.49	\$ 28.81	\$ 20.42
Total return to shareholders (h)	79.4%	(37.6)%	(20.8)%	42.5%	(3.8)%
<b>Financial Position:</b>					
Total assets (l)	\$ 651,162	\$ 623,260	\$ 788,626	\$ 793,008	\$ 783,165
Cash and cash equivalents	\$ 29,511	\$ 44,156	\$ 50,056	\$ 52,617	\$ 48,822
Debt	\$ 95,000	\$ 104,000	\$ 137,250	\$ 139,000	\$ 128,000
Shareholders' equity (net book value)	\$ 310,783	\$ 272,748	\$ 372,029	\$ 402,664	\$ 372,252
Equity market capitalization (i)	\$ 790,411	\$ 445,131	\$ 729,173	\$ 930,711	\$ 654,857

Refer to Notes to Financial Tables on page 19.



## SEGMENT TABLES

Tredegar Corporation and Subsidiaries

### Net Sales (j)

	2016	2015	2014	2013	2012
(In Thousands)					
PE Films	\$ 331,146	\$ 385,550	\$ 464,339	\$ 495,386	\$ 473,849
Flexible Packaging Films	108,028	105,332	114,348	125,853	138,028
Aluminum Extrusions	360,098	375,457	344,346	309,482	245,465
Total net sales	799,272	866,339	923,033	930,721	857,342
Add back freight	29,069	29,838	28,793	28,625	24,846
Sales as shown in Consolidated Statements of Income	\$ 828,341	\$ 896,177	\$ 951,826	\$ 959,346	\$ 882,188

### Identifiable Assets

	2016	2015	2014	2013	2012
(In Thousands)					
PE Films	\$ 278,558	\$ 270,236	\$ 283,606	\$ 291,377	\$ 301,175
Flexible Packaging Films	156,836	146,253	262,604	265,496	250,667
Aluminum Extrusions	147,639	136,935	143,328	134,928	129,279
Subtotal	583,033	553,424	689,538	691,801	681,121
General corporate	38,618	25,680	49,032	48,590	53,222
Cash and cash equivalents	29,511	44,156	50,056	52,617	48,822
Total	\$ 651,162	\$ 623,260	\$ 788,626	\$ 793,008	\$ 783,165

Refer to *Notes to Financial Tables* on page 19.

## SEGMENT TABLES

Tredegar Corporation and Subsidiaries

	2016	2015	2014	2013	2012
(In Thousands)					
PE Films:					
Ongoing operations	\$ 26,312	\$ 48,275	\$ 60,971	\$ 61,866	\$ 50,814
Plant shutdowns, asset impairments, restructurings and other	(4,602) (a)	(4,180) (c)	(12,236) (d)	(671) (e)	1,011 (f)
Flexible Packaging Films:					
Ongoing operations	1,774	5,453	(2,917)	9,100	19,136
Plant shutdowns, asset impairments, restructurings and other	(214) (a)	(185) (c)	(591) (d)	—	(1,120) (f)
Goodwill impairment charge	—	(44,465) (b)	—	—	—
Aluminum Extrusions:					
Ongoing operations	37,794	30,432	25,664	18,291	9,037
Plant shutdowns, asset impairments, restructurings and other	(741) (a)	(708) (c)	(976) (d)	(2,748) (e)	(5,427) (f)
<b>Total</b>	<b>60,323</b>	<b>34,622</b>	<b>69,915</b>	<b>85,838</b>	<b>73,451</b>
Interest income	261	294	588	594	418
Interest expense	3,806	3,502	2,713	2,870	3,590
Gain (loss) on investment accounted for under the fair value method	1,600	(20,500) (c)	2,000 (d)	3,400 (e)	16,100 (f)
Gain on sale of investment property	—	—	1,208 (d)	—	—
Unrealized loss on investment property	1,032	—	—	1,018 (e)	—
Stock option-based compensation expense	56	483	1,272	1,155	1,432
Corporate expenses, net	29,607 (a)	33,638 (c)	24,310 (d)	31,857 (e)	23,443 (f)
Income (loss) from continuing operations before income taxes	27,683	(23,207)	45,416	52,932	61,504
Income taxes	3,217 (a)	8,928 (c)	9,387 (d)	16,995 (e)	18,319 (f)
Income (loss) from continuing operations	24,466	(32,135)	36,029	35,937	43,185
Income (loss) from discontinued operations, net of tax (g)	—	—	850 (g)	(13,990) (g)	(14,934) (g)
<b>Net income (loss)</b>	<b>\$ 24,466</b>	<b>\$ (32,135)</b>	<b>\$ 36,879</b>	<b>\$ 21,947</b>	<b>\$ 28,251</b>

Refer to *Notes to Financial Tables* on page 19.

## SEGMENT TABLES

Tredegar Corporation and Subsidiaries

### Depreciation and Amortization

	2016	2015	2014	2013	2012
(In Thousands)					
PE Films	\$ 13,653	\$ 15,480	\$ 21,399	\$ 25,656	\$ 28,962
Flexible Packaging Films	9,505	9,697	9,331	9,676	10,240
Aluminum Extrusions	9,173	9,698	9,974	9,202	9,984
Subtotal	32,331	34,875	40,704	44,534	49,186
General corporate	141	107	114	121	73
Total continuing operations	32,472	34,982	40,818	44,655	49,259
Discontinued operations (g)	—	—	—	—	10
Total depreciation and amortization expense	\$ 32,472	\$ 34,982	\$ 40,818	\$ 44,655	\$ 49,269

### Capital Expenditures

	2016	2015	2014	2013	2012
(In Thousands)					
PE Films	\$ 25,759	\$ 21,218	\$ 17,000	\$ 15,615	\$ 5,965
Flexible Packaging Films	3,391	3,489	21,806	49,252	24,519
Aluminum Extrusions	15,918	8,124	6,092	14,742	2,332
Subtotal	45,068	32,831	44,898	79,609	32,816
General corporate	389	—	—	52	436
Total capital expenditures	\$ 45,457	\$ 32,831	\$ 44,898	\$ 79,661	\$ 33,252

Refer to Notes to Financial Tables on page 19.

## NOTES TO FINANCIAL TABLES

- (a) Plant shutdowns, asset impairments, restructurings and other charges for 2016 include income of \$0.4 million related to the explosion that occurred in the second quarter of 2016 at Bonnell's aluminum extrusions manufacturing facility in Newnan, Georgia, which includes the recognition of a gain of \$1.9 million for a portion of the insurance recoveries approved by the insurer to begin the replacement of capital equipment, offset by the impairment of equipment damaged by the explosion of \$0.3 million (net amount included in "Other income (expense), net" in the consolidated statements of income) and other costs related to the explosion that are not recoverable from insurance of \$0.6 million (included in "Selling, general and administrative") and excess production costs for which recovery from insurance is not assured of \$0.6 million (included in "Cost of goods sold" in the consolidated statements of income); charges of \$4.3 million associated with the consolidation of domestic PE Films manufacturing facilities, which includes severance and other employee-related costs of \$1.2 million, asset impairments of \$0.4 million, accelerated depreciation of \$0.6 million (included in "Cost of goods sold" in the consolidated statements of income) and other facility consolidation-related expenses of \$2.0 million (\$1.6 million is included in "Cost of goods sold" in the consolidated statements of income); charges of \$0.4 million associated with a business development project included in "Selling, general and administrative" in the consolidated statements of income; charge of \$0.3 million for severance and other employee-related costs associated with restructurings in PE Films (\$0.1 million) and Corporate (\$0.2 million); charges of \$0.6 million associated with the acquisition of Futura Industries Corporation (included in "Selling, general and administrative" in the consolidated statements of income); charges of \$0.5 million related to expected future environmental costs at the Company's aluminum extrusions manufacturing facility in Newnan, Georgia (included in "Cost of goods sold" in the consolidated statements of income); charges of \$0.3 million related to the settlement of a tax dispute in the Flexible Packaging Films segment (included in "Cost of goods sold" in the consolidated statements of income); charges of \$0.2 million associated with asset impairments in PE Films; gain of \$0.1 million from the settlement of a Terphane pre-acquisition contingency (included in "Other income (expense), net" in the consolidated statements of income); charge of \$0.1 million from the sale of the aluminum extrusions manufacturing facility in Kentland, Indiana at a pretax gain of \$0.2 million, offset by pretax charges of \$0.3 million associated with the shutdown of this facility. The unrealized gain on the Company's investment in káleo of \$1.6 million is included in "Other income (expense), net" in the consolidated statements of income.
- (b) Results for 2015 included a goodwill impairment charge of \$44.5 million (\$44.5 million after taxes) recognized in Flexible Packaging Films in the third quarter of 2015 upon completion of an impairment analysis performed as of September 30, 2015.
- (c) Plant shutdowns, asset impairments, restructurings and other charges for 2015 include charges of \$3.9 million (included in "Selling, general and administrative" in the consolidated statements of income) for severance and other employee-related costs associated with the resignation of the Company's former chief executive and chief financial officers; charges of \$2.2 million associated with the consolidation of domestic PE Films manufacturing facilities, which includes severance and other employee-related costs of \$0.8 million, asset impairments of \$0.4 million, accelerated depreciation of \$0.4 million (included in "Cost of goods sold" in the consolidated statements of income) and other facility consolidation-related expenses of \$0.6 million (\$0.1 million is included in "Cost of goods sold" in the consolidated statements of income); charge of \$2.2 million for severance and other employee-related costs associated with restructurings in PE Films (\$2.0 million) (\$0.4 million included in "Selling, general and administrative expense" in the consolidated statement of income), Flexible Packaging Films (\$0.2 million), Aluminum Extrusions (\$35,000) and Corporate (\$26,000); charges of \$1.0 million associated with a non-recurring business development project (included in "Cost of goods sold" in the consolidated statements of income); charges of \$0.4 million associated with the shutdown of the aluminum extrusions manufacturing facility in Kentland, Indiana; and charges of \$0.3 million related to expected future environmental costs at the Company's aluminum extrusions manufacturing facility in Newnan, Georgia (included in "Cost of goods sold" in the consolidated statements of income). The unrealized loss on the Company's investment in káleo of \$20.5 million is included in "Other income (expense), net" in the consolidated statements of income.
- (d) Plant shutdowns, asset impairments, restructurings and other for 2014 include a charge of \$10.0 million (included in "Other income (expense), net" in the consolidated statements of income) associated with the one-time, lump sum license payment to 3M Company ("3M") after the Company settled all litigation issues associated with a patent infringement complaint; charges of \$2.3 million for severance and other employee-related costs in connection with restructurings in PE Films (\$1.7 million), Flexible Packaging Films (\$0.6 million) and Aluminum Extrusions (\$31,000); charges of \$0.9 million related to expected future environmental costs at the aluminum extrusions manufacturing facility in Newnan, Georgia (included in "Cost of goods sold" in the consolidated statement of income); charges of \$0.7 million associated with the shutdown of the film products manufacturing facility in Red Springs, North Carolina, which includes severance and other employee-related costs of \$0.4 million and asset impairment and other shutdown-related charges of \$0.3 million; gain of \$0.1 million related to the sale of previously shutdown film products manufacturing facility in LaGrange, Georgia (included in "Other income (expense), net" in the consolidated statements of income); and charges of \$54,000 associated with the shutdown of the aluminum extrusions manufacturing facility in Kentland, Indiana. The unrealized gain on the Company's investment in káleo of \$2.0 million; the unrealized loss on the Company's investment in Harbinger Capital Partners Special Situations Fund L.P. ("Harbinger") of \$0.8 million and the gain on sale on a portion the Company's investment property in Alleghany and Bath County, Virginia was \$1.2 million in 2014 are included in "Other income (expense), net" in the consolidated statements of income. Income taxes from continuing operations in 2014 includes the recognition of a tax benefit for a portion of the Company's capital loss carryforwards of \$4.9 million. These capital loss carryforwards were previously offset by a valuation allowance associated with expected limitations on the utilization of these assumed capital losses. As a result of changes in the underlying basis of certain foreign subsidiaries, income taxes from continuing operations in 2014 also included an adjustment of \$2.2 million to reverse previously accrued deferred tax liabilities arising from foreign currency translation adjustments.
- (e) Plant shutdowns, asset impairments, restructurings and other for 2013 include a charge of \$1.7 million related to expected future environmental costs at the aluminum extrusions manufacturing facility in Newnan, Georgia (included in "Cost of goods sold" in the consolidated statement of income); charges of \$0.6 million associated with the shutdown of the Company's aluminum extrusions manufacturing facility in Kentland, Indiana, which included accelerated depreciation for property and equipment of \$2.4 million (included in "Cost of goods sold" in the consolidated statement of income), severance and other shutdown-related charges of \$2.3 million, fire at an outside warehouse; charges of \$1.3 million for acquisition-related expenses (included in "Selling, general and administrative expenses" in the consolidated statements of income) associated with the acquisition of AACOA by Aluminum Extrusions; charges of \$1.1 million for integration-related expenses and other nonrecurring transactions (included in "Selling, general and administrative expenses" in the consolidated statements of income) associated with the acquisition of AACOA by Aluminum Extrusions; charges of \$1.1 million for integration-related expenses and other nonrecurring transactions (included in "Selling, general and administrative expenses" in the consolidated statements of income) associated with the acquisition of Terphane by Tredgar; gain of \$1.1 million (included in "Other income (expense), net" in the consolidated statements of income) on the sale of assets associated with a previously shutdown film products manufacturing facility in LaGrange, Georgia; losses of \$0.8 million for asset impairments associated with a previously shutdown film products manufacturing facility in LaGrange, Georgia; charges of \$0.5 million for severance and other employee-related costs in connection with restructurings in PE Films (\$0.3 million) and Aluminum Extrusions (\$0.2 million); charges of \$0.2 million for asset impairments in PE Films; charges of \$0.2 million for integration-related expenses and other nonrecurring transactions (included in "Selling, general and administrative expenses" in the consolidated statements of income) associated with the acquisition of AACOA by Aluminum Extrusions; charges of \$0.1 million associated with purchase accounting adjustments made to the value of inventory sold by Aluminum Extrusions after its acquisition of AACOA; and a charge of \$0.1 million (included in "Costs of goods sold" in the consolidated statements of income) related to expected future environmental costs at the aluminum extrusions manufacturing facility in Newnan, Georgia (included in "Cost of goods sold" in the consolidated statement of income). The unrealized gain on the Company's investment in káleo of \$16.1 million and the unrealized loss on the Company's investment in Harbinger of \$1.1 million in 2012 are included in "Other income (expense), net" in the consolidated statements of income. Income taxes for 2012 include the recognition of an additional valuation allowance of \$1.3 million related to the expected limitations on the utilization of assumed capital losses on certain investments.
- (g) On November 20, 2012, Tredgar sold its membership interests in Falling Springs, LLC. All historical results for this business have been reflected in discontinued operations. In 2012, discontinued operations also includes an after-tax loss of \$2.0 million from the sale of Falling Springs in addition to operating results through the closing date. In 2012, net income of \$0.5 million has been reclassified to discontinued operations. On February 12, 2008, Tredgar sold its aluminum extrusions business in Canada. All historical results for this business have been reflected as discontinued operations. In 2014, accruals for indemnifications under the purchase agreement were adjusted, resulting in income from discontinued operations of \$0.9 million. In 2013 and 2012, discontinued operations include after-tax charges of \$14.0 million and \$13.4 million, respectively, to accrue for indemnifications under the purchase agreement related to environmental matters.
- (h) Total return to shareholders is defined as the change in stock price during the year plus dividends per share, divided by the stock price at the beginning of the year.
- (i) Equity market capitalization is the closing market price per share for the period multiplied by the shares outstanding at the end of the period.
- (j) Net sales represent gross sales less freight. Net sales is the measure used by the chief operating decision maker of each segment for purposes of assessing performance.
- (k) In addition to quarterly dividends of 4 1/2 cents per share in the first and second quarters and 6 cents per share in the third and fourth quarters of 2012, there was a special one-time dividend of 75 cents per share in December 2012.
- (l) Total assets in 2015 and 2016 are not comparable to prior years due to the adoption of new FASB guidance associated with the classification of deferred income tax assets and liabilities. See Note 17 to the *Financial Statements* for additional details.
- (m) Equity per share is computed by dividing shareholders' equity at year end by the shares outstanding at end of period.

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

**Forward-looking and Cautionary Statements**

Some of the information contained in this Form 10-K may constitute “forward-looking statements” within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. When using the words “believe,” “estimate,” “anticipate,” “expect,” “project,” “likely,” “may” and similar expressions, Tredegar does so to identify forward-looking statements. Such statements are based on then current expectations and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those addressed in the forward-looking statements. It is possible that actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in or implied by these forward-looking statements. Accordingly, you should not place undue reliance on these forward-looking statements. For risks and important factors that could cause actual results to differ from expectations, refer to the reports that Tredegar files with or furnishes the SEC from time-to-time, including the risks and important factors set forth in “Risk Factors” in Part I, Item 1A of this Form 10-K. Readers are urged to review and consider carefully the disclosures Tredegar makes in the reports Tredegar files with or furnishes to the SEC. Tredegar does not undertake, and expressly disclaims any duty, to update any forward-looking statement to reflect any change in management’s expectations or any change in conditions, assumptions or circumstances on which such statements are based, except as required by applicable law.

**Executive Summary**

**General**

Tredegar is a manufacturer of polyethylene (“PE”) plastic films, polyester films, and aluminum extrusions. Descriptions of all of the Company’s businesses are provided in the **Business** section.

Sales from continuing operations were \$828.3 million in 2016 compared to \$896.2 million in 2015. Net income from continuing operations was \$24.5 million (\$0.75 per diluted share) in 2016, compared with net loss from continuing operations of \$32.1 million (\$0.99 per diluted share) in 2015. The net loss from continuing operations in 2015 included the following:

- The write-off of all goodwill associated with Flexible Packaging Films (\$44.5 million); and
- An unrealized loss on the Company’s investment in kaléo (\$20.5 million), which is accounted for under the fair value method.

Other losses associated with plant shutdowns, asset impairments and restructurings and gains and losses on the sale of assets, gains or losses on investments accounted for under the fair value method and other items are described in Note 18 of the Notes to Financial Statements.

**PE Films**

A summary of operating results for PE Films is provided below:

(In thousands, except percentages)	Year Ended December 31		Favorable/ (Unfavorable)
	2016	2015	% Change
Sales volume (pounds)	139,020	160,283	(13.3)%
Net sales	\$ 331,146	\$ 385,550	(14.1)%
Operating profit from ongoing operations	\$ 26,312	\$ 48,275	(45.5)%

Net sales in 2016 decreased by \$54.4 million versus 2015 primarily due to:

- The loss of business with PE Films' largest customer related to various products in personal care materials (\$22.0 million) and other personal care materials customers (\$7.6 million);
- Lower volume in personal care materials primarily due to the timing of product transitions and lower customer demand (\$10.8 million);
- A decline in volume in surface protection films (\$6.2 million) that the Company believes is primarily the result of lower consumer demand for products with flat panel display screens; and
- Lower volume of low margin overwrap films (\$9.1 million) primarily due to the loss of business with a large customer, partially offset by sales growth for components used in LED lighting products (\$1.3 million).

As noted above, current year sales volume has declined in part due to the wind down of shipments for certain personal care materials related to previously announced known lost business, primarily with PE Films' largest customer. The restructuring project to consolidate domestic manufacturing facilities in PE Films, which commenced in the third quarter of 2015 ("North American facility consolidation"), is expected to be completed in the second half of 2017. Once complete, annual pre-tax cash cost savings are expected to be approximately \$5-6 million on cash-related expenditures. Exit costs are expected to be approximately \$17 million. The table below summarizes the pro forma operating profit from ongoing operations for 2016 and 2015, had the impact of the events noted above been fully realized:

(In Thousands)	Year Ended December 31,	
	2016	2015
Operating profit from ongoing operations, as reported	\$26,312	\$48,275
Contribution to operating profit from ongoing operations associated with known lost business before restructurings & fixed costs reduction	2,995	13,349
Operating profit from ongoing operations net of the impact of known business that will be fully eliminated in future periods	23,317	34,926
Estimated future benefit of North American facility consolidation	5,200	5,200
Pro forma estimated operating profit from ongoing operations	\$28,517	\$40,126

Net sales associated with known lost business that have yet to be fully eliminated were \$8.9 million and \$38.5 million in 2016 and 2015, respectively.

Net of the impact of known lost business, pro forma estimated operating profit from ongoing operations in 2016 decreased by \$11.6 million versus 2015 primarily due to:

- Lower contribution to profits from surface protection films (\$5.0 million) primarily due to lower volume and productivity issues;
- Lower contribution to profits in personal care materials primarily due to volume declines resulting from the timing of product transitions and lower customer demand (\$3.1 million) and lower productivity (\$1.8 million) due in part to operational inefficiencies largely related to elastics production for European customers sourced from the Lake Zurich, Illinois facility;
- The unfavorable lag in the pass-through of average resin costs of \$0.2 million in 2016 versus the favorable lag of \$1.3 million in 2015;
- A charge for inventories accounted for under the LIFO method of \$0.9 million in 2016 versus income of \$0.4 million in 2015;
- Higher contribution to profits from other products in PE Films (\$0.7 million); and
- Higher research and development expenses to support new product opportunities (\$3.0 million), offset by lower general, sales and administrative expenses (\$3.6 million).

The surface protection operating segment of the PE Films reporting segment supports manufacturers of optical and other specialty substrates used in flat panel display products. These films are primarily used by customers to protect components of

displays during the manufacturing and transportation process and then discarded. The top three surface protection customers account for a significant portion of surface protection sales.

As previously discussed, the Company believes that over the next few years, there is an increased risk that a portion of its film used in surface protection applications will be made obsolete by possible future customer product transitions to less costly alternative processes or materials. The Company estimates on a preliminary basis that the annual adverse impact on ongoing operating profit from customer shifts to alternative processes or materials in surface protection is in the range of up to \$5 to \$10 million. Given the technological and commercial complexity involved in bringing these alternative processes and materials to market, the Company is very uncertain as to the timing and ultimate amount of the possible transitions. In addition, the Company is experiencing increasing competitive pricing pressures in other surface protection applications. In response, the Company is aggressively pursuing new surface protection products, applications and customers.

The valuation of the intangible assets associated with the surface protection operating unit not currently subject to amortization of \$57 million is dependent upon the timing and extent of the business lost by customers transitions to less costly alternative processes and materials and changes in the Company's previous assessment could trigger an impairment of these intangible assets.

The Company continues to anticipate a significant additional product transition in its personal care business after 2018 that has an estimated annual adverse impact on ongoing operating profit of \$10 million. The competitive dynamics in the personal care business require continuous development of new materials for customers, which include the leading global and regional personal care producers. The product development process for personal care materials, which spans from idea inception to product commercialization, is typically 24 to 48 months.

Amounts estimated for the expected impact on future profits of lost business and product transitions are provided on a stand-alone basis and do not include any potential offsets such as sales growth, cost reductions or new product developments.

#### *Restructuring*

In July 2015, the Company announced its intention to consolidate its domestic production for PE Films by restructuring the operations in its manufacturing facility in Lake Zurich, Illinois. Efforts to transition domestic production from the Lake Zurich manufacturing facility will require various machinery upgrades and equipment transfers to its other manufacturing facilities. Given PE Films' focus on maintaining product quality and customer satisfaction, the Company anticipates that these activities will be completed in the middle of 2017. Total pre-tax cash expenditures associated with restructuring the Lake Zurich manufacturing facility are expected to be approximately \$17 million over the project period, and once complete, annual pre-tax cash cost savings are expected to be approximately \$5-6 million.

The Company expects to recognize costs associated with the exit and disposal activities of approximately \$5-6 million over the project period. Exit and disposal costs include severance charges and other employee-related expenses arising from the termination of employees of approximately \$3-4 million and equipment transfers and other facility consolidation-related costs of approximately \$2 million. During the same period of time, operating expenses will include the acceleration of approximately \$3 million of non-cash depreciation expense for certain machinery and equipment at the Lake Zurich manufacturing facility. Total expenses associated with the North American facility consolidation project were \$4.3 million in 2016, (\$2.1 million included in "Asset impairments and costs associated with exit and disposal activities, net of adjustments" and \$2.2 million included in "Cost of goods sold" in the consolidated statements of income). As of December 31, 2016, total expenses incurred since the project began in the third quarter of 2015 were \$6.5 million.

Total estimated cash expenditures of \$16-17 million over the project period include the following:

- Cash outlays associated with previously discussed exit and disposal expenses of approximately \$5 million, including additional operating expenses of approximately \$1 million associated with customer product qualifications on upgraded and transferred production lines;
- Capital expenditures associated with equipment upgrades at other PE Films manufacturing facilities in the U.S. of approximately \$11 million; and
- Cash incentives of approximately \$1 million in connection with meeting safety and quality standards while production ramps down at the Lake Zurich manufacturing facility.

Cash expenditures for the North American facility consolidation project were \$10.2 million in 2016, which includes capital expenditures of \$8.2 million. As of December 31, 2016, total cash expenditures since the project began in the third quarter of 2015 were \$13.8 million, which includes \$11.1 million for capital expenditures.

### Capital Expenditures and Depreciation & Amortization

Capital expenditures in PE Films were \$25.8 million in 2016 compared to \$21.2 million in 2015. Capital expenditures are projected to be \$36 million in 2017, including capacity expansion for elastics and acquisition distribution layer materials, other growth and strategic projects and approximately \$10 million for routine capital expenditures required to support operations. Depreciation expense was \$13.5 million in 2016 and \$15.4 million in 2015. Depreciation expense is projected to be \$16 million in 2017. Amortization expense was \$0.1 million in 2016 and \$0.1 million in 2015, and is projected to be \$0.1 million in 2017.

### Flexible Packaging Films

A summary of operating results for Flexible Packaging Films, which excludes the 2015 goodwill impairment charge, is provided below:

(In thousands, except percentages)	Year Ended December 31		Favorable/ (Unfavorable)
	2016	2015	% Change
Sales volume (pounds)	89,706	82,347	8.9 %
Net sales	\$ 108,028	\$ 105,332	2.6 %
Operating profit from ongoing operations	\$ 1,774	\$ 5,453	(67.5)%

Net sales in 2016 increased 2.6% versus 2015 primarily due to a 8.9% increase in sales volume partially offset by competitive pricing pressures and the pass-through to customers of lower raw material costs. Sales volume improved from 2015 to 2016 partially due to the increase of end-use applications for flexible packaging films in the Latin American market.

Operating profit from ongoing operations decreased by \$3.7 million in 2016 versus 2015 primarily due to:

- Foreign currency transaction losses of \$3.5 million in 2016 versus foreign currency transaction gains of \$3.5 million in 2015, associated with U.S. dollar denominated export sales in Brazil;
- Higher volume (\$3.0 million) and operating efficiencies (\$0.7 million);
- Net refunds of \$1.6 million in 2015 received as a result of the reinstatement by the U.S. of the Generalized System of Preferences (GSP) program for allowing duty-free shipments of Terphane products into the U.S. (none in 2016);
- The favorable settlement of certain loss contingencies of \$0.6 million in 2015 (none in 2016);
- The estimated lag in the pass through of lower raw material costs of \$1.2 million in 2016 versus \$1.0 million in 2015; and
- Lower depreciation and amortization costs (\$0.2 million) and other costs and expenses (\$1.4 million).

### Capital Expenditures, Depreciation & Amortization and Goodwill Impairment Charge

Capital expenditures were \$3.4 million in 2016 compared to \$3.5 million in 2015. Capital expenditures are projected to be \$4 million in 2017, including approximately \$3 million for routine items required to support operations. Depreciation expense was \$6.7 million in 2016 and \$6.8 million in 2015. Depreciation expense is projected to be \$7 million in 2017. Amortization expense was \$2.8 million in 2016 and \$2.9 million in 2015, and is projected to be \$3 million in 2017.

During the third quarter of 2015, the Company performed a goodwill impairment assessment related to Terphane. This review was undertaken as a result of the continued competitive pressures related to ongoing unfavorable economic conditions in Terphane's primary market of Brazil, and excess global industry capacity. The assessment resulted in a full write-off of the goodwill of \$44.5 million associated with the acquisition of Terphane.



## Aluminum Extrusions

A summary of operating results for Aluminum Extrusions is provided below:

(In thousands, except percentages)	Year Ended December 31		Favorable/ (Unfavorable)
	2016	2015	% Change
Sales volume (pounds)	172,986	170,045	1.7 %
Net sales	\$ 360,098	\$ 375,457	(4.1)%
Operating profit from ongoing operations	\$ 37,794	\$ 30,432	24.2 %

Net sales in 2016 decreased versus 2015 primarily due to a decrease in average selling prices, partially offset by higher sales volume. Higher sales volume, primarily in the automotive market, had a favorable impact of \$4.7 million on sales in 2016 versus 2015. Lower average selling prices, which had an unfavorable impact on net sales of \$20.8 million, can be primarily attributed to a decrease in average aluminum market prices.

Operating profit from ongoing operations in 2016 increased in comparison to 2015 by \$7.4 million, as a result of:

- Higher volume (\$0.9 million) and lower materials, supply and other net costs (\$2.6 million, including \$0.7 million of construction-related costs incurred in 2015 for the anodizing upgrade project); and
- Improved management of freight logistics and lower utility costs (\$2.2 million) and other efficiencies (\$1.8 million).

### Cast House Explosion

As previously disclosed, on June 29, 2016, the Bonnell Aluminum plant in Newnan, Georgia suffered an explosion in the casting department, resulting in injuries to five employees, one seriously. The explosion caused significant damage to the cast house and related equipment. Production in the extrusion and finishing areas of the plant resumed on June 30, 2016. The Company is in the process of replacing the damaged casting equipment and expects the cast house to be back in production by the end of the second quarter of 2017. The Newnan plant is now sourcing raw materials for its extrusion process from other Bonnell plants and from third party vendors.

Bonnell Aluminum has various forms of insurance to cover losses in the event of such incidents. These policies cover damage to buildings and equipment, workers compensation claims, third party claims, business interruption losses and additional expenses incurred as a result of the explosion.

During 2016, Bonnell Aluminum recognized a gain of \$1.9 million for insurance recoveries to-date associated with assets destroyed or damaged (included in "Other income (expense), net" in the Consolidated Statements of Income - see Note 18 of the Notes to Financial Statements for additional details). The Company also incurred \$5.0 million of additional expenses during 2016, \$4.3 million of which have been fully offset by insurance recoveries (netted in "Cost of goods sold" in the Consolidated Statements of Income and in "Plant shutdowns, asset impairments, restructurings and other" in the Operating Profit table in Note 5 of the Notes to Financial Statements). The remaining \$0.7 million in 2016 of additional expenses for which recovery from insurance is not assured are included in "Cost of goods sold" in the Consolidated Statements of Income. As the insurance recovery process progresses, additional insurance recoveries are expected and any associated gains will be recorded in "Plant shutdowns, asset impairments, restructurings and other" in the Operating Profit table in Note 5 of the Notes to Financial Statements).

### Capital Expenditures and Depreciation & Amortization

Capital expenditures for Aluminum Extrusions were \$15.9 million in 2016 compared to \$8.1 million in 2015. Capital expenditures in 2016 included approximately \$5 million for routine capital expenditures required to support operations and \$9 million of a total of \$18 million expected to add extrusions capacity at the Niles, Michigan, manufacturing facility. Bonnell Aluminum's average extrusions capacity utilization at year end was in excess of 90%. Projections of capital expenditures for Bonnell Aluminum of \$27 million in 2017 include approximately \$9 million to complete the extrusions capacity project at Niles, expenditures to fix the damage caused by the cast house explosion net of related insurance recoveries (facility upgrades of approximately \$2 million will not be covered by insurance reimbursements), \$9 million for routine items required to support legacy operations, and \$6 million to support operations for Futura Industries, which was acquired in February 2017. Depreciation expense was \$8.1 million in 2016 compared to \$8.7 million in 2015, and is projected to be \$12 million in 2017. Amortization expense was \$1.0 million in 2016 and \$1.0 million in 2015, and is projected to be \$4 million in 2017.

## Futura Acquisition

On February 15, 2017, Bonnell Aluminum completed its previously announced acquisition of Futura on a net debt-free basis for approximately \$92 million. The acquisition, which was funded using Tredegar's secured revolving credit facility and will be treated as an asset purchase for U.S. federal income tax purposes, is expected to be immediately accretive to Tredegar's consolidated ongoing earnings. For more information, see "Aluminum Extrusions - Futura Acquisition" in the **Business** section.

## Corporate Expenses, Interest and Income Taxes

Pension expense was \$10.9 million in 2016, a favorable change of \$1.5 million from 2015. Most of the impact on earnings from lower pension expense is reflected in "Corporate expenses, net" in the Operating Profit table in Note 5 of the Notes to Financial Statements. Pension expense is projected to be \$10.4 million in 2017. Corporate expenses, net decreased in 2016 versus 2015. In 2015, corporate expenses, net included non-recurring costs of \$4.9 million, which consisted mainly of employee-related charges of \$3.9 million associated with the resignations of the Company's former chief executive and chief financial officers in the second quarter of 2015. In 2014, corporate expenses, net included non-recurring costs of \$0.9 million.

Interest expense was \$3.8 million in 2016 in comparison to \$3.5 million in 2015.

The effective tax rate from continuing operations was 11.6% in 2016 compared to a negative 38.5% in 2015. The low effective tax rate in 2016 is primarily due to a \$6.4 million tax benefit from excess foreign tax credits that are related to the repatriation of cash from Brazil. The effective tax rate for 2015 was significantly lowered by 68.1% due to the non-deductible goodwill impairment charge of \$44.5 million associated with the acquisition of Terphane. More information on the significant differences between the effective tax rate for income from continuing operations and the U.S. federal statutory rate for 2016 and 2015 are further detailed in the effective income tax rate reconciliation provided in Note 17 of the **Notes to Financial Statements**.

Total debt was \$95.0 million at December 31, 2016, compared to \$104.0 million at December 31, 2015. Net debt (debt in excess of cash and cash equivalents) was \$65.5 million at December 31, 2016, compared with \$59.8 million at December 31, 2015. Net debt is calculated as follows:

(in millions)	December 31, 2016	December 31, 2015
Debt	\$ 95.0	\$ 104.0
Less: Cash and cash equivalents	29.5	44.2
Net debt	\$ 65.5	\$ 59.8

Net debt, a financial measure that is not calculated or presented in accordance with GAAP, is not intended to represent debt as defined by GAAP, but is utilized by management in evaluating financial leverage and equity valuation. The Company believes that investors also may find net debt helpful for the same purposes. Consolidated net capitalization and other credit measures are provided in the **Financial Condition** section.

## Critical Accounting Policies

In the ordinary course of business, the Company makes a number of estimates and assumptions relating to the reporting of results of operations and financial position in the preparation of financial statements in conformity with GAAP. Actual results could differ significantly from those estimates under different assumptions and conditions. The Company believes the following discussion addresses its critical accounting policies. These policies require management to exercise judgments that are often difficult, subjective and complex due to the necessity of estimating the effect of matters that are inherently uncertain.

## Impairment and Useful Lives of Long-lived Identifiable Assets and Goodwill

The Company assesses its long-lived identifiable assets for impairment when events or circumstances indicate that their carrying value may not be recoverable from future cash flows. Any necessary impairment charges are recorded when the Company does not believe the carrying value of the long-lived asset(s) will be recoverable. Tredegar also reassesses the useful lives of its long-lived assets based on changes in the business and technologies.

The Company assesses goodwill for impairment when events or circumstances indicate that the carrying value may not be recoverable, or, at a minimum, on an annual basis (December 1<sup>st</sup> of each year). As of December 31, 2016, reporting units in PE Films and Aluminum Extrusions carried goodwill balances. All goodwill associated with Flexible Packaging Films was

impaired in the third quarter of 2015. Goodwill of the PE Films operating units, Personal Care and Surface Protection, was tested for impairment at the annual testing date, with the estimated fair value of these reporting units exceeding the carrying value of their net assets by approximately 30% and 48%, respectively, at December 1, 2016. The goodwill of the Aluminum Extrusions reporting unit is associated with the October 2012 acquisition of AACOA. The estimated fair value of this reporting unit substantially exceeded the carrying value of its net assets at December 1, 2016.

In assessing the recoverability of goodwill and long-lived identifiable assets, the Company estimates fair value using discounted cash flow analysis and comparative enterprise value-to-EBITDA (earnings before interest, taxes, depreciation and amortization) multiples. These calculations require management to make assumptions regarding estimated future cash flows, discount rates and other factors to determine if an impairment exists. If these estimates or their related assumptions change in the future, the Company may be required to record additional impairment charges.

Based upon assessments performed as to the recoverability of long-lived identifiable assets, the Company recorded an asset impairment loss for continuing operations of \$0.6 million and \$0.2 million in 2016 and 2015, respectively (none in 2014).

### **Investment Accounted for Under the Fair Value Method**

In August 2007 and December 2008, Tredegar made an aggregate investment of \$7.5 million in kaléo (formerly Intelliject, Inc.), a privately held specialty pharmaceutical company. This investment is accounted for under the fair value method. At the time of the initial investment, the Company elected the fair value option over the equity method of accounting since its investment objectives were similar to those of venture capitalists, which typically do not have controlling financial interests (venture capital funds generally use the fair value method to account for their investment portfolios). At December 31, 2016, Tredegar's ownership interest was approximately 19% on a fully diluted basis.

The Company discloses the level within the fair value hierarchy in which fair value measurements in their entirety fall, segregating fair value measurements using quoted prices in active markets for identical assets or liabilities (Level 1), significant other observable inputs (Level 2), and significant unobservable inputs (Level 3). On the dates of its investments, Tredegar believes that the amount it paid for its ownership interest and liquidation preferences was based on Level 2 inputs, including investments by other investors. Subsequent to the last round of financing, and until the next round of financing, the Company believes fair value estimates are based upon Level 3 inputs since there is no secondary market for Tredegar's ownership interest. Accordingly, after the latest financing and until the next round of financing or any other significant financial transaction, fair value estimates will primarily be based on assumptions relating to meeting product development and commercialization milestones, cash flow projections (projections of development and commercialization milestone payments, sales, costs, expenses, capital expenditures and working capital investment) and discounting of these factors for the high degree of risk. Adjustments to the estimated fair value of this investment will be made in the period upon which such changes can be quantified.

At December 31, 2016 and 2015, the fair value of the Company's investment in kaléo (the carrying value included in "Other assets and deferred charges" in the consolidated balance sheet) was \$20.2 million and \$18.6 million, respectively. The weighted average cost of capital used in the fair market valuation of the Company's interest in kaléo was 45% at both December 31, 2016 and 2015. The fair market valuation of Tredegar's interest in kaléo is sensitive to changes in the weighted average cost of capital used to discount cash flow projections for the high degree of risk associated with meeting development and commercialization milestones as anticipated. At December 31, 2016, the effect of a 500 basis point decrease in the weighted average cost of capital assumption would have further increased the fair value of the Company's interest in kaléo by approximately \$6 million, and a 500 basis point increase in the weighted average cost of capital assumption would have decreased the fair value of the Company's interest by approximately \$5 million. See Note 4 of the *Notes to Financial Statements* for more information.

### **Pension Benefits**

Tredegar sponsors noncontributory defined benefit (pension) plans in its continuing operations that have resulted in varying amounts of net pension income or expense, as developed from actuarial valuations. Inherent in these valuations are key assumptions including discount rates, expected return on plan assets and rate of future compensation increases. The Company is required to consider current market conditions, including changes in interest rates and plan asset investment returns, in determining these assumptions. Actuarial assumptions may differ materially from actual results due to changing market and economic conditions, higher or lower withdrawal rates or longer or shorter life spans of participants. These differences may result in a significant impact to the amount of net pension income or expense recorded in future periods.

The discount rate is used to determine the present value of future payments. The discount rate is the single rate that, when applied to expected benefit payments, provides a present value equal to the present value of expected benefit payments determined by using the AA-rated bond yield curve. In general, the pension liability increases as the discount rate decreases

and vice versa. The weighted average discount rate utilized was 4.29%, 4.55% and 4.17% at the end of 2016, 2015 and 2014, respectively, with changes between periods due to changes in market interest rates. Pay for active participants of the plan was frozen as of December 31, 2007. With the exception of plan participants at one of the Company's U.S. manufacturing facilities, the plan no longer accrued benefits associated with crediting employees for service, thereby freezing all future benefits under the plan.

A lower expected return on plan assets increases the amount of expense and vice versa. Decreases in the level of actual plan assets will also serve to increase the amount of pension expense. The total return on plan assets, which is primarily affected by the change in fair value of plan assets, current year contributions and current year payments to participants, was approximately 7.9%, (1.8)% and 4.1% in 2016, 2015 and 2014, respectively. The expected long-term return on plan assets relating to continuing operations, which is estimated by asset class and generally based on inflation-adjusted historical returns, volatilities, risk premiums and managed asset premiums, was 7.00%, 7.50% and 7.75% in 2016, 2015 and 2014, respectively. The Company anticipates that its expected long-term return on plan assets will be 6.50% for 2017. See Note 14 of the *Notes to Financial Statements* on for more information on expected long-term return on plan assets and asset mix.

See the *Executive Summary* for further discussion regarding the financial impact of the Company's pension plans.

### **Income Taxes**

On a quarterly basis, Tredegar reviews its judgments regarding uncertain tax positions and the likelihood that the benefits of a deferred tax asset will be realized. As circumstances change, the Company reflects in earnings any adjustments to unrecognized benefits for uncertain tax positions and valuation allowances for deferred tax assets.

For financial reporting purposes, unrecognized tax benefits on uncertain tax positions were \$3.3 million, \$4.0 million and \$3.3 million as of December 31, 2016, 2015 and 2014, respectively. Tax payments resulting from the successful challenge by the taxing authority on uncertain tax positions taken by Tredegar would possibly result in the payment of interest and penalties. Accordingly, the Company also accrues for possible interest and penalties on uncertain tax positions. The balance of accrued interest and penalties on deductions taken relating to uncertain tax positions was \$0.1 million, \$0.4 million and \$0.3 million at December 31, 2016, 2015 and 2014, respectively (\$0.1 million, \$0.2 million and \$0.2 million, respectively, net of corresponding federal and state income tax benefits). Accruals for possible interest and penalties on uncertain tax positions are reflected in income tax expense for financial reporting purposes.

Tredegar, or one of its subsidiaries, files income tax returns in the U.S. federal jurisdiction, various states and jurisdictions outside the U.S. With few exceptions, Tredegar is no longer subject to U.S. federal, state or non-U.S. income tax examinations by tax authorities for years before 2013.

As of December 31, 2016 and 2015, valuation allowances relating to deferred tax assets were \$12.7 million and \$13.3 million, respectively. For more information on deferred income tax assets and liabilities, see Note 17 of the *Notes to Financial Statements*.

### **Recently Issued Accounting Standards**

Refer to the section *Recently Issued Accounting Statements* in Note 1 of the *Notes to Financial Statements* for information concerning the effect of recently issued accounting pronouncements.

### **Results of Continuing Operations**

#### **2016 versus 2015**

**Revenues.** Sales in 2016 decreased by 7.6% compared with 2015 due to lower sales by PE Films and Aluminum Extrusions, partially offset by higher sales by Flexible Packaging Films. Net sales decreased 14.1% in PE Films primarily due to lower volume from lost sales, product transitions and adverse market demand for certain products. Net sales increased 2.6% in Flexible Packaging Films from higher volume partially due to the increase of end-use applications for flexible packaging films in the Latin American market, partially offset by competitive pricing pressures and the pass-through to customers of lower raw material costs. Net sales decreased 4.1% in Aluminum Extrusions primarily due to a decrease in average selling prices driven mainly by lower aluminum costs, partially offset by higher sales volume in the automotive market. For more information on changes in net sales and volume, see the *Executive Summary*.

**Operating Costs and Expenses.** Consolidated gross profit margin (sales minus cost of goods sold and freight as a percentage of sales) was 15.8% in 2016 and 15.7% in 2015. The gross profit margin in PE Films decreased due to lower revenue, as discussed above, an unfavorable lag in the pass-through of average resin costs, productivity inefficiencies in surface protection

films and an unfavorable LIFO inventory adjustment. The gross profit margin in Flexible Packaging Films increased primarily as a result of higher sales volume, as discussed above, operating efficiencies and lower other costs and expenses, partially offset by net refunds in 2015 of export duties paid. The gross profit margin in Aluminum Extrusions increased primarily as a result of higher volume, production efficiencies, improved management of freight logistics and lower utility costs. Consolidated gross profit as a percentage of sales was positively impacted by lower pension expenses in 2016 compared to 2015. Most of the impact related to pension expense is not allocated to PE Films or Aluminum Extrusions.

For more information on changes in operating costs and expenses, see the *Executive Summary*.

**Selling, General and Administrative.** As a percentage of sales, selling, general and administrative and R&D expenses were 11.5% in 2016, which increased from 9.8% in 2015. The increase in selling, general and administrative and R&D expenses as a percentage of sales can be primarily attributed to the higher R&D expenses.

**Plant shutdowns, asset impairments, restructurings and other.** Plant shutdowns, asset impairments, restructurings and other items in 2016 are shown in the segment operating profit table in Note 5 and are described in detail in Note 18 of the *Notes to Financial Statements*. A discussion of unrealized gains and losses on investments can also be found in Note 4 of the *Notes to Financial Statements*.

**Interest Income and Expense.** Interest income, which is included in “Other income (expense), net” in the consolidated statements of income, was \$0.3 million in both 2016 and 2015.

Interest expense, which is net of amounts capitalized and included in property, plant and equipment (\$0.3 million and \$0.4 million capitalized in 2016 and 2015, respectively), was \$3.8 million in 2016, compared to \$3.5 million for 2015. Interest expense in 2016 included the write-off of \$0.2 million in unamortized loan fees from Tredegar’s revolving credit facility that was refinanced, in the first quarter of 2016. Average debt outstanding and interest rates were as follows:

(In millions, except percentages)	2016	2015
Floating-rate debt with interest charged on a rollover basis at one-month LIBOR plus a credit spread:		
Average outstanding debt balance	\$ 103.5	\$ 135.1
Average interest rate	2.3%	2.0%
Fixed-rate and other debt:		
Average outstanding debt balance	\$ —	\$ —
Average interest rate	n/a	n/a
Total debt:		
Average outstanding debt balance	\$ 103.5	\$ 135.1
Average interest rate	2.3%	2.0%

**Identifiable Assets.** A summary of identifiable assets for the year ended December 31, 2016 versus 2015 is provided below:

(In thousands)	Year Ended December 31		
	2016	2015	Variance
PE Films	\$ 278,558	\$ 270,236	\$ 8,322
Flexible Packaging Films	156,836	146,253	10,583
Aluminum Extrusions	147,639	136,935	10,704
Subtotal	583,033	553,424	29,609
General corporate	38,618	25,680	12,938
Cash and cash equivalents	29,511	44,156	(14,645)
Total	\$ 651,162	\$ 623,260	\$ 27,902

Identifiable assets in PE Films increased at December 31, 2016 from December 31, 2015 primarily due to higher property, plant and equipment balances as a result of higher current year capital expenditures. Identifiable assets in Flexible Packaging Films increased at December 31, 2016 from December 31, 2015 primarily due to higher property, plant and equipment balances as a result of changes in the value of the U.S. dollar relative to foreign currencies, partially offset by depreciation and amortization. Identifiable assets in Aluminum Extrusions increased at December 31, 2016 from December 31,

2015 primarily due to higher property, plant and equipment balances as a result of current year capital expenditures, higher accounts receivable balances due to the timing of collections and higher inventory balances. Identifiable assets in General Corporate increased at December 31, 2016 from December 31, 2015 due to an increase in income taxes recoverable, deferred financing fees from the refinancing of the revolving credit facility, and an increase in the value of the Company's investment in kaléo.

### **2015 versus 2014**

**Revenues.** Sales in 2015 decreased by 5.8% compared with 2014 due to lower sales by PE Films and Flexible Packaging Films, partially offset by higher sales in Aluminum Extrusions. Net sales decreased 17.0% in PE Films primarily due to lower volume, a decrease in average selling prices due to competitive pricing pressures and lower input costs and the unfavorable impact of the change in the U.S. dollar value of currencies for operations outside the U.S. Net sales decreased 7.9% in Flexible Packaging Films primarily due to competitive pricing pressures and the pass-through to customers of lower raw material costs, partially offset by an increase in sales volume. Net sales increased 9.0% in Aluminum Extrusions primarily due to higher sales volume in all markets, offset by a decrease in average selling prices driven mainly by lower aluminum costs and mix changes.

**Operating Costs and Expenses.** Consolidated gross profit margin (sales minus cost of goods sold and freight as a percentage of sales) was 15.7% in 2015 and 15.2% in 2014. The gross profit margin in PE Films increased due to a favorable lag in the pass-through of average resin costs and higher productivity in surface protection films offset by lower volume, partially offset by competitive pricing pressures and the unfavorable impact of the change in the U.S. dollar value of currencies for operations outside the U.S. The gross profit margin in Flexible Packaging Films increased primarily as a result of higher sales volume, lower manufacturing costs, foreign currency transaction gains associated with U.S. dollar denominated export sales in Brazil, a favorable lag in the pass through of lower raw material costs and net refunds of export duties paid. The gross profit margin in Aluminum Extrusions increased primarily as a result of higher volume partially offset by new hire costs and other production inefficiencies that occurred in the first three quarters of 2015. Consolidated gross profit as a percentage of sales was negatively impacted by higher pension expenses in 2015 compared to 2014. Most of the impact of higher pension expense is not allocated to PE Films or Aluminum Extrusions.

**Selling, General and Administrative.** As a percentage of sales, selling, general and administrative and R&D expenses were 9.8% in 2015, which increased from 8.6% in 2014. The increase in selling, general and administrative and R&D expenses as a percentage of sales can be primarily attributed to the severance and other employee-related costs associated with the resignation of the Company's former chief executive and chief financial officers and costs incurred on a non-recurring business development project.

**Plant shutdowns, asset impairments, restructurings and other.** Plant shutdowns, asset impairments, restructurings and other items in 2015 are shown in the segment operating profit table in Note 5 and are described in detail in Note 18 of the *Notes to Financial Statements*. A discussion of unrealized gains and losses on investments can also be found in Note 4 of the *Notes to Financial Statements*.

**Discontinued Operations.** On February 12, 2008, Tredegar sold its aluminum extrusions business in Canada for \$25.0 million. All historical results for this business have been reflected as discontinued operations. Accruals for indemnifications under the purchase agreement related to environmental matters were adjusted in 2014, resulting in income from discontinued operations of \$0.9 million (\$0.9 million after taxes).

**Interest Income and Expense.** Interest income, which is included in "Other income (expense), net" in the consolidated statements of income, was \$0.3 million in 2015, compared to \$0.6 million in 2014.

Interest expense, which is net of amounts capitalized and included in property, plant and equipment (\$0.4 million and \$1.1 million capitalized in 2015 and 2014, respectively), was \$3.5 million in 2015, compared to \$2.7 million for 2014. Average debt outstanding and interest rates were as follows:

(In millions, except percentages)	2015	2014
Floating-rate debt with interest charged on a rollover basis at one-month LIBOR plus a credit spread:		
Average outstanding debt balance	\$ 135.1	\$ 136.5
Average interest rate	2.0%	2.0%
Fixed-rate and other debt:		
Average outstanding debt balance	\$ —	\$ —
Average interest rate	n/a	n/a
Total debt:		
Average outstanding debt balance	\$ 135.1	\$ 136.5
Average interest rate	2.0%	2.0%

**Income Taxes.** The effective income tax rate from continuing operations was a negative 38.5% in 2015 compared with 20.7% in 2014. The effective tax rate for 2015 was significantly lower due to the non-deductible goodwill impairment charge of \$44.5 million associated with the acquisition of Terphane. Income taxes from continuing operations in 2014 included the recognition of a tax benefit for a portion of the Company's capital loss carryforwards of \$4.9 million. As a result of changes in the underlying basis of certain foreign subsidiaries, income taxes from continuing operations in 2014 also included an adjustment of \$2.2 million to reverse previously accrued deferred tax liabilities arising from changes in tax basis due to foreign currency translation adjustments and unremitted earnings. Factors impacting the effective tax rate for 2015 and 2014 are further detailed in the effective income tax rate reconciliation provided in Note 17 of the *Notes to Financial Statements*.

**Identifiable Assets.** A summary of identifiable assets for the year ended December 31, 2015 versus 2014 is provided below:

(In thousands)	Year Ended December 31		
	2015	2014	Variance
PE Films	\$ 270,236	\$ 283,606	\$ (13,370)
Flexible Packaging Films	146,253	262,604	(116,351)
Aluminum Extrusions	136,935	143,328	(6,393)
Subtotal	553,424	689,538	(136,114)
General corporate	25,680	49,032	(23,352)
Cash and cash equivalents	44,156	50,056	(5,900)
Total	\$ 623,260	\$ 788,626	\$ (165,366)

Identifiable assets in PE Films decreased at December 31, 2015 from December 31, 2014 primarily due to lower accounts receivable and inventories as a result of lower sales volume and lower property, plant and equipment and intangible asset balances as a result of changes in the value of the U.S. dollar relative to foreign currencies, partially offset by current year capital expenditures. Identifiable assets in Flexible Packaging Films decreased at December 31, 2015 from December 31, 2014 primarily due to the write off of \$44.5 million of goodwill from the Terphane acquisition, lower accounts receivable and inventories as a result of lower sales volume, a reduction in property, plant and equipment and intangible asset balances as a result of changes in the value of the U.S. dollar relative to foreign currencies, partially offset by capital expenditures. Identifiable assets in Aluminum Extrusions decreased at December 31, 2015 from December 31, 2014 primarily due to lower accounts receivable balances as a result of the timing of collections. Identifiable assets in General Corporate decreased at December 31, 2015 from December 31, 2014 primarily due to a decrease in the value of the Company's investment in kaléo.

**Segment Analysis.** A summary of operating results for 2015 versus 2014 for each of the Company's reporting segments is shown below.

**PE Films**

A summary of operating results for PE Films is provided below:

(In thousands, except percentages)	Year Ended December 31		Favorable/ (Unfavorable)
	2015	2014	% Change
Sales volume (pounds)	160,283	175,203	(8.5)%
Net sales	\$ 385,550	\$ 464,339	(17.0)%
Operating profit from ongoing operations	\$ 48,275	\$ 60,971	(20.8)%

Net sales in 2015 decreased by \$78.8 million versus 2014, primarily due to lower volume (\$46.3 million), mainly from lost business and product transitions, and the unfavorable impact from the change in the U.S. dollar value of currencies for operations outside of the U.S. (\$25.9 million).

Sales volume in 2015 declined as a result of the wind down of shipments for certain personal care materials due to various product transitions and lost business, primarily with PE Films' largest customer. In addition, efforts to consolidate domestic manufacturing facilities in PE Films commenced in the third quarter of 2015. This restructuring project is not expected to be completed until the second half of 2017, and once complete, annual pre-tax cash cost savings are expected to be approximately \$5-6 million. The table below summarizes the pro forma operating profit from ongoing operations for 2015 and 2014, had the impact of the events noted in the *Restructuring* section in the *Executive Summary* been fully realized in each period:

(In Thousands)	Year Ended December 31,	
	2015	2014
Operating profit from ongoing operations, as reported	\$48,275	\$60,971
Contribution to operating profit from ongoing operations associated with lost business:		
Certain baby care elastic films sold in North America	—	2,106
Product transitions & other lost business before restructurings & fixed costs reduction	13,349	22,686
Operating profit from ongoing operations net of the impact of business that will be fully eliminated in future periods	34,926	36,179
Estimated future benefit of North American facility consolidation	5,200	5,200
Pro forma estimated operating profit from ongoing operations	\$40,126	\$41,379

Net sales associated with lost business and product transitions that have yet to be fully eliminated were approximately \$38.5 million and \$84.5 million in 2015 and 2014, respectively.

Net of the impact of product transitions and lost business, pro forma estimated operating profit from ongoing operations in 2015 decreased by \$1.3 million versus 2014 due to the following:

- An increase in volume of over 6% and a favorable mix for surface protection films (\$4.2 million);
- A decrease in volume for polyethylene overwrap films and other personal care materials (\$2.4 million);
- The favorable lag in the pass-through of average resin costs of \$1.3 million in 2015 versus a negative \$0.1 million in 2014;
- An increase in foreign currency translation and transaction losses (\$3.7 million); and
- Other factors including higher research and development costs partially offset by lower depreciation.

Capital Expenditures and Depreciation & Amortization



Capital expenditures in PE Films were \$21.2 million in 2015 compared to \$17.0 million in 2014. Depreciation expense was \$15.4 million in 2015 and \$21.1 million in 2014 as certain assets became fully depreciated. Amortization expense was \$0.1 million in 2015 and \$0.3 million in 2014.

### **Flexible Packaging Films**

A summary of operating results for Flexible Packaging Films, which excludes the goodwill impairment charge discussed below, is provided below:

(In thousands, except percentages)	Year Ended December 31		Favorable/ (Unfavorable)
	2015	2014	% Change
Sales volume (pounds)	82,347	72,064	14.3 %
Net sales	\$ 105,332	\$ 114,348	(7.9)%
Operating profit (loss) from ongoing operations	\$ 5,453	\$ (2,917)	-

Net sales in 2015 decreased 7.9% versus 2014 primarily due to competitive pricing pressures and the pass-through to customers of lower raw material costs, partially offset by a 14.3% increase in sales volume.

Operating profit (loss) from ongoing operations improved from a loss of \$2.9 million in 2014 to income of \$5.5 million in 2015 (\$8.4 million improvement), primarily due to the following:

- An improvement of \$1.4 million in 2015 versus 2014 due to lower general, sales and administration costs of \$1.2 million and operating efficiencies of \$0.9 million, partially offset by lower margins of \$0.7 million primarily from competitive pricing pressures;
- Foreign currency transaction gains associated with U.S. dollar denominated export sales in Brazil of \$3.5 million in 2015 versus \$0.5 million in 2014;
- The estimated lag in the pass through of lower raw material costs of \$1.0 million in 2015 (none in 2014);
- Net refunds of \$1.6 million in 2015 as a result of the reinstatement by the U.S. in the third quarter of 2015 of the Generalized System of Preferences (GSP) program allowing for duty-free shipment of Terphane's products to the U.S. versus duties paid of \$1.1 million in 2014; and
- The favorable settlement of certain loss contingencies of \$0.6 million in 2015 versus \$0.3 million in 2014.

### **Capital Expenditures, Depreciation & Amortization and Goodwill Impairment Charge**

Capital expenditures were \$3.5 million in 2015 compared to \$21.8 million in 2014. Capital expenditures in 2014 included \$17 million for the capacity expansion project at a manufacturing facility in Cabo de Santo Agostinho, Brazil. Depreciation expense was \$6.8 million in 2015 and \$5.8 million in 2014. Amortization expense was \$2.9 million in 2015 and \$3.5 million in 2014.

During the third quarter of 2015, the Company performed a goodwill impairment assessment related to Flexible Packaging Films. This review was undertaken as a result of the continued competitive pressures related to ongoing unfavorable economic conditions in Flexible Packaging Films' primary market of Brazil and excess global industry capacity. The assessment resulted in a full write-off of the goodwill of \$44.5 million associated with the acquisition of Terphane.

### **Aluminum Extrusions**

A summary of operating results for Aluminum Extrusions is provided below:

(In thousands, except percentages)	Year Ended December 31		Favorable/ (Unfavorable)
	2015	2014	% Change
Sales volume (pounds)	170,045	153,843	10.5%
Net sales	\$ 375,457	\$ 344,346	9.0%
Operating profit from ongoing operations	\$ 30,432	\$ 25,664	18.6%

Net sales in 2015 increased in comparison to 2014 primarily due to higher sales volume in all major markets, offset by a decrease in average selling prices. Higher sales volume had a favorable impact of \$40.6 million in 2015 compared to 2014. The decrease in average selling prices, which reduced net sales by \$9.5 million, were mainly due to lower aluminum costs and mix changes.

Operating profit from ongoing operations in 2015 increased \$4.8 million primarily as a result of higher volume partially offset by new hire costs and other production inefficiencies that occurred in the first three quarters of 2015.

#### Capital Expenditures and Depreciation & Amortization

Capital expenditures for Aluminum Extrusions were \$8.1 million in 2015 compared to \$6.1 million in 2014. Depreciation expense was \$8.7 million in 2015 compared to \$8.3 million in 2014. Amortization expense was \$1.0 million in 2015 and \$1.6 million in 2014.

### Financial Condition

#### Assets and Liabilities

Tredegar's management continues to focus on improving working capital management, and measures such as days sales outstanding ("DSO"), days inventory outstanding ("DIO") and days payables outstanding ("DPO") are used by the Company to evaluate changes in working capital. Significant changes in assets and liabilities from continuing operations from December 31, 2015 to December 31, 2016 are summarized below:

- Accounts and other receivables increased \$3.2 million (3.4%).
  - Accounts and other receivables in PE Films increased by \$0.8 million due mainly to the timing of cash receipts and slower collections. DSO (represents trailing 12 months net sales divided by a rolling 12-month average of accounts and other receivables balances) was approximately 45.7 days in 2016 and 42.7 days in 2015.
  - Accounts and other receivables in Flexible Packaging Films increased by \$0.2 million primarily due to the impact of the change in the value of the U.S. dollar relative to the Brazilian real. DSO was approximately 51.8 days in 2016 and 68.9 days in 2015.
  - Accounts and other receivables in Aluminum Extrusions increased by \$2.0 million primarily due to the timing of cash receipts. DSO was approximately 43.3 days in 2016 and 45.1 days in 2015.
- Inventories increased \$0.7 million (1.1%).
  - Inventories in PE Films decreased by \$0.3 million primarily due to lower storeroom and shop supply balances and the timing of shipments at the end of the year. DIO (represents trailing 12 months costs of goods sold calculated on a first-in, first-out basis divided by a rolling 12-month average of inventory balances calculated on the first-in, first-out basis) was approximately 52.2 days in 2016 and 48.3 days in 2015.
  - Inventories in Flexible Packaging Films increased by \$0.1 million primarily due to the impact of the change in the value of the U.S. dollar relative to the Brazilian real. DIO was approximately 77.0 days in 2016 and 81.6 days in 2015.
  - Inventories in Aluminum Extrusions increased by \$1.0 million primarily due to higher sales volume and the timing of shipments at the end of the year. DIO was approximately 26.5 days in 2016 and 29.8 days in 2015.
- Net property, plant and equipment increased \$29.4 million (12.7%) due primarily to capital expenditures of \$45.5 million and changes in the value of the U.S. dollar relative to the Brazilian Real of \$12.9 million, partially offset by depreciation of \$28.5 million.
- Goodwill and other intangibles decreased by \$1.6 million (1.1%) primarily due to amortization expense of \$4.0 million, partially offset by changes in the value of the U.S. dollar relative to the Brazilian real of \$2.3 million.
- Accounts payable decreased by \$2.8 million (3.3%).
  - Accounts payable in PE Films decreased by \$3.4 million primarily due to the timing of payments at the end of the year. DPO (represents trailing 12 months costs of goods sold calculated on a first-in, first-out basis divided by a rolling 12-month average of accounts payable balances) was approximately 38.5 days in 2016 and 39.0 days in 2015.
  - Accounts payable in Flexible Packaging Films increased by \$3.7 million, the timing of payments and the impact of the change in the U.S. dollar value of currencies for operations outside the U.S. DPO was approximately 39.5 days in 2016 and 34.2 days in 2015.

- Accounts payable in Aluminum Extrusions decreased by \$1.9 million, primarily due to the timing of payments. DPO was approximately 45.4 days in 2016 and 48.0 days in 2015.
- Accrued expenses increased by \$5.0 million (14.8%) from December 31, 2015 due to higher employee benefit accruals, higher stock-based benefit obligations and deferred revenue related to the startup of a new production line.
- Other noncurrent liabilities decreased by \$5.8 million (5.2%) from December 31, 2015, primarily due to a reduction in the accrued pension liability.
- Net noncurrent deferred income tax liabilities in excess of noncurrent deferred tax assets increased by \$1.9 million primarily due to numerous changes between years in the balance of the components shown in the December 31, 2016 and 2015 schedule of deferred income tax assets and liabilities provided in Note 17 of the *Notes to Financial Statements*. The Company had a current income tax receivable of \$7.5 million at December 31, 2016 compared to \$0.4 million at December 31, 2015. The change is primarily due to timing of tax payments and anticipated refunds of credits available for carryback to prior years.

On March 1, 2016, the Company entered into a new five-year, \$400 million secured revolving credit agreement that expires on March 1, 2021 (“revolving credit agreement”), replacing the previous \$350 million unsecured revolving credit agreement. Net capitalization and indebtedness as defined under the revolving credit agreement as of December 31, 2016 were as follows:

Net Capitalization and Indebtedness as of December 31, 2016	
(In Thousands)	
Net capitalization:	
Cash and cash equivalents	\$ 29,511
Debt:	
\$400 million revolving credit agreement maturing March 1, 2021	95,000
Other debt	—
Total debt	95,000
Debt net of cash and cash equivalents	65,489
Shareholders' equity	310,783
Net capitalization	\$ 376,272
Indebtedness as defined in revolving credit agreement:	
Total debt	\$ 95,000
Face value of letters of credit	2,685
Capital lease	255
Other	250
Indebtedness	\$ 98,190

The credit spread and commitment fees charged on the unused amount under our revolving credit agreement at various indebtedness-to-adjusted EBITDA levels are as follows:

Pricing Under Revolving Credit Agreement (Basis Points)		
Indebtedness-to-Adjusted EBITDA Ratio	Credit Spread Over LIBOR	Commitment Fee
> 3.5x but <= 4.0x	250	45
> 3.0x but <= 3.5x	225	40
> 2.0x but <= 3.0x	200	35
> 1.0x but <= 2.0x	175	30
<= 1.0x	150	25

At December 31, 2016, the interest rate on debt under the revolving credit agreement existing at that date was priced at one-month LIBOR plus the applicable credit spread of 175 basis points. Under the revolving credit agreement, borrowings are permitted up to \$400 million, and approximately \$185.0 million was available to borrow at December 31, 2016, based upon the most restrictive covenants.

As of December 31, 2016, Tredegar is in compliance with all financial covenants outlined in its revolving credit agreement. Noncompliance with any of the debt covenants may have a material adverse effect on financial condition or liquidity in the event such noncompliance cannot be cured or should the Company be unable to obtain a waiver from the lenders. Renegotiation of the covenant(s) through an amendment to the revolving credit agreement may effectively cure the noncompliance, but may have an effect on financial condition or liquidity depending upon how the amended covenant is renegotiated.

The computations of adjusted EBITDA, adjusted EBIT, the leverage ratio and interest coverage ratio as defined in the revolving credit agreement are presented below along with the related most restrictive covenants. Adjusted EBITDA and adjusted EBIT as defined in the revolving credit agreement are not intended to represent net income or cash flow from operations as defined by GAAP and should not be considered as either an alternative to net income or to cash flow.

**Computations of Adjusted EBITDA, Adjusted EBIT, Leverage Ratio and Interest Coverage Ratio as Defined in the Revolving Credit Agreement Along with Related Most Restrictive Covenants**  
As of and for the Twelve Months Ended December 31, 2016 (In Thousands)

Computations of adjusted EBITDA and adjusted EBIT as defined in revolving credit agreement for the twelve months ended December 31, 2016:

Net income	\$ 24,466
Plus:	
After-tax losses related to discontinued operations	—
Total income tax expense for continuing operations	3,217
Interest expense	3,806
Depreciation and amortization expense for continuing operations	32,472
All non-cash losses and expenses, plus cash losses and expenses not to exceed \$10,000, for continuing operations that are classified as unusual, extraordinary or which are related to plant shutdowns, asset impairments and/or restructurings (cash-related of \$6,742)	8,645
Charges related to stock option grants and awards accounted for under the fair value-based method	56
Losses related to the application of the equity method of accounting	—
Losses related to adjustments in the estimated fair value of assets accounted for under the fair value method of accounting	—
Minus:	
After-tax income related to discontinued operations	—
Total income tax benefits for continuing operations	—
Interest income	(261)
All non-cash gains and income, plus cash gains and income in excess of \$10,000, for continuing operations that are classified as unusual, extraordinary or which are related to plant shutdowns, asset impairments and/or restructurings	—
Income related to changes in estimates for stock option grants and awards accounted for under the fair value-based method	—
Income related to the application of the equity method of accounting	—
Income related to adjustments in the estimated fair value of assets accounted for under the fair value method of accounting	(1,600)
Plus cash dividends declared on investments accounted for under the equity method of accounting	—
Plus or minus, as applicable, pro forma EBITDA adjustments associated with acquisitions and asset dispositions	—
Adjusted EBITDA as defined in revolving credit agreement	70,801
Less: Depreciation and amortization expense for continuing operations (including pro forma for acquisitions and asset dispositions)	(32,472)
Adjusted EBIT as defined in revolving credit agreement	\$ 38,329
Computations of leverage and interest coverage ratios as defined in revolving credit agreement at December 31, 2016:	
Leverage ratio (indebtedness-to-adjusted EBITDA)	1.39x
Interest coverage ratio (adjusted EBIT-to-interest expense)	10.07x
Most restrictive covenants as defined in revolving credit agreement:	
Maximum permitted aggregate amount of dividends that can be paid by Tredegar during the term of the revolving credit agreement (\$100,000 plus 50% of net income generated for each quarter beginning January 1, 2016)	\$ 112,233
Maximum leverage ratio permitted	4.00x
Minimum interest coverage ratio permitted	2.50x

Tredegar is obligated to make future payments under various contracts as set forth below:

(In Millions)	Payments Due by Period						
	2017	2018	2019	2020	2021	Remainder	Total
<b>Debt:</b>							
Principal payments	\$ —	\$ —	\$ —	\$ —	\$ 95.0	\$ —	\$ 95.0
Estimated interest expense	2.5	2.5	2.5	2.5	0.4	—	10.4
Estimated contributions required <sup>(1)</sup> :							
Defined benefit plans	5.5	8.9	12.1	10.3	10.5	28.1	75.4
Other postretirement benefits	0.5	0.5	0.5	0.5	0.5	2.5	5.0
Capital expenditure commitments	12.0	—	—	—	—	—	12.0
Leases	2.4	2.2	2.0	2.0	1.5	1.1	11.2
Estimated obligations relating to uncertain tax positions <sup>(2)</sup>						3.4	3.4
Other <sup>(3)</sup>	3.8	2.1	—	—	—	—	5.9
<b>Total</b>	<b>\$ 26.7</b>	<b>\$ 16.2</b>	<b>\$ 17.1</b>	<b>\$ 15.3</b>	<b>\$ 107.9</b>	<b>\$ 35.1</b>	<b>\$ 218.3</b>

- (1) Estimated minimum required contributions for defined benefit plans and benefit payments for other postretirement plans are based on actuarial estimates using current assumptions for discount rates, long-term rate of return on plan assets, rate of compensation increases and health care cost trends. The expected defined benefit plan contribution estimates for 2017 through 2026 were determined under provisions of the Pension Protection Act of 2006 using the preliminary assumptions chosen by Tredegar for the 2017 plan year. Tredegar has determined that it is not practicable to present defined benefit contributions and other postretirement benefit payments beyond 2026.
- (2) Amounts for which reasonable estimates about the timing of payments cannot be made are included in the remainder column.
- (3) Includes contractual severance and other miscellaneous contractual arrangements.

From time to time, the Company enters into transactions with third parties in connection with the sale of assets or businesses in which it agrees to indemnify the buyers or third parties involved in the transaction, or the sellers or third parties involved in the transaction agree to indemnify Tredegar, for certain liabilities or risks related to the assets or business. Also, in the ordinary course of business, the Company may enter into agreements with third parties for the sale of goods or services that may contain indemnification provisions. In the event that an indemnification claim is asserted, liability for indemnification would be subject to an assessment of the underlying facts and circumstances under the terms of the applicable agreement. Further, any indemnification payments may be limited or barred by a monetary cap, a time limitation, or a deductible or basket. For these reasons, the Company is unable to estimate the maximum potential amount of the potential future liability under the indemnity provisions of these agreements. Tredegar does, however, accrue for losses for any known contingent liability, including those that may arise from indemnification provisions, when future payment is probable and the amount is reasonably estimable. The Company discloses contingent liabilities if the probability of loss is reasonably possible and material.

At December 31, 2016, Tredegar had cash and cash equivalents of \$29.5 million, including funds held in locations outside the U.S. of \$23.8 million. Tredegar's policy is to accrue U.S. federal income taxes on unremitted earnings of all foreign subsidiaries where required. Prior to the second quarter of 2016, deferred U.S. federal income taxes had not been recorded for the undistributed earnings for Terphane Ltda. because the Company had intended to permanently reinvest these earnings. Due to concerns about the current political and economic conditions in Brazil, Terphane Ltda. has begun making cash distributions to the Company. During 2016, Terphane Ltda. paid dividends totaling \$13.3 million to the Company. Because of the accumulation of significant losses related to foreign currency translations at Terphane Ltda., there were no unrecorded deferred tax liabilities associated with the U.S. federal income taxes and foreign withholding taxes on Terphane Ltda.'s undistributed earnings as of December 31, 2016 and December 31, 2015.

The Company believes that existing borrowing availability, current cash balances and cash flow from operations will be sufficient to satisfy working capital, capital expenditure and dividend requirements for at least the next twelve months.

### **Shareholders' Equity**

At December 31, 2016, Tredegar had 32,933,807 shares of common stock outstanding and a total market capitalization of \$790.4 million, compared with 32,682,162 shares of common stock outstanding and a total market capitalization of \$445.1 million at December 31, 2015.

Tredegar did not repurchase any shares on the open market in 2016, 2015 or 2014 under its approved share repurchase program.

## **Cash Flows**

The discussion in this section supplements the information presented in the *Consolidated Statements of Cash Flows*. Cash flows for discontinued operations have not been separately disclosed in the consolidated statements of cash flows.

Cash provided by operating activities was \$48.9 million in 2016 compared with \$74.3 million in 2015. The decrease is due primarily to lower earnings in PE Films and changes in working capital (higher accounts receivable and income taxes recoverable) (see the *Assets and Liabilities* section for discussion of changes in working capital).

Cash used in investing activities was \$42.0 million in 2016 compared with \$31.4 million in 2015. Cash used in investing activities in 2016 primarily includes capital expenditures of \$45.5 million.

Net cash flow used by financing activities was \$23.7 million in 2016, which is primarily due to net payments on the revolving credit agreement of \$9.0 million, the payment of regular quarterly dividends of \$14.5 million (44 cents per share) and debt financing costs related to the refinancing of the revolving credit agreement of \$2.6 million, partially offset by the proceeds from the exercise of stock options and other financing activities of \$2.3 million.

Cash provided by operating activities was \$74.3 million in 2015 compared with \$51.2 million in 2014. The increase is due primarily to normal volatility of working capital components and higher earnings, after adjusting for two large, non-cash charges: \$44.5 million goodwill impairment charge at Terphane and \$20.5 million write down of an investment in kaléo.

Cash used in investing activities was \$31.4 million in 2015 compared with \$38.3 million in 2014. Cash used in investing activities in 2015 primarily consists of capital expenditures of \$32.8 million. Cash used in investing activities in 2014 primarily consists of capital expenditures of \$44.9 million, partially offset by proceeds from the sale of a portion of investment property in Alleghany and Bath Counties, Virginia (\$4.5 million).

Net cash flow used by financing activities was \$44.2 million in 2015, which is primarily due to net payments on the existing revolving credit agreement of \$33.3 million and the payment of regular quarterly dividends of \$13.7 million (42 cents per share) partially offset by the proceeds from the exercise of stock options and other financing activities of \$2.9 million.

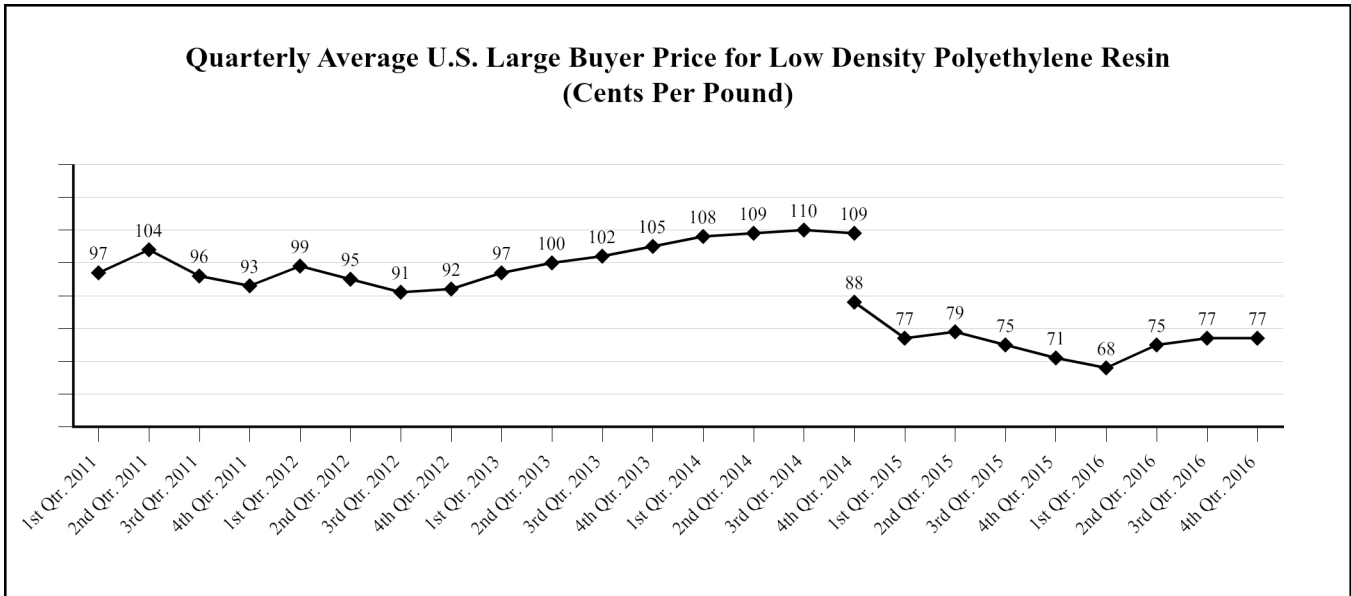
## **Quantitative and Qualitative Disclosures about Market Risk**

Tredegar has exposure to the volatility of interest rates, polyethylene, polypropylene and polyester resin prices, PTA and MEG prices, aluminum ingot and scrap prices, energy prices, foreign currencies and emerging markets. See the *Assets and Liabilities* section regarding interest rate exposures related to borrowings under the revolving credit agreement.

Changes in polyethylene resin prices, and the timing of those changes, could have a significant impact on profit margins in PE Films. Changes in polyester resin, PTA and MEG prices, and the timing of those changes, could have a significant impact on profit margins in Flexible Packaging Films. Profit margins in Aluminum Extrusions are sensitive to fluctuations in aluminum ingot and scrap prices as well as natural gas prices (natural gas is the principal energy source used to operate its casting furnaces). There is no assurance of the Company's ability to pass through higher raw material and energy costs to its customers.

See the *Executive Summary* and the *Results of Continuing Operations* sections for discussion regarding the impact of the lag in the pass-through of resin price changes.

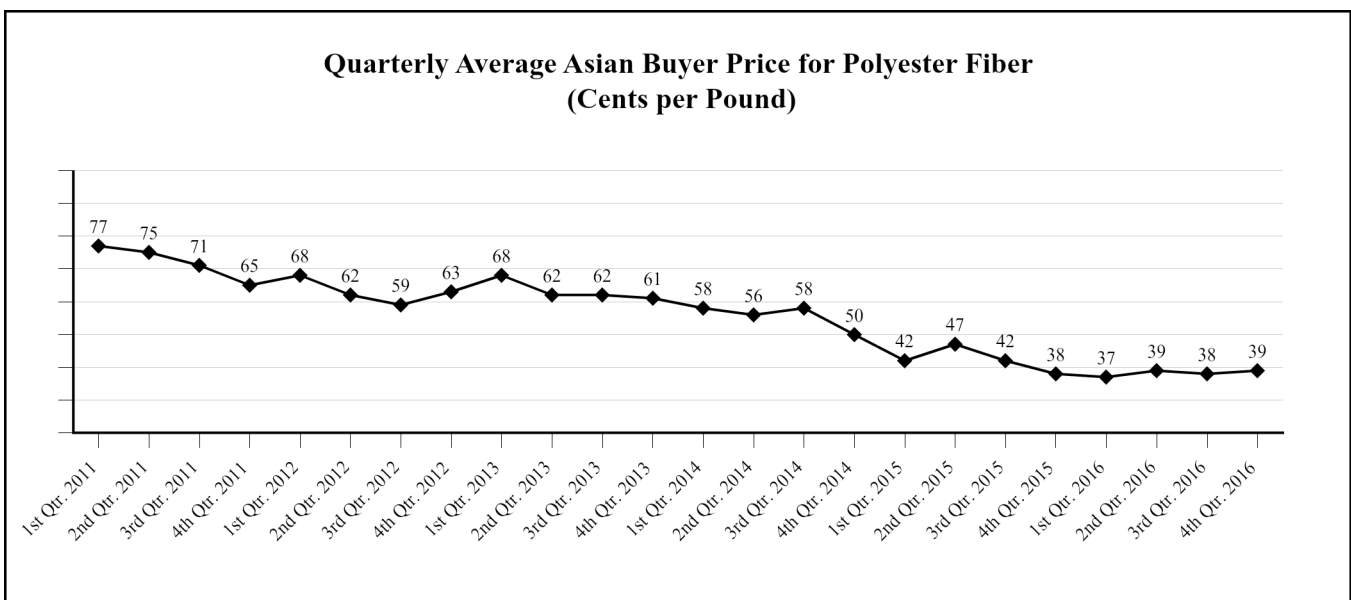
The volatility of average quarterly prices of low density polyethylene resin in the U.S. (a primary raw material for PE Films products) is shown in the chart below:



Source: Quarterly averages computed by Tredegar using monthly data provided by IHS, Inc. In January 2015, IHS reflected a 21 cents per pound non-market adjustment based on their estimate of the growth of discounts in prior periods. The 4th quarter 2014 average rate of \$1.09 per pound is shown on a pro forma basis as if the non-market adjustment was made in the fourth quarter of 2014.

Polyethylene resin prices in Europe, Asia and South America have exhibited similar long-term trends. The price of resin is driven by several factors, including supply and demand and the price of oil, ethylene and natural gas. To address fluctuating resin prices, PE Films has index-based pass-through raw material cost agreements for the majority of its business. However, under certain agreements, changes in resin prices are not passed through for an average period of 90 days (see the *Executive Summary* and the *Results of Continuing Operations* sections for more information). Pricing on the remainder of the business is based upon raw material costs and supply/demand dynamics within the markets that the Company competes.

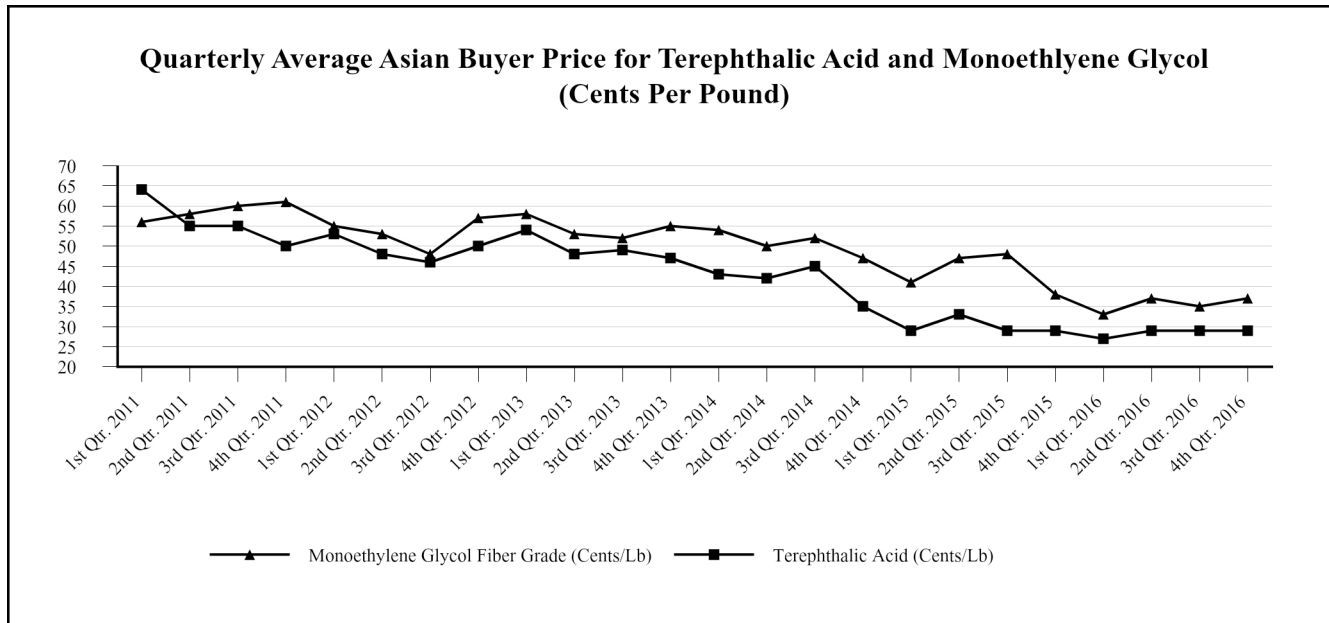
Polyester resins, MEG and PTA used by Flexible Packaging Films in Brazil are primarily purchased domestically, with other sources available, mostly from Asia and the U.S. Given the nature of these products as commodities, pricing is derived from Asian pricing indexes. The volatility of the average quarterly prices for polyester fibers in Asia, which is representative of polyester resin (a primary raw material for polyester film products) prices, is shown in the chart below:



Source: Quarterly averages computed by Tredegar using monthly data from CMAI Global Index data.

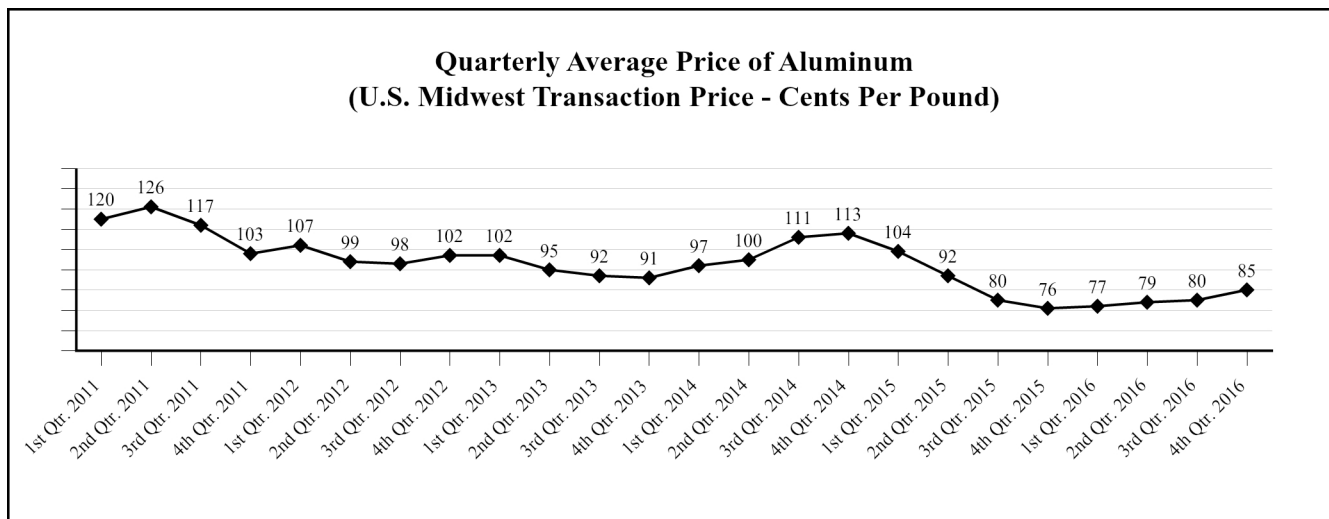


The volatility of average quarterly prices of PTA and MEG in Asia (raw materials used in the production of polyester resins produced by Flexible Packaging Films) is shown in the chart below:



Source: Quarterly averages computed by Tredegar using monthly data from CMAI Global Index data.

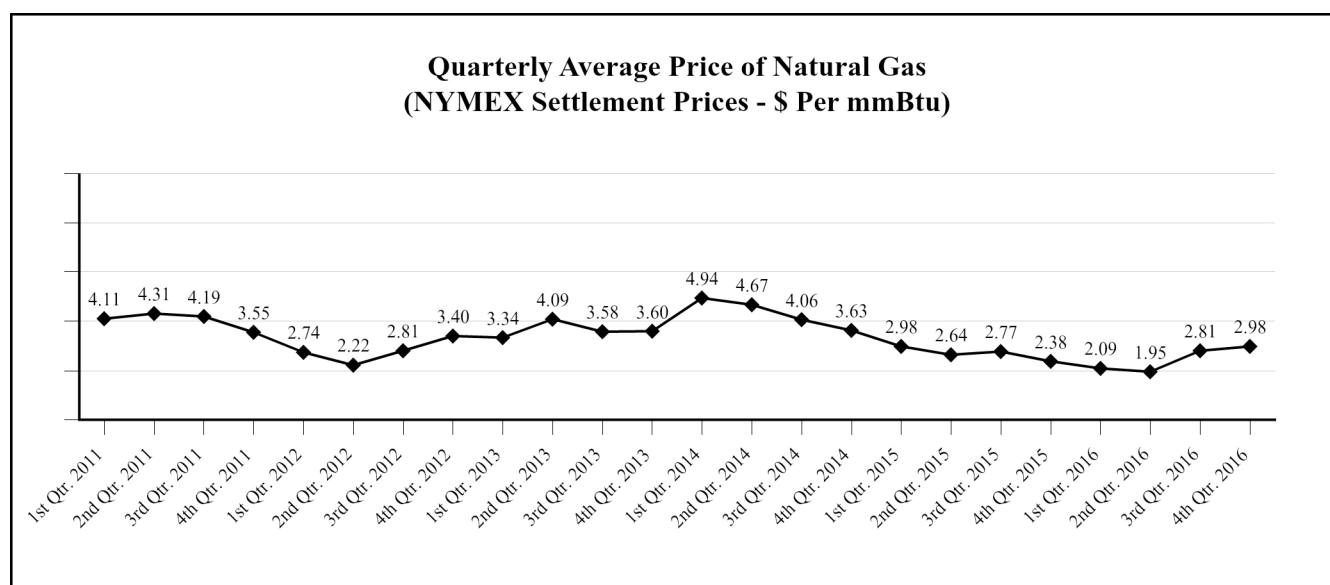
In the normal course of business, Aluminum Extrusions enters into fixed-price forward sales contracts with certain customers for the sale of fixed quantities of aluminum extrusions at scheduled intervals. In order to hedge its exposure to aluminum price volatility (see the chart below) under these fixed-price arrangements, which generally have a duration of not more than 12 months, the Company enters into a combination of forward purchase commitments and futures contracts to acquire or hedge aluminum, based on the scheduled deliveries. See Note 9 of the *Notes to Financial Statements* for more information. The volatility of quarterly average aluminum prices is shown in the chart below:



Source: Quarterly averages computed by Tredegar using daily Midwest average prices provided by Platts.

From time-to-time, Aluminum Extrusions hedges a portion of its exposure to natural gas price volatility by entering into fixed-price forward purchase contracts with its natural gas suppliers. The Company estimates that, in an unhedged situation, every \$1 per mmBtu per month change in the market price of natural gas has an \$81,000 impact on the continuing monthly operating profit for U.S. operations in Aluminum Extrusions. There is an energy surcharge for Aluminum Extrusions in the U.S. that is applied when the previous quarter's NYMEX natural gas average settlement price is in excess of \$8.85 per mmBtu.

The volatility of quarterly average natural gas prices is shown in the chart below:



Source: Quarterly averages computed by Tredegar using monthly NYMEX settlement prices.

Tredegar sells to customers in foreign markets through its foreign operations and through exports from U.S. plants. The percentage of sales and total assets for manufacturing operations related to foreign markets for 2016, 2015 and 2014 are as follows:

Tredegar Corporation—Continuing Operations									
Percentage of Net Sales and Total Assets Related to Foreign Markets									
	2016			2015			2014		
	% of Total Net Sales *		% Total Assets - Foreign Operations *	% of Total Net Sales *		% Total Assets - Foreign Operations *	% of Total Net Sales *		% Total Assets - Foreign Operations *
	Exports From U.S.	Foreign Operations		Exports From U.S.	Foreign Operations		Exports From U.S.	Foreign Operations	
Canada	6	—	—	5	—	—	5	—	—
Europe	1	10	6	1	10	5	1	12	5
Latin America	—	11	21	—	10	20	—	11	27
Asia	9	3	6	9	3	7	8	4	4
Total % exposure to foreign markets	16	24	33	15	23	32	14	27	36

\* The percentages for foreign markets are relative to Tredegar's consolidated net sales and total assets from continuing operations.

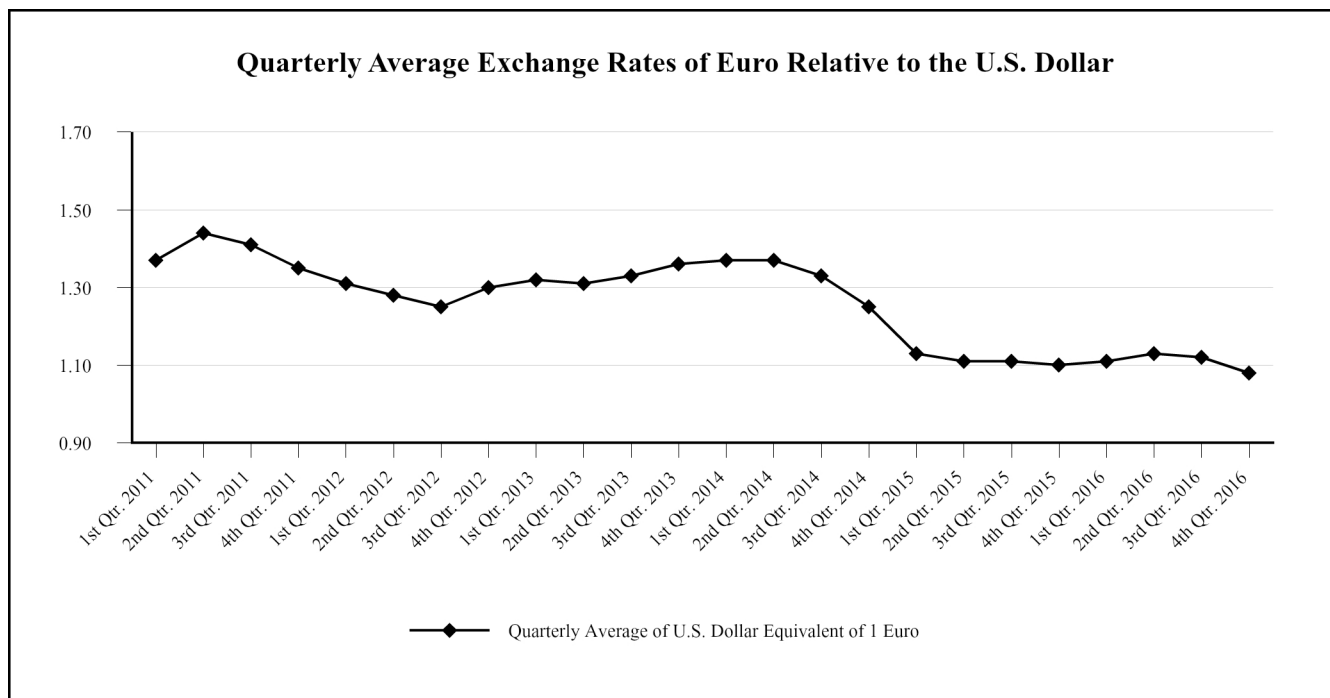
Tredegar attempts to match the pricing and cost of its products in the same currency and generally view the volatility of foreign currencies (see trends for the Euro, Brazilian Real and Chinese Yuan in the chart on pages 42-43) and emerging markets, and the corresponding impact on earnings and cash flow, as part of the overall risk of operating in a global environment. Exports from the U.S. are generally denominated in U.S. Dollars. The Company's foreign currency exposure on income from continuing foreign operations relates to the Euro, the Chinese Yuan, the Hungarian Forint, the Brazilian Real and the Indian Rupee.

PE Films is generally able to match the currency of its sales and costs for its product lines. For flexible packaging films produced in Brazil, while selling prices and key raw material costs are principally determined in U.S. Dollars, they are impacted by local economic conditions, including the value of the Brazilian Real in U.S. Dollars and local supply and demand factors. Certain production costs, such as conversion costs and other fixed costs, are priced in Brazilian Real, and adversely impacted by high inflation levels in Brazil. Moreover, the value of the Brazilian Real when compared to the U.S. Dollar is impacted by many variables, including inflation differentials between the U.S. and Brazil. In general, local currency inflationary cost increases in Brazil will be offset when converting to U.S. Dollars by decreases in the value of the Brazilian Real relative to the U.S. Dollar that is related to high Brazil inflation versus low U.S. inflation. Accordingly, because of the

many volatile economic variables at play in Brazil, it is not practical to isolate to one measure the economic impact on Flexible Packaging Films' operating profit of changes in the U.S. Dollar value of the Brazilian Real.

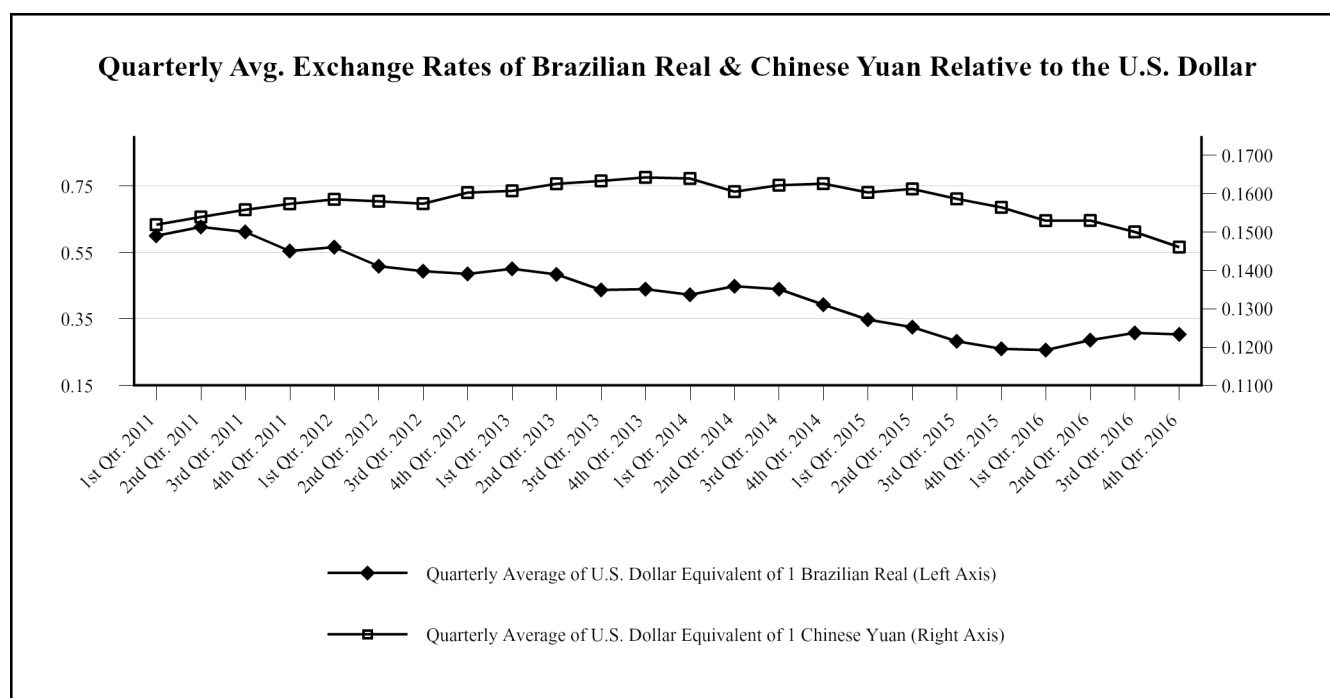
Tredegar estimates that the change in the value of foreign currencies relative to the U.S. Dollar on PE Films had an unfavorable impact on operating profit from ongoing operations in PE Films of \$0.3 million in 2016 compared to 2015, an unfavorable impact on operating profit from ongoing operations of \$3.7 million in 2015 compared with 2014, a favorable impact of \$0.7 million in 2014 compared with 2013.

Trends for the Euro are shown in the chart below:



Source: Quarterly averages computed by Tredegar using daily closing data provided by Bloomberg.

Trends for the Brazilian Real and Chinese Yuan are shown in the chart below:



Source: Quarterly averages computed by Tredegar using daily closing data provided by Bloomberg.

**Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

See discussion of *Quantitative and Qualitative Disclosures about Market Risk* in Management’s Discussion and Analysis of Financial Condition and Results of Operations.

**Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

See the *Index to Financial Statements and Supplementary Data* for references to the report of the independent registered public accounting firm, the consolidated financial statements and selected quarterly financial data.

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

None.

**Item 9A. CONTROLS AND PROCEDURES**

**Evaluation of Disclosure Controls and Procedures**

Pursuant to Rule 13a-15(b) under the Exchange Act, Tredegar carried out an evaluation, with the participation of its management, including its principal executive officer and principal financial officer, of the effectiveness of disclosure controls and procedures (as defined under Rule 13a-15(e) under the Exchange Act) as of the end of the period covered by this report. Based upon that evaluation, the principal executive officer and principal financial officer concluded that the Company's disclosure controls and procedures are effective to ensure that information required to be disclosed by Tredegar in the reports that it files or submits under the Exchange Act, is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including the principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

**Management's Report on Internal Control Over Financial Reporting**

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act. Tredegar's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of published financial statements in accordance with U.S. generally accepted accounting principles and includes policies and procedures that:

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

Internal control over financial reporting includes the controls themselves, monitoring (including internal auditing practices) and actions taken to correct deficiencies as identified.

Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of the Company's consolidated financial statements would be prevented or detected. 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.

Management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control - Integrated Framework 2013* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this evaluation under the framework in *Internal Control - Integrated Framework 2013*, Tredegar's management concluded that the Company's internal control over financial reporting was effective as of December 31, 2016.

The effectiveness of Tredegar's internal control over financial reporting as of December 31, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included on page 48.

**Changes in Internal Control Over Financial Reporting**

There has been no change in Tredegar's internal control over financial reporting during the quarter ended December 31, 2016, that has materially affected, or is reasonably likely to materially affect, its internal control over financial reporting.

**Item 9B. OTHER INFORMATION**

None.

### PART III

#### Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information concerning directors and persons nominated to become directors of Tredegar to be included in the Proxy Statement under the headings “Election of Directors” and “Tredegar’s Board of Directors” is incorporated herein by reference.

The information concerning corporate governance to be included in the Proxy Statement under the headings “Board Meetings, Meetings of Non-Management Directors and the Board Committees” and “Corporate Governance” is incorporated herein by reference.

The information to be included in the Proxy Statement under the heading “Section 16(a) Beneficial Ownership Reporting Compliance” is incorporated herein by reference.

Set forth below are the names, ages and titles of the Company’s executive officers:

<u>Name</u>	<u>Age</u>	<u>Title</u>
John D. Gottwald	62	President and Chief Executive Officer
D. Andrew Edwards	58	Vice President and Chief Financial Officer
Michael W. Giancaspro	62	Vice President, Business Processes and Corporate Development
Michael J. Schewel	63	Vice President, General Counsel and Corporate Secretary

**John D. Gottwald.** Mr. Gottwald was elected President and Chief Executive Officer on August 18, 2015. From June 26, 2015 until August 17, 2015, he served as interim President and Chief Executive Officer. He previously served as the Company’s President and Chief Executive Officer from March 1, 2006 until January 31, 2010, and as the Company’s Chairman of the Board from September 2001 until February 2008. Mr. Gottwald also served as the Company’s President and Chief Executive Officer from July 1989 until September 2001.

**D. Andrew Edwards.** Mr. Edwards was elected Vice President and Chief Financial Officer effective July 20, 2015. He previously served as the Chief Financial Officer of United Sporting Companies, Inc., a wholesale distributor of outdoor sporting goods, from February 2013 until July 2015 and as Vice President, Controller and Chief Accounting Officer of Owens & Minor, Inc., a distributor of acute medical products, from April 2010 to February 2013 and as Acting Chief Financial Officer of Owens & Minor, Inc. from March 2012 to February 2013. Mr. Edwards also served as Vice President, Finance, of Owens & Minor, Inc. from December 2009 until April 2010. Mr. Edwards previously served as the Company’s Vice President, Chief Financial Officer and Treasurer from August 2003 to December 2009 and as the Company’s Vice President, Finance from November 1998 to August 2003. Mr. Edwards also served as the Company’s Treasurer from May 1997 to December 2009 and as the Company’s Controller from October 1992 until July 2000.

**Michael W. Giancaspro.** Mr. Giancaspro was elected Vice President, Business Processes and Corporate Development, effective October 1, 2015. He previously was President of Turnaround Strategies LLC, a business turnaround consulting practice, from 2006 until 2015. He served as part of the Company’s initial senior management team in 1989, and as a Vice President of the Company from 1992 until 2000 and from 2003 until 2005.

**Michael J. Schewel.** Mr. Schewel was elected Vice President, General Counsel and Corporate Secretary effective May 9, 2016. He was previously partner with the law firm of McGuire Woods, LLP from 1986 until May 2016, except for four years from 2002 until 2006 when he served as Secretary of Commerce and Trade for the Commonwealth of Virginia.

Tredegar has adopted a Code of Conduct that applies to all of its directors, officers and employees (including its chief executive officer, chief financial officer and principal accounting officer) and has posted the Code of Conduct on its website. All amendments to or waivers from any provision of the Company’s Code of Conduct applicable to the chief executive officer, chief financial officer and principal accounting officer will be disclosed on the Company’s website. The Company’s internet address is [www.tredegar.com](http://www.tredegar.com).

**Item 11. EXECUTIVE COMPENSATION**

The information to be included in the Proxy Statement under the headings “Compensation of Directors,” “Board Meetings, Meetings of Non-Management Directors and Board Committees—Executive Compensation Committee Interlocks and Insider Participation,” “Compensation Discussion and Analysis,” “Executive Compensation Committee Report” and “Compensation of Executive Officers” is incorporated herein by reference.

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

The information to be included in the Proxy Statement under the heading “Stock Ownership” is incorporated herein by reference. The following table summarizes information with respect to equity compensation plans under which securities are authorized for issuance as of December 31, 2016.

Plan Category	Column (a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Column (b) Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	Column (c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans, Excluding Securities Reflected in Column (a)
Equity compensation plans approved by security holders	946,703	\$ 21.67	2,748,000
Equity compensation plans not approved by security holders	—	—	—
Total	946,703	\$ 21.67	2,748,000

\* Includes performance stock units that give the holder the right to receive shares of Tredegar common stock upon the satisfaction of certain performance criteria.

**Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The information to be included in the Proxy Statement under the headings “Certain Relationships and Related Transactions”, “Tredegar’s Board of Directors” and “Board Meetings, Meetings of Non-Management Directors and Board Committees” is incorporated herein by reference.

**Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**

The following is incorporated herein by reference:

- Information on accounting fees and services to be included in the Proxy Statement under the heading “Audit Fees;” and
- Information on the Audit Committee’s procedures for pre-approving certain audit and non-audit services to be included in the Proxy Statement under the heading “Board Meetings, Meetings of Non-Management Directors and Board Committees—Audit Committee Matters.”

**PART IV**

**Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

(a) List of documents filed as a part of the report:

(1) Financial statements:

Tredegar Corporation  
Index to Financial Statements and Supplementary Data

	Page
Report of Independent Registered Public Accounting Firm	48
Financial Statements:	
Consolidated Balance Sheets as of December 31, 2016 and 2015	49
Consolidated Statements of Income for the Years Ended December 31, 2016, 2015 and 2014	50
Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2016, 2015 and 2014	51
Consolidated Statements of Cash Flows for the Years Ended December 31, 2016, 2015 and 2014	52
Consolidated Statements of Shareholders' Equity for the Years Ended December 31, 2016, 2015 and 2014	53
Notes to Financial Statements	54-89

(2) Financial statement schedules:

None.

(3) Exhibits:

See Exhibit Index on pages 91-93.



## **Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Shareholders of  
Tredegar Corporation:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income (loss), cash flows and shareholders' equity present fairly, in all material respects, the financial position of Tredegar Corporation and its subsidiaries at December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ PricewaterhouseCoopers LLP  
Richmond, Virginia  
February 22, 2017

## CONSOLIDATED BALANCE SHEETS

Tredegar Corporation and Subsidiaries

December 31	2016	2015
(In Thousands, Except Share Data)		
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 29,511	\$ 44,156
Accounts and other receivables, net of allowance for doubtful accounts and sales returns of \$3,102 in 2016 and \$3,746 in 2015	97,388	94,217
Income taxes recoverable	7,518	360
Inventories	66,069	65,325
Prepaid expenses and other	7,738	6,946
Total current assets	208,224	211,004
Property, plant and equipment, at cost:		
Land and land improvements	11,294	10,953
Buildings	126,064	120,544
Machinery and equipment	660,272	623,181
Total property, plant and equipment	797,630	754,678
Less accumulated depreciation	(536,905)	(523,363)
Net property, plant and equipment	260,725	231,315
Goodwill and other intangibles	151,423	153,072
Other assets and deferred charges	30,790	27,869
Total assets	\$ 651,162	\$ 623,260
<b>Liabilities and Shareholders' Equity</b>		
Current liabilities:		
Accounts payable	\$ 81,342	\$ 84,148
Accrued expenses	38,647	33,653
Total current liabilities	119,989	117,801
Long-term debt	95,000	104,000
Deferred income taxes	21,110	18,656
Other noncurrent liabilities	104,280	110,055
Total liabilities	340,379	350,512
Commitments and contingencies (Notes 3, 16 and 19)		
Shareholders' equity:		
Common stock (no par value):		
Authorized 150,000,000 shares;		
Issued and outstanding—32,933,807 shares in 2016 and 32,682,162 in 2015 (including restricted stock)	32,007	29,467
Common stock held in trust for savings restoration plan (69,622 shares in 2016 and 67,726 in 2015)	(1,497)	(1,467)
Accumulated other comprehensive income (loss):		
Foreign currency translation adjustment	(93,970)	(112,807)
Gain (loss) on derivative financial instruments	863	(373)
Pension and other postretirement benefit adjustments	(90,127)	(95,539)
Retained earnings	463,507	453,467
Total shareholders' equity	310,783	272,748
Total liabilities and shareholders' equity	\$ 651,162	\$ 623,260

See accompanying notes to financial statements.

**CONSOLIDATED STATEMENTS OF INCOME**

Tredegar Corporation and Subsidiaries

Years Ended December 31	2016	2015	2014
(In Thousands, Except Per-Share Data)			
<b>Revenues and other:</b>			
Sales	\$ 828,341	\$ 896,177	\$ 951,826
Other income (expense), net	2,381	(20,113)	(6,697)
	<b>830,722</b>	<b>876,064</b>	<b>945,129</b>
<b>Costs and expenses:</b>			
Cost of goods sold	668,626	725,459	778,113
Freight	29,069	29,838	28,793
Selling, general and administrative	75,754	71,911	69,526
Research and development	19,122	16,173	12,147
Amortization of intangibles	3,978	4,073	5,395
Interest expense	3,806	3,502	2,713
Asset impairments and costs associated with exit and disposal activities	2,684	3,850	3,026
Goodwill impairment charge	—	44,465	—
Total	<b>803,039</b>	<b>899,271</b>	<b>899,713</b>
Income (loss) from continuing operations before income taxes	27,683	(23,207)	45,416
Income taxes	3,217	8,928	9,387
Income (loss) from continuing operations	24,466	(32,135)	36,029
Income (loss) from discontinued operations, net of tax	—	—	850
<b>Net income (loss)</b>	<b>\$ 24,466</b>	<b>\$ (32,135)</b>	<b>\$ 36,879</b>
<b>Earnings (loss) per share:</b>			
Basic:			
Continuing operations	\$ 0.75	\$ (0.99)	\$ 1.12
Discontinued operations	—	—	0.02
Net income (loss)	\$ 0.75	\$ (0.99)	\$ 1.14
Diluted:			
Continuing operations	\$ 0.75	\$ (0.99)	\$ 1.11
Discontinued operations	—	—	0.02
Net income (loss)	\$ 0.75	\$ (0.99)	\$ 1.13

See accompanying notes to financial statements.

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**

Tredegar Corporation and Subsidiaries

Years Ended December 31	2016	2015	2014
(In Thousands, Except Per-Share Data)			
<b>Net income (loss)</b>	<b>\$ 24,466</b>	<b>\$ (32,135)</b>	<b>\$ 36,879</b>
<b>Other comprehensive income (loss):</b>			
Unrealized foreign currency translation adjustment (net of tax benefit of \$729 in 2016, tax benefit of \$890 in 2015 and tax benefit of \$2,396 in 2014)	<b>18,837</b>	(65,537)	(28,065)
Derivative financial instruments adjustment (net of tax of \$727 in 2016, tax benefit of \$550 in 2015 and tax benefit of \$112 in 2014)	<b>1,236</b>	(1,029)	(109)
Pension & other post-retirement benefit adjustments			
Net gains (losses) and prior service costs (net of tax benefit of \$1,874 in 2016, tax benefit of \$226 in 2015 and tax benefit of \$22,445 in 2014)	<b>(3,288)</b>	(2,176)	(38,730)
Amortization of prior service costs and net gains or losses (net of tax of \$4,398 in 2016, tax of \$5,823 in 2015 and tax of \$3,582 in 2014)	<b>8,700</b>	10,218	6,997
Other comprehensive income (loss)	<b>25,485</b>	(58,524)	(59,907)
<b>Comprehensive income (loss)</b>	<b>\$ 49,951</b>	<b>\$ (90,659)</b>	<b>\$ (23,028)</b>

*See accompanying notes to financial statements.*

## CONSOLIDATED STATEMENTS OF CASH FLOWS

Tredegar Corporation and Subsidiaries

Years Ended December 31	2016	2015	2014
(In Thousands)			
<b>Cash flows from operating activities:</b>			
Net income (loss)	\$ 24,466	\$ (32,135)	\$ 36,879
Adjustments for noncash items:			
Depreciation	28,494	30,909	35,423
Amortization of intangibles	3,978	4,073	5,395
Goodwill impairment charge	—	44,465	—
Deferred income taxes	(3,689)	(10,523)	(11,489)
Accrued pension and postretirement benefits	11,047	12,521	6,974
(Gain) loss on an investment accounted for under the fair value method	(1,600)	20,500	(2,000)
Loss on asset impairments	1,436	403	993
(Gain) loss on sale of assets	(220)	(11)	(1,031)
Gain from insurance recoveries	(1,634)	—	—
Changes in assets and liabilities:			
Accounts and notes receivables	92	9,180	(18,696)
Inventories	1,127	1,137	(8,803)
Income taxes recoverable/payable	(7,061)	(1,849)	(906)
Prepaid expenses and other	(1,914)	(1,256)	496
Accounts payable and accrued expenses	161	(2,455)	5,554
Pension and postretirement benefit plan contributions	(8,061)	(2,709)	(3,108)
Other, net	2,250	2,006	5,554
Net cash provided by operating activities	48,872	74,256	51,235
<b>Cash flows from investing activities:</b>			
Capital expenditures	(45,457)	(32,831)	(44,898)
Net proceeds from the sale of investment property	—	—	4,500
Insurance proceeds from cast house explosion	1,156	—	—
Proceeds from the sale of assets and other	2,308	1,416	2,125
Net cash used in investing activities	(41,993)	(31,415)	(38,273)
<b>Cash flows from financing activities:</b>			
Borrowings	96,750	107,000	116,000
Debt principal payments	(105,750)	(140,250)	(117,750)
Dividends paid	(14,456)	(13,725)	(11,007)
Debt financing costs	(2,606)	(78)	(29)
Proceeds from exercise of stock options and other	2,313	2,858	410
Net cash used in financing activities	(23,749)	(44,195)	(12,376)
<b>Effect of exchange rate changes on cash</b>	<b>2,225</b>	<b>(4,546)</b>	<b>(3,147)</b>
<b>Decrease in cash and cash equivalents</b>	<b>(14,645)</b>	<b>(5,900)</b>	<b>(2,561)</b>
<b>Cash and cash equivalents at beginning of period</b>	<b>44,156</b>	<b>50,056</b>	<b>52,617</b>
<b>Cash and cash equivalents at end of period</b>	<b>\$ 29,511</b>	<b>\$ 44,156</b>	<b>\$ 50,056</b>
Supplemental cash flow information:			
Interest payments	\$ 3,074	\$ 3,508	\$ 3,320
Income tax payments (refunds), net	\$ 15,406	\$ 20,118	\$ 20,890

See accompanying notes to financial statements.

## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

Tredegar Corporation and Subsidiaries

(In Thousands, Except Share and Per-Share Data)	Common Stock		Retained Earnings	Trust for Savings Restoration Plan	Accumulated Other Comprehensive Income (Loss)				Total Shareholders' Equity
	Shares	Amount			Foreign Currency Translation	Gain (Loss) on Derivative Financial Instruments	Pension & Other Post-retirement Benefit Adjust.		
Balance at January 1, 2014	32,305,145	\$ 20,641	\$473,729	\$ (1,418)	\$ (19,205)	\$ 765	\$ (71,848)	\$ 402,664	
Net income	—	—	36,879	—	—	—	—	36,879	
Foreign currency translation adjustment (net of tax benefit of \$2,396)	—	—	—	—	(28,065)	—	—	(28,065)	
Derivative financial instruments adjustment (net of tax benefit of \$112)	—	—	—	—	—	(109)	—	(109)	
Net gains or losses and prior service costs (net of tax benefit of \$22,445)	—	—	—	—	—	—	(38,730)	(38,730)	
Amortization of prior service costs and net gains or losses (net of tax of \$3,582)	—	—	—	—	—	—	6,997	6,997	
Cash dividends declared (\$0.34 per share)	—	—	(11,007)	—	—	—	—	(11,007)	
Stock-based compensation expense	85,129	3,224	—	—	—	—	—	3,224	
Issued upon exercise of stock options (including related income tax benefit of \$3) & other	31,808	499	—	—	—	—	—	499	
Shareholder Rights Plan redemption	—	—	(323)	—	—	—	—	(323)	
Tredegar common stock purchased by trust for savings restoration plan	—	—	22	(22)	—	—	—	—	
Balance at December 31, 2014	32,422,082	24,364	499,300	(1,440)	(47,270)	656	(103,581)	372,029	
Net loss	—	—	(32,135)	—	—	—	—	(32,135)	
Foreign currency translation adjustment (net of tax benefit of \$890)	—	—	—	—	(65,537)	—	—	(65,537)	
Derivative financial instruments adjustment (net of tax benefit of \$550)	—	—	—	—	—	(1,029)	—	(1,029)	
Net gains or losses and prior service costs (net of tax benefit of \$226)	—	—	—	—	—	—	(2,176)	(2,176)	
Amortization of prior service costs and net gains or losses (net of tax of \$5,823)	—	—	—	—	—	—	10,218	10,218	
Cash dividends declared (\$0.42 per share)	—	—	(13,725)	—	—	—	—	(13,725)	
Stock-based compensation expense	118,440	3,435	—	—	—	—	—	3,435	
Issued upon exercise of stock options (including related income tax of \$302) & other	141,640	1,668	—	—	—	—	—	1,668	
Tredegar common stock purchased by trust for savings restoration plan	—	—	27	(27)	—	—	—	—	
Balance at December 31, 2015	32,682,162	29,467	453,467	(1,467)	(112,807)	(373)	(95,539)	272,748	
Net income	—	—	24,466	—	—	—	—	24,466	
Foreign currency translation adjustment (net of tax benefit of \$729)	—	—	—	—	18,837	—	—	18,837	
Derivative financial instruments adjustment (net of tax of \$727)	—	—	—	—	—	1,236	—	1,236	
Net gains or losses and prior service costs (net of tax benefit of \$1,874)	—	—	—	—	—	—	(3,288)	(3,288)	
Amortization of prior service costs and net gains or losses (net of tax of \$4,398)	—	—	—	—	—	—	8,700	8,700	
Cash dividends declared (\$0.44 per share)	—	—	(14,456)	—	—	—	—	(14,456)	
Stock-based compensation expense	127,169	1,461	—	—	—	—	—	1,461	
Issued upon exercise of stock options (including related income tax of \$1,109) & other	124,476	1,079	—	—	—	—	—	1,079	
Tredegar common stock purchased by trust for savings restoration plan	—	—	30	(30)	—	—	—	—	
Balance at December 31, 2016	32,933,807	\$ 32,007	\$463,507	\$ (1,497)	\$ (93,970)	\$ 863	\$ (90,127)	\$ 310,783	

See accompanying notes to financial statements.

## NOTES TO FINANCIAL STATEMENTS

Tredegar Corporation and Subsidiaries

### 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**Organization and Nature of Operations.** Tredegar Corporation and subsidiaries (collectively “Tredegar,” “the Company,” “we,” “us” or “our”) are primarily engaged in the manufacture of polyethylene films, polyester films and aluminum extrusions. See Notes 10 and 18 regarding restructurings and Note 3 regarding discontinued operations.

**Basis of Presentation.** The consolidated financial statements include the accounts and operations of Tredegar and all of its majority-owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation. On February 12, 2008, Tredegar sold its aluminum extrusions business in Canada. All historical results for this business have been reflected as discontinued operations in these financial statements; however, cash flows for discontinued operations have not been separately disclosed in the consolidated statements of cash flows. See Note 3 regarding discontinued operations.

The preparation of financial statements in conformity with United States (“U.S.”) generally accepted accounting principles (“GAAP”) requires Tredegar to make estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

Tredegar has historically reported two business segments: Film Products and Aluminum Extrusions. In the third quarter of 2015, the Company divided Film Products into two separate operating segments: PE Films and Flexible Packaging Films. All historical results for PE Films and Flexible Packaging Films have been separately presented to conform with the new presentation of segments. See Note 5 regarding business segments.

Certain amounts for the prior years have been reclassified to conform to current year presentation.

**Fiscal Year End.** The Company operates on a calendar fiscal year except the Aluminum Extrusions segment, which operates on a 52/53-week fiscal year basis. References to Aluminum Extrusions for 2016, 2015 and 2014 relate to the 52-week fiscal years ended December 26, 2016, December 27, 2015 and December 28, 2014, respectively. The Company does not believe the impact of reporting the results of this segment as stated above is material to the consolidated financial results.

**Foreign Currency Translation.** The financial statements of subsidiaries located outside the U.S., where the local currency is the functional currency, are translated into U.S. Dollars using exchange rates in effect at the period end for assets and liabilities and average exchange rates during each reporting period for results of operations. Adjustments resulting from the translation of these financial statements are reflected as a separate component of shareholders’ equity. There are no operating subsidiaries located outside the U.S. where the U.S. Dollar is the functional currency.

Transaction and remeasurement gains or losses included in income were losses of \$3.6 million, \$4.0 million and \$1.5 million in 2016, 2015 and 2014, respectively. These amounts do not include the effects between reporting periods that exchange rate changes have on income of the locations outside the U.S. that result from translation into U.S. Dollars.

**Cash and Cash Equivalents.** Cash and cash equivalents consist of cash on hand in excess of daily operating requirements and highly liquid investments with original maturities of three months or less. At December 31, 2016 and 2015, Tredegar had cash and cash equivalents of \$29.5 million and \$44.2 million, respectively, including funds held in locations outside the U.S. of \$23.8 million and \$27.7 million, respectively.

The Company’s policy permits investment of excess cash in marketable securities that have the highest credit ratings and maturities of less than one year. The primary objectives of the policy are safety of principal and liquidity.

**Accounts and Other Receivables.** Accounts receivable are stated at the amount invoiced to customers less allowances for doubtful accounts and sales returns. Accounts receivable are non-interest bearing and arise from the sale of product to customers under typical industry trade terms. Notes receivable are not significant. Past due amounts are determined based on established terms and charged-off when deemed uncollectible. The allowance for doubtful accounts is determined based on an assessment of probable losses taking into account past due amounts, customer credit profile, historical experience and current economic conditions. Other receivables include value-added taxes related to certain foreign subsidiaries and other miscellaneous receivables due within one year.

**Inventories.** Inventories are stated at the lower of cost or market, with cost determined on the last-in, first-out (“LIFO”) basis, the weighted average cost or the first-in, first-out basis. Cost elements included in work-in-process and finished goods inventories are raw materials, direct labor and manufacturing overhead. Finished goods, work in process, raw materials and

supplies, stores and other inventory are reviewed to determine if inventory quantities are in excess of forecasted usage or if they have become obsolete.

**Property, Plant and Equipment.** Accounts include costs of assets constructed or purchased, related delivery and installation costs and interest incurred on significant capital projects during their construction periods. Expenditures for renewals and betterments also are capitalized, but expenditures for repairs and maintenance are expensed as incurred. The cost and accumulated depreciation applicable to assets retired or sold are removed from the respective accounts, and gains or losses thereon are included in income.

Capital expenditures for property, plant and equipment include capitalized interest. Capitalized interest included in capital expenditures for property, plant and equipment was \$0.3 million, \$0.4 million and \$1.1 million in 2016, 2015 and 2014, respectively.

Depreciation is computed primarily by the straight-line method based on the estimated useful lives of the assets that, except for isolated exceptions, range from 5 to 40 years for buildings and land improvements and 2 to 20 years for machinery and equipment.

**Investments in Private Entities with Less Than or Equal to 50% Voting Ownership Interest.** The Company accounts for its investments in private entities where its voting ownership is less than or equal to 50% based on the facts and circumstances surrounding the investment. Investments are required to be accounted for under the consolidation method in situations where Tredegar is the primary beneficiary of a variable interest entity. The primary beneficiary is the party that has a controlling financial interest in a variable interest entity. The Company is deemed to have a controlling financial interest if it has (i) the power to direct activities of the variable interest entity that most significantly impact its economic performance and (ii) the obligation to absorb losses or the right to receive benefits from the variable interest entity that could potentially be significant to its operations.

If the Company is not deemed to be the primary beneficiary in an investment in a variable interest entity then it selects either: (i) the fair value method or (ii) either (a) the cost method if it does not have significant influence over operating and financial policies of the investee or (b) the equity method if it does have significant influence.

For those investments measured at fair value, GAAP requires disclosure of the level within the fair value hierarchy in which fair value measurements in their entirety fall, segregating fair value measurements using quoted prices in active markets for identical assets or liabilities (Level 1), significant other observable inputs (Level 2), and significant unobservable inputs (Level 3).

**Goodwill and Other Intangibles.** The excess of the purchase price over the fair value of identifiable net assets of acquired companies is allocated to goodwill. The Company assesses goodwill for impairment when events or circumstances indicate that the carrying value may not be recoverable or, at a minimum, on an annual basis (December 1st of each year). The Company's significant operating units in PE Films include Personal Care and Surface Protection. There are two operating units in Aluminum Extrusions, Bonnell Aluminum and AACOA. Each of these reporting units has separately identifiable operating net assets (operating assets including goodwill and intangible assets net of operating liabilities).

The Company recorded a goodwill impairment charge of \$44.5 million (\$44.5 million after taxes) to write off the goodwill associated with Flexible Packaging Films in the third quarter of 2015. See Note 8 for additional details.

The Company estimates the fair value of its reporting units using discounted cash flow analysis and comparative enterprise value-to-EBITDA (earnings before interest, taxes, depreciation and amortization) multiples. Goodwill of the PE Films operating units, Personal Care and Surface Protection, was tested for impairment at the annual testing date, with the estimated fair value of these reporting units exceeding the carrying value of their net assets by approximately 30% and 48%, respectively, at December 1, 2016. The goodwill of the Aluminum Extrusions reporting unit was tested for impairment at the annual testing date. All goodwill in Aluminum Extrusions is associated with the October 2012 acquisition of AACOA, Inc. ("AACOA"). The estimated fair value of this reporting unit substantially exceeded the carrying value of its net assets at December 1, 2016.

Indefinite-lived intangible assets are assessed for impairment when events or circumstances indicate that the carrying value may not be recoverable, or, at a minimum, on an annual basis (December 1st of each year). The Company estimates the fair value of its trade names using a relief-from-royalty method that relies upon a corresponding discounted cash flow analysis. The indefinite-lived intangible assets of Flexible Packaging Films were tested for impairment at the annual testing date, with the estimated fair value of these reporting units exceeding the carrying value of their net assets by approximately 20% at December 1, 2016. For AACOA, the indefinite-lived intangible assets were tested for impairment at the annual testing date, with the estimated fair value substantially exceeding the carrying value of the net assets.



Additional disclosure of Tredegar goodwill and other intangible assets is included in Note 8.

**Impairment of Long-Lived Assets.** The Company reviews long-lived assets for possible impairment when events indicate that an impairment may exist. For assets that are held and used in operations, if events indicate that an asset may be impaired, the Company estimates the future unlevered pre-tax cash flows expected to result from the use of the asset and its eventual disposition. Assets are grouped for this purpose at the lowest level for which there are identifiable and independent cash flows. If the sum of these undiscounted pre-tax cash flows is less than the carrying amount of the asset, an impairment loss is calculated. Measurement of the impairment loss is the amount by which the carrying amount exceeds the estimated fair value of the asset group.

Assets that are held for sale are reported at the lower of their carrying amount or estimated fair value less cost to sell, with an impairment loss recognized for any write-down required.

**Pension Costs and Postretirement Benefit Costs Other than Pensions.** Pension costs and postretirement benefit costs other than pensions are accrued over the period employees provide service to Tredegar. Liabilities and expenses for pension plans and other postretirement benefits are determined using actuarial methodologies and incorporate significant assumptions, including the rate used to discount the future estimated liability, the long-term rate of return on plan assets, and several assumptions relating to the employee workforce. The Company recognizes the funded status of its pension and other postretirement plans in the accompanying consolidated balance sheets. Tredegar's policy is to fund its pension plans at amounts not less than the minimum requirements of the Employee Retirement Income Security Act ("ERISA") of 1974 and to fund postretirement benefits other than pensions when claims are incurred.

**Revenue Recognition.** Revenue from the sale of products, which is shown net of estimated sales returns and allowances, is recognized when title has passed to the customer, the price of the product is fixed and determinable, and collectability is reasonably assured. Amounts billed to customers related to freight have been classified as sales in the accompanying consolidated statements of income. The cost of freight has been classified as a separate line in the accompanying consolidated statements of income. Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction between Tredegar and its customers (such as value-added taxes) are accounted for on a net basis and therefore excluded from revenues.

**Research & Development ("R&D") Costs.** R&D costs are expensed as incurred and include primarily salaries, wages, employee benefits, equipment depreciation, facility costs and the cost of materials consumed relating to R&D efforts. R&D costs include a reasonable allocation of indirect costs.

**Income Taxes.** Income taxes are recognized during the period in which transactions enter into the determination of income for financial reporting purposes, with deferred income taxes being provided at enacted statutory tax rates on the differences between the financial reporting and tax bases of assets and liabilities (see Note 17). Tredegar's policy is to accrue U.S. federal income taxes to the extent required under GAAP on unremitted earnings of all foreign subsidiaries. Prior to the second quarter of 2016, deferred U.S. federal income taxes had not been recorded for the undistributed earnings for Terphane Ltda. because the Company had intended to permanently reinvest these earnings. Due to concerns about the current political and economic conditions in Brazil, Terphane Ltda. has begun making cash distributions to the Company. During 2016, Terphane Ltda. paid dividends totaling \$13.3 million to the Company. Because of the accumulation of significant losses related to foreign currency translations at Terphane Ltda., there were no unrecorded deferred tax liabilities associated with the U.S. federal income taxes and foreign withholding taxes on Terphane Ltda.'s undistributed earnings as of December 31, 2016 and December 31, 2015.

A valuation allowance is recorded in the period when the Company determines that it is more likely than not that all or a portion of deferred tax assets may not be realized. The establishment and removal of a valuation allowance requires the Company to consider all positive and negative evidence and make a judgmental decision regarding the amount of valuation allowance required as of a reporting date. The benefit of an uncertain tax position is included in the accompanying financial statements when the Company determines that it is more likely than not that the position will be sustained, based on the technical merits of the position, if the taxing authority examines the position and the dispute is litigated. This determination is made on the basis of all the facts, circumstances and information available as of the reporting date.

**Earnings Per Share.** Basic earnings per share is computed using the weighted average number of shares of common stock outstanding. Diluted earnings per share is computed using the weighted average common and potentially dilutive common equivalent shares outstanding, determined as follows:

	2016	2015	2014
Weighted average shares outstanding used to compute basic earnings per share	32,761,793	32,578,116	32,302,108
Incremental shares attributable to stock options and restricted stock	13,279	—	251,746
Shares used to compute diluted earnings per share	32,775,072	32,578,116	32,553,854

Incremental shares attributable to stock options and restricted stock are computed using the average market price during the related period. The Company had a net loss from continuing operations in 2015, so there is no dilutive impact for such shares. If the Company had reported net income from continuing operations in 2015, average out-of-the-money options to purchase shares that would have been excluded from the calculation of incremental shares attributable to stock options and restricted stock were 881,513. The average out-of-the-money options to purchase shares that were excluded from the calculation of incremental shares attributable to stock options and restricted stock were 128,200 in 2016 and 320,849 in 2014.

**Stock-Based Employee Compensation Plans.** Compensation expense is recorded on all share-based awards based upon its calculated fair value over the requisite service period using the graded-vesting method. The fair value of stock option awards was estimated as of the grant date using the Black-Scholes options-pricing model. The fair value of restricted stock awards was estimated as of the grant date using the closing stock price on that date.

The assumptions used in this model for valuing Tredegar stock options granted in 2014 (no grants in 2015 and 2016) were as follows:

	2014
Dividend yield	1.3%
Weighted average volatility percentage	43.5%
Weighted average risk-free interest rate	2.0%
Holding period (years):	
Officers	6.0
Management	5.0
Weighted average exercise price at date of grant (also weighted average market price at date of grant):	
Officers	\$ 22.49
Management	\$ 22.33

The dividend yield is the actual dividend yield on Tredegar's common stock at the date of grant, which the Company believes is a reasonable estimate of the expected yield during the holding period. The expected volatility is based on the historical volatility of Tredegar's common stock using a sequential period of historical data equal to the expected holding period of the option. The Company has no reason to believe that future volatility for this period is likely to differ from the past. The assumed risk-free interest rate is based on observed interest rates (zero coupon U.S. Treasury debt securities) appropriate for the expected holding period. The expected holding period and forfeiture assumptions are based on historical experience. Estimated forfeiture assumptions are reviewed through the vesting period. Adjustments are made if actual forfeitures differ from previous estimates. The cumulative effect of a change in estimated forfeitures is recognized in the period of the change.

Tredegar stock options granted during 2014 (no grants in 2015 and 2016), and related estimated fair value at the date of grant, are as follows:

	2014
Stock options granted (number of shares):	
Officers	87,820
Management	93,656
Total	181,476
Estimated weighted average fair value of options per share at date of grant:	
Officers	\$ 9.21
Management	\$ 7.60
Total estimated fair value of stock options granted (in thousands)	\$ 1,521

Additional disclosure of Tredegar stock options is included in Note 13.

**Financial Instruments.** Tredegar uses derivative financial instruments for the purpose of hedging aluminum price volatility and currency exchange rate exposures that exist as part of transactions associated with ongoing business operations. The Company's derivative financial instruments are designated as and qualify as cash flow hedges and are recognized in the accompanying balance sheet at fair value. A change in the fair value of the derivative that is highly effective and that is designated and qualifies as a cash flow hedge is recorded in other comprehensive income. Gains and losses reported in other comprehensive income (loss) are reclassified to earnings in the periods in which earnings are affected by the variability of cash flows of the hedged transaction. Such gains and losses are reported on the same line as the underlying hedged item, and the cash flows related to financial instruments are classified in the consolidated statements of cash flows in a manner consistent with those of the transactions being hedged. Any hedge ineffectiveness (which represents the amount by which the changes in the fair value of the derivative exceed the variability in the cash flows of the forecasted transaction) is recorded in current period earnings. The amount of gains and losses recognized for hedge ineffectiveness were not material in 2016, 2015 and 2014.

The Company's policy requires that it formally document all relationships between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The Company also formally assesses (both at the hedge's inception and on an ongoing basis) whether the derivatives that are used in hedging transactions have been highly effective in offsetting changes in the fair value or cash flows of hedged items and whether those derivatives may be expected to remain highly effective in future periods. When it is determined that a derivative is not (or has ceased to be) highly effective as a hedge, the Company discontinues hedge accounting prospectively.

As a policy, Tredegar does not engage in speculative or leveraged transactions, nor does it hold or issue financial instruments for trading purposes. Additional disclosure of the utilization of derivative hedging instruments is included in Note 9.

**Comprehensive Income (Loss).** Comprehensive income (loss) is defined as net income or loss as adjusted by other comprehensive income or loss items. Other comprehensive income (loss) includes changes in foreign currency translation adjustments, unrealized gains and losses on derivative financial instruments, prior service costs and net gains or losses from pension and other postretirement benefit plans arising during the period and amortization of these prior service costs and net gain or loss adjustments, all recorded net of deferred income taxes.

The following table summarizes the after-tax changes in accumulated other comprehensive income (loss) for the year ended December 31, 2016:

(In Thousands)	Foreign currency translation adjustment	Gain (loss) on derivative financial instruments	Pension and other post-retirement benefit adjustments	Total
Beginning balance, January 1, 2016	\$ (112,807)	\$ (373)	\$ (95,539)	\$ (208,719)
Other comprehensive income (loss) before reclassifications	18,837	247	(3,288)	15,796
Amounts reclassified from accumulated other comprehensive income (loss)	—	989	8,700	9,689
Net other comprehensive income (loss) - current period	18,837	1,236	5,412	25,485
Ending balance, December 31, 2016	\$ (93,970)	\$ 863	\$ (90,127)	\$ (183,234)

The following table summarizes the after-tax changes in accumulated other comprehensive income (loss) for the year ended December 31, 2015:

(In Thousands)	Foreign currency translation adjustment	Gain (loss) on derivative financial instruments	Pension and other post-retirement benefit adjustments	Total
Beginning balance, January 1, 2015	\$ (47,270)	\$ 656	\$ (103,581)	\$ (150,195)
Other comprehensive income (loss) before reclassifications	(65,537)	(3,221)	(2,176)	(70,934)
Amounts reclassified from accumulated other comprehensive income (loss)	—	2,192	10,218	12,410
Net other comprehensive income (loss) - current period	(65,537)	(1,029)	8,042	(58,524)
Ending balance, December 31, 2015	\$ (112,807)	\$ (373)	\$ (95,539)	\$ (208,719)

Reclassifications of balances out of accumulated other comprehensive income (loss) into net income during 2016 are summarized as follows:

(In Thousands)	Amount reclassified from other comprehensive income (loss)	Location of gain (loss) reclassified from accumulated other comprehensive income (loss) to net income (loss)
Gain (loss) on derivative financial instruments:		
Aluminum future contracts, before taxes	\$ (1,630)	Cost of sales
Foreign currency forward contracts, before taxes	62	Cost of sales
Total, before taxes	(1,568)	
Income tax expense (benefit)	(579)	Income taxes
Total, net of tax	\$ (989)	
Amortization of pension and other post-retirement benefits:		
Actuarial gain (loss) and prior service costs, before taxes	\$ (13,098)	(a)
Income tax expense (benefit)	(4,398)	Income taxes
Total, net of tax	\$ (8,700)	

(a) This component of accumulated other comprehensive income is included in the computation of net periodic pension cost (see Note 14 for additional detail).

Reclassifications of balances out of accumulated other comprehensive income (loss) into net income during 2015 are summarized as follows:

(In Thousands)	Amount reclassified from other comprehensive income (loss)	Location of gain (loss) reclassified from accumulated other comprehensive income (loss) to net income
Gain (loss) on derivative financial instruments:		
Aluminum future contracts, before taxes	\$ (3,538)	Cost of sales
Foreign currency forward contracts, before taxes	62	Cost of sales
Total, before taxes	(3,476)	
Income tax expense (benefit)	(1,284)	Income taxes
Total, net of tax	\$ (2,192)	
Amortization of pension and other post-retirement benefits:		
Actuarial gain (loss) and prior service costs, before taxes	\$ (16,041)	(a)
Income tax expense (benefit)	(5,823)	Income taxes
Total, net of tax	\$ (10,218)	

(a) This component of accumulated other comprehensive income is included in the computation of net periodic pension cost (see Note 14 for additional detail).

Reclassifications of balances out of accumulated other comprehensive income (loss) into net income during 2014 are summarized as follows:

(In Thousands)	Amount reclassified from other comprehensive income (loss)	Location of gain (loss) reclassified from accumulated other comprehensive income (loss) to net income
<b>Gain (loss) on derivative financial instruments:</b>		
Aluminum future contracts, before taxes	\$ 631	Cost of sales
Foreign currency forward contracts, before taxes	16	Cost of sales
Total, before taxes	647	
Income tax expense (benefit)	244	Income taxes
Total, net of tax	\$ 403	
<b>Amortization of pension and other post-retirement benefits:</b>		
Actuarial gain (loss) and prior service costs, before taxes	\$ (10,579)	(a)
Income tax expense (benefit)	(3,582)	Income taxes
Total, net of tax	\$ (6,997)	

(a) This component of accumulated other comprehensive income is included in the computation of net periodic pension cost (see Note 14 for additional detail).

**Recently Issued Accounting Standards.** In May 2014, the Financial Accounting Standards Board (“FASB”) and International Accounting Standards Board (“IASB”) issued their converged standard on revenue recognition. The revised revenue standard contains principles that an entity will apply to direct the measurement of revenue and timing of when it is recognized. The core principle of the guidance is that the recognition of revenue should depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which an entity expects to be entitled in exchange for those goods and services. To achieve that core principle, an entity will utilize a principle-based five-step approach model. The converged standard also includes more robust disclosure requirements which will require entities to provide sufficient information to enable users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. In March 2016, amended guidance was issued regarding clarifying the implementation guidance on principal versus agent considerations and in April 2016, clarifying guidance was issued relating to identifying performance obligations and licensing implementation. The effective date of this revised standard is for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. Early application is permitted as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that annual reporting period. The converged standard can be adopted either retrospectively or through the use of a practical expedient. The Company continues to assess the impact of this standard. The Company has a team in place to analyze the impact of standard, and the related guidance issued, across all revenue streams to evaluate the impact of the new standard on revenue contracts. This includes reviewing current accounting policies and practices to identify potential differences that would result from applying the requirements under the new standard. In 2016, the Company made progress on contract reviews and expects to complete the contract evaluations and validate results in the first half of 2017. The Company has also started evaluating the new disclosure requirements and expects to complete its evaluations of the impacts of the accounting and disclosure requirements on its business processes, controls and systems by the end of the third quarter of 2017. Full implementation will be completed by the end of 2017. The Company is still evaluating the method of adoption of the standard, which will occur in the first quarter of 2018.

In July 2015, the FASB issued new guidance for the measurement of inventories. Inventories within the scope of the revised guidance should be measured at the lower of cost or net realizable value. The previous guidance dictated that inventory should be measured at the lower of cost or market, with market being either replacement cost, net realizable value or net realizable value less an approximation of normal profit margin. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. Subsequent measurement is unchanged for inventories measured using LIFO or the retail inventory method. The new guidance is effective for fiscal years beginning after December 31, 2016, including the interim periods within those fiscal years. The amendments should be applied prospectively, with early adoption permitted. The Company will adopt the new guidance in the first quarter of 2017, and the adoption of this guidance is not expected to have a material impact on the consolidated financial statements.

In January 2016, the FASB issued amended guidance associated with accounting for equity investments measured at fair value. The amended guidance requires all equity investments to be measured at fair value with changes in the fair value recognized through net income (other than those accounted for under equity method of accounting or those that result in consolidation of the investee). The amended guidance also requires an entity to present separately in other comprehensive

income the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk when the entity has elected to measure the liability at fair value in accordance with the fair value option for financial instruments. In addition, the amendments in this update eliminate the requirement to disclose the fair value of financial instruments measured at amortized cost for entities that are not public business entities and the requirement to disclose the method(s) and significant assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at amortized cost on the balance sheet for public business entities. The amended guidance is effective for fiscal years beginning after December 31, 2017, including the interim periods within those fiscal years. The amendments should be applied by means of a cumulative-effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption. The amendments related to equity securities without readily determinable fair values (including disclosure requirements) should be applied prospectively to equity investments that exist as of the date of adoption of the update. Early adoption is permitted under limited, specific circumstances. The Company is still assessing the impact of this amended guidance.

In February 2016, the FASB issued a revised standard on lease accounting. Lessees will need to recognize virtually all of their leases on the balance sheet, by recording a right-of-use asset and lease liability. The revised standard requires additional analysis of the components of a transaction to determine if a right-to-use asset is embedded in the transaction that needs to be treated as a lease. Substantial additional disclosures are also required by the revised standard. The revised standard is effective for fiscal years beginning after December 31, 2018, including the interim periods within those fiscal years. The revised standard should be applied on a modified retrospective approach or through the use of a practical expedient, with early adoption permitted. The Company is still assessing the impact of this revised standard.

In March 2016, the FASB issued amended guidance to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The updated guidance is effective for fiscal years beginning after December 31, 2016, including the interim periods within those fiscal years. The Company will adopt the new guidance in the first quarter of 2017. Under the new guidance, excess tax benefits related to equity compensation will be recognized in "Income taxes" in the consolidated statements of income rather than in "Common stock" in the consolidated balance sheets and will be applied on a prospective basis. If these amounts had been included in the consolidated statements of income in previous years, net income would have been reduced by \$1.1 million in 2016, and the net loss would have increased \$0.3 million in 2015 (no impact in 2014). Changes to the statements of cash flows related to the classification of excess tax benefits and employee taxes paid for share-based payment arrangements will be implemented on a retrospective basis. The Company does not expect further impacts from the guidance.

In June 2016, the FASB issued new accounting guidance that will require the earlier recognition of credit losses on loans and other financial instruments based on an expected loss model, replacing the incurred loss model that is currently in use. Under the new guidance, an entity will measure all expected credit losses for financial instruments held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. The expected loss model will apply to loans and leases, unfunded lending commitments, held-to-maturity (HTM) debt securities and other debt instruments measured at amortized cost and accounts receivable. The new guidance is effective for fiscal years beginning after December 31, 2019, including the interim periods within those fiscal years, with early adoption allowed for fiscal years beginning after December 31, 2018. The new guidance must be applied on a modified retrospective basis, with a cumulative effect adjustment recorded to opening retained earnings. The Company is not expecting to be materially impacted by this new guidance.

In October 2016, the FASB issued guidance that requires an entity to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The amendments are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017, and should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings at the beginning period of adoption. Early adoption is permitted in the first interim period of an annual reporting period for which financial statements have not been issued. The Company is currently evaluating the impact of adopting this guidance.

In January 2017, the FASB issued guidance to assist with evaluating when a set of transferred assets and activities (collectively, the "set") is a business and provides a screen to determine when a set is not a business. Under the new guidance, when substantially all of the fair value of gross assets acquired (or disposed of) is concentrated in a single identifiable asset, or group of similar assets, the assets acquired would not represent a business. Also, to be considered a business, an acquisition would have to include an input and a substantive process that together significantly contribute to the ability to produce outputs. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017, and should be applied on a prospective basis to any transactions occurring within the period of adoption. Early adoption is permitted for interim or annual periods in which the financial statements have not been issued. The Company is currently evaluating the impact of adopting this guidance.

In January 2017, the FASB issued amended guidance that eliminates the requirement to determine the fair value of individual assets and liabilities of a reporting unit to measure goodwill impairment. Under the amendments in the new guidance, goodwill impairment testing will be performed by comparing the fair value of the reporting unit with its carrying amount and recognizing an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. The new standard is effective for annual and interim goodwill impairment tests in fiscal years beginning after December 15, 2019, and should be applied on a prospective basis. Early adoption is permitted for annual or interim goodwill impairment testing performed after January 1, 2017. The Company is currently evaluating the impact of adopting this guidance.

## **2 SUBSEQUENT EVENTS**

On February 15, 2017, Bonnell Aluminum acquired 100% of the stock of Futura Industries Corporation ("Futura") on a net debt-free basis for approximately \$92 million pursuant to a Stock Purchase Agreement, dated as of February 1, 2017. The acquisition, which was funded using Tredegar's existing revolving credit facility, will be treated as an asset purchase for U.S. federal income tax purposes.

Futura, headquartered in Clearfield, Utah, with a national sales presence and particular strength in the western U.S., designs and manufactures a wide range of extruded aluminum products for a number of industries and end markets, including branded flooring trims and TSLOTS™, as well as OEM (original equipment manufacturer) components for truck grills, solar panels, fitness equipment and other applications. As a result of this transaction, Futura is now a wholly-owned subsidiary of Tredegar and will operate as a division of Aluminum Extrusions, and its results of operations will be included in Tredegar's consolidated financial statements from the date of acquisition.

## **3 DISCONTINUED OPERATIONS**

On February 12, 2008, the Company sold its aluminum extrusions business in Canada for \$25.0 million. In 2014, accruals for indemnifications under the purchase agreement related to environmental matters were adjusted, resulting in income from discontinued operations of \$0.9 million (\$0.9 million net of tax). The historical results for this business, including any subsequent adjustments for contractual indemnifications, have been reflected as discontinued operations; however, cash flows for discontinued operations have not been separately disclosed in the consolidated statements of cash flows.

## **4 INVESTMENTS**

In August 2007 and December 2008, Tredegar made an aggregate investment of \$7.5 million in kaleo, Inc. ("kaléo"), a privately held specialty pharmaceutical company dedicated to building innovative solutions for serious and life-threatening medical conditions. The mission of kaléo is to provide products that empower patients to confidently take control of their medical conditions. Tredegar's ownership interest on a fully diluted basis was approximately 19% at December 31, 2016, and the investment is accounted for under the fair value method. At the time of the initial investment, the Company elected the fair value option over the equity method of accounting since its investment objectives were similar to those of venture capitalists, which typically do not have controlling financial interests.

In 2009, kaléo licensed exclusive rights to sanofi-aventis U.S. LLC ("Sanofi") to commercialize an epinephrine auto-injector in the U.S. and Canada. Sanofi began manufacturing and distributing the epinephrine auto-injector, under the names Auvi-Q® in the U.S. and Allerject® in Canada, in 2013. On October 28, 2015, Sanofi announced a voluntary recall of all Auvi-Q and Allerject epinephrine injectors that were on the market. In January 2017, kaléo announced that it would recommence sales of Auvi-Q in the U.S. starting in February 2017.

At December 31, 2016 and 2015, the estimated fair value of the Company's investment (also the carrying value, which is included in "Other assets and deferred charges" in the consolidated balance sheets) was \$20.2 million and \$18.6 million, respectively. The Company recognized an unrealized gain on its investment in kaléo of \$1.6 million (\$1.2 million after taxes) in 2016. The change in the estimated fair value of the Company's holding in kaléo in 2016 was primarily related to favorable adjustments in the fair value for the passage of time as anticipated cash flows associated with achieving product development and commercialization milestones are discounted at 45% for their high degree of risk.

The Company recognized a net unrealized loss of \$20.5 million (\$15.7 million after taxes) in 2015 that primarily related to the adverse impact of the product recall noted above.



The Company recognized an unrealized gain of \$2.0 million (\$1.0 million after taxes) in 2014 that primarily related to favorable adjustments in the fair value for the passage of time as anticipated cash flows associated with achieving product development and commercialization milestones were discounted at 45% for their high degree of risk and the impact of reducing the weighted average cost of capital used to discount cash flow projections from 55% after kaléo commercialized a second product, partially offset by unfavorable adjustments in the fair value due to a reassessment of the amount and timing of estimated cash flows associated with kaléo's commercialized products.

Unrealized gains (losses) associated with this investment are included in "Other income (expense), net" in the consolidated statements of income and separately stated in the segment operating profit table in Note 5 of the Notes to Financial Statements. Subsequent to its most recent investment (December 15, 2008), and until the next round of financing, the Company believes fair value estimates are based upon Level 3 inputs since there is no secondary market for its ownership interest. Accordingly, until the next round of financing or any other significant financial transaction, value estimates will primarily be based on assumptions relating to the reintroduction of the Auvi-Q product, meeting product development and commercialization milestones, cash flow projections (projections of development and commercialization milestone payments, sales, costs, expenses, capital expenditures and working capital investment) and discounting of these factors for their high degree of risk. If kaléo does not meet its development and commercialization milestones or there are indications that the amount or timing of its projected cash flows or related risks are unfavorable versus the most recent valuation, or a new round of financing or other significant financial transaction indicates a lower enterprise value, then the Company's estimate of the fair value of its ownership interest in kaléo is likely to decline. Adjustments to the estimated fair value of this investment will be made in the period upon which such changes can be quantified.

In addition to the impact on valuation of the possible changes in assumptions, Level 3 inputs and projections from changes in business conditions, the fair market valuation of Tredegar's interest in kaléo is sensitive to changes in the weighted average cost of capital used to discount cash flow projections for the high degree of risk associated with meeting development and commercialization milestones as anticipated. The weighted average cost of capital used in the fair market valuation of the Company's interest in kaléo was 45% at both December 31, 2016 and 2015. At December 31, 2016, the effect of a 500 basis point decrease in the weighted average cost of capital assumption would have further increased the fair value of Tredegar's interest in kaléo by approximately \$6 million, and a 500 basis point increase in the weighted average cost of capital assumption would have decreased the fair value of the Company's interest by approximately \$5 million.

Had the Company not elected to account for its investment under the fair value method, it would have been required to use the equity method of accounting. The condensed balance sheets for kaléo at December 31, 2016 and 2015 and related condensed statements of operations for the last three years ended December 31, 2016, as reported to the Company by kaléo, are provided below:

(In Thousands)	December 31,		December 31,	
	2016	2015	2016	2015
Assets:		Liabilities & Equity:		
Cash & cash equivalents	\$ 102,329	\$ 91,844	Current liabilities	\$ 50,134 \$ 10,261
Restricted cash	31	8,182	Long-term debt, net	143,380 142,696
Other current assets	15,391	9,070	Other noncurrent liabilities	822 552
Property & equipment	13,011	8,453	Equity	(63,102) (33,057)
Other long-term assets	472	2,903		
Total assets	\$ 131,234	\$ 120,452	Total liabilities & equity	\$ 131,234 \$ 120,452

	2016	2015	2014
Revenues & Expenses:			
Revenues	\$ 56,188	\$ 35,731	\$ 21,156
Cost of goods sold	(15,428)	(14,147)	(3,801)
Expenses and other, net (a)	(71,548)	(63,042)	(48,447)
Income tax (expense) benefit	(35)	(481)	8,100
Net income (loss)	\$ (30,823)	\$ (41,939)	\$ (22,992)

(a) "Expenses and other, net" includes selling, general and administrative expense, research and development expense, gain on contract termination, interest expense and other income (expense), net. Excluding the gain on contract termination, "Expenses and other, net" would have been a net deduction of \$89.6 million in 2016.

The audited financial statements and accompanying footnotes of kaléo as of December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014 have been included as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2016 filed with the Securities and Exchange Commission.

On April 2, 2007, Tredegar invested \$10.0 million in Harbinger Capital Partners Special Situations Fund, L.P. (the "Harbinger Fund"), a private investment fund that is subject to limitations on withdrawal. There is no secondary market for interests in the fund. The Company's investment in the Harbinger Fund, which represents less than 1% of its total partnership capital, is accounted for under the cost method. Unrealized losses on the Company's investment in the Harbinger Fund (included in "Other income (expense), net" in the consolidated statements of income) were \$0.8 million (\$0.4 million after taxes) in 2014 (none in 2015 and 2016), as a result of a reduction in the estimated fair value of the investment that is not expected to be temporary. The December 31, 2016 and 2015 carrying values in the consolidated balance sheets (included in "Other assets and deferred charges") were \$1.7 million and \$1.7 million, respectively. The carrying value at December 31, 2016 reflected Tredegar's cost basis in its investment in Harbinger, net of total withdrawal proceeds received and unrealized losses. Withdrawal proceeds were \$0.1 million in 2015 and \$0.2 million in 2014 (none in 2016). The timing and amount of future installments of withdrawal proceeds was not known as of December 31, 2016. There were no realized gains or losses associated with the investment in the Harbinger Fund in 2016, 2015 and 2014. Gains on the Company's investment in the Harbinger Fund, if any, will be recognized when the amounts expected to be collected from withdrawal from the investment are known, which will likely be when cash in excess of the remaining carrying value is received. Losses will be recognized if management believes it is probable that future withdrawal proceeds will not exceed the remaining carrying value.

Tredegar has investment property in Alleghany and Bath County, Virginia. In 2016, the Company recorded an unrealized loss on this investment property of \$1.0 million (\$0.7 million after taxes) as a reduction in the estimated fair value of our investment that is not expected to be temporary. The Company realized a gain (included in "Other income (expense), net" in the consolidated statements of income) of \$1.2 million (\$0.8 million after taxes) on a sale of a portion of this investment property in 2014. The Company's carrying value in this investment property (included in "Other assets and deferred charges" on the consolidated balance sheets) was \$1.6 million at December 31, 2016 and \$2.6 million at December 31, 2015.

## 5 BUSINESS SEGMENTS

Tredegar has historically reported two business segments: Film Products and Aluminum Extrusions. In the third quarter of 2015, the Company divided Film Products into two separate reportable segments: PE Films and Flexible Packaging Films. PE Films is comprised of the following operating segments: personal care materials, surface protection films, and LED lighting products. Flexible Packaging Films is comprised of the Company's polyester films business, Terphane Holdings LLC ("Terphane"), which was acquired by Film Products in October 2011. Therefore, the Company's business segments are now PE Films, Flexible Packaging Films and Aluminum Extrusions. All historical results for PE Films and Flexible Packaging Films have been separately presented to conform with the new presentation of segments.

Information by business segment and geographic area for the last three years is provided below. There were no accounting transactions between segments and no allocations to segments. Net sales (sales less freight) and operating profit from ongoing operations are the measures of sales and operating profit used by the chief operating decision maker (Tredegar's President and Chief Executive Officer) for purposes of assessing performance. PE Films' net sales to The Procter & Gamble Company ("P&G") totaled \$129.1 million in 2016, \$163.9 million in 2015 and \$220.8 million in 2014. These amounts include plastic film sold to others that convert the film into materials used with products manufactured by P&G.

<i>Net Sales</i>			
(In Thousands)	2016	2015	2014
PE Films	\$ 331,146	\$ 385,550	\$ 464,339
Flexible Packaging Films	108,028	105,332	114,348
Aluminum Extrusions	360,098	375,457	344,346
Total net sales	799,272	866,339	923,033
Add back freight	29,069	29,838	28,793
Sales as shown in consolidated statements of income	\$ 828,341	\$ 896,177	\$ 951,826

<i>Operating Profit</i>			
(In Thousands)	2016	2015	2014
PE Films:			
Ongoing operations	\$ 26,312	\$ 48,275	\$ 60,971
Plant shutdowns, asset impairments, restructurings and other (a)	(4,602)	(4,180)	(12,236)
Flexible Packaging Films:			
Ongoing operations	1,774	5,453	(2,917)
Plant shutdowns, asset impairments, restructurings and other (a)	(214)	(185)	(591)
Goodwill impairment charge	—	(44,465)	—
Aluminum Extrusions:			
Ongoing operations	37,794	30,432	25,664
Plant shutdowns, asset impairments, restructurings and other (a)	(741)	(708)	(976)
Total	60,323	34,622	69,915
Interest income	261	294	588
Interest expense	3,806	3,502	2,713
Gain (loss) on investment accounted for under the fair value method (a)	1,600	(20,500)	2,000
Gain on sale of investment property (a)	—	—	1,208
Unrealized loss on investment property (a)	1,032	—	—
Stock option-based compensation expense	56	483	1,272
Corporate expenses, net (a)	29,607	33,638	24,310
Income (loss) from continuing operations before income taxes	27,683	(23,207)	45,416
Income taxes (a)	3,217	8,928	9,387
Income (loss) from continuing operations	24,466	(32,135)	36,029
Income (loss) from discontinued operations (a)	—	—	850
Net income (loss)	\$ 24,466	\$ (32,135)	\$ 36,879

<i>Identifiable Assets</i>		
(In Thousands)	2016	2015
PE Films	\$ 278,558	\$ 270,236
Flexible Packaging Films	156,836	146,253
Aluminum Extrusions	147,639	136,935
Subtotal	583,033	553,424
General corporate (b)	38,618	25,680
Cash and cash equivalents (d)	29,511	44,156
Total	\$ 651,162	\$ 623,260

(In Thousands)	<i>Depreciation and Amortization</i>			<i>Capital Expenditures</i>		
	2016	2015	2014	2016	2015	2014
PE Films	\$ 13,653	\$ 15,480	\$ 21,399	\$ 25,759	\$ 21,218	\$ 17,000
Flexible Packaging Films	9,505	9,697	9,331	3,391	3,489	21,806
Aluminum Extrusions	9,173	9,698	9,974	15,918	8,124	6,092
Subtotal	32,331	34,875	40,704	45,068	32,831	44,898
General corporate	141	107	114	389	—	—
Total	\$ 32,472	\$ 34,982	\$ 40,818	\$ 45,457	\$ 32,831	\$ 44,898

See footnotes on page 68.

<i>Net Sales by Geographic Area (d)</i>			
(In Thousands)	2016	2015	2014
United States	\$ 475,734	\$ 528,881	\$ 542,395
Exports from the United States to:			
Asia	73,220	75,383	72,597
Canada	45,683	45,290	47,391
Europe	7,348	9,809	10,874
Latin America	5,561	3,464	3,116
Operations outside the United States:			
Brazil	90,571	89,829	97,954
The Netherlands	54,352	53,211	74,329
Hungary	24,207	32,612	39,457
China	14,390	18,919	26,109
India	8,206	8,941	8,811
<b>Total (c)</b>	<b>\$ 799,272</b>	<b>\$ 866,339</b>	<b>\$ 923,033</b>

(In Thousands)	<i>Identifiable Assets by Geographic Area (d)</i>		<i>Property, Plant &amp; Equipment, Net by Geographic Area (d)</i>	
	2016	2015	2016	2015
United States (b)	\$ 367,406	\$ 351,115	\$ 118,661	\$ 104,380
Operations outside the United States:				
Brazil	139,163	126,478	91,553	78,845
China	29,751	34,409	23,759	27,563
Hungary	20,610	14,798	15,117	8,135
The Netherlands	19,484	19,372	5,784	6,224
India	6,619	7,252	4,670	5,234
General corporate (b)	38,618	25,680	1,181	934
Cash and cash equivalents (d)	29,511	44,156	n/a	n/a
<b>Total</b>	<b>\$ 651,162</b>	<b>\$ 623,260</b>	<b>\$ 260,725</b>	<b>\$ 231,315</b>

<i>Net Sales by Product Group</i>			
(In Thousands)	2016	2015	2014
PE Films:			
Personal care materials	\$ 238,213	\$ 287,768	\$ 367,451
Surface protection films	84,013	90,197	90,129
LED lighting products & other films	8,920	7,585	6,759
Subtotal	331,146	385,550	464,339
Flexible Packaging Films	108,028	105,332	114,348
Aluminum Extrusions:			
Nonresidential building & construction	212,863	221,363	200,707
Consumer durables	39,293	41,835	44,897
Automotive	34,700	30,250	22,272
Machinery & equipment	20,872	18,102	26,907
Distribution	20,506	18,659	15,318
Residential building & construction	20,252	22,737	21,470
Electrical	11,612	22,511	12,775
Subtotal	360,098	375,457	344,346
<b>Total</b>	<b>\$ 799,272</b>	<b>\$ 866,339</b>	<b>\$ 923,033</b>

See footnotes on page 68 and a reconciliation of net sales to sales as shown in the *Consolidated Statements of Income* on page 65.

- (a) See Notes 1, 3, 4 and 18 for more information on losses associated with plant shutdowns, asset impairments and restructurings, unusual items, gains or losses from sale of assets, gains or losses on an investment accounted for under the fair value method and other items.
- (b) The balance sheets include the funded status of each of the Company's defined benefit pension and other postretirement plans. The funded status of the Company's defined benefit pension plan was a net liability of \$88.6 million and \$93.2 million as of December 31, 2016 and 2015, respectively. See Note 14 for more information on the Company's pension and other postretirement plans.
- (c) The difference between total consolidated sales as reported in the consolidated statements of income and segment, geographic and product group net sales reported in this note is freight of \$29.1 million in 2016, \$29.8 million in 2015 and \$28.8 million in 2014.
- (d) Information on exports and foreign operations are provided on the previous page. Cash and cash equivalents includes funds held in locations outside the U.S. of \$23.8 million and \$27.7 million at December 31, 2016 and 2015, respectively. Export sales relate almost entirely to PE Films. Operations outside the U.S. in The Netherlands, Hungary, China and India also relate to PE Films. Operations in Brazil are primarily related to Flexible Packaging Films, but also include PE Films operations. Sales from locations in The Netherlands and Hungary are primarily to customers located in Europe. Sales from locations in China (Guangzhou and Shanghai) are primarily to customers located in China, but also include other customers in Asia.

## 6 ACCOUNTS AND OTHER RECEIVABLES

Accounts and other receivables consist of the following:

(In Thousands)	2016	2015
Trade, less allowance for doubtful accounts and sales returns of \$3,102 in 2016 and \$3,746 in 2015	\$ 91,109	\$ 90,028
Other	6,279	4,189
<b>Total</b>	<b>\$ 97,388</b>	<b>\$ 94,217</b>

A reconciliation of the beginning and ending balances of the allowance for doubtful accounts and sales returns for the three years ended December 31, 2016 is as follows:

(In Thousands)	2016	2015	2014
Balance, beginning of year	\$ 3,746	\$ 2,610	\$ 3,327
Charges to expense	1,410	3,387	1,344
Recoveries	(32)	(7)	(1,654)
Write-offs and settlements	(2,167)	(1,970)	(153)
Foreign exchange and other	145	(274)	(254)
<b>Balance, end of year</b>	<b>\$ 3,102</b>	<b>\$ 3,746</b>	<b>\$ 2,610</b>

## 7 INVENTORIES

Inventories consist of the following:

(In Thousands)	2016	2015
Finished goods	\$ 16,215	\$ 13,935
Work-in-process	8,590	9,249
Raw materials	23,733	22,149
Stores, supplies and other	17,531	19,992
<b>Total</b>	<b>\$ 66,069</b>	<b>\$ 65,325</b>

Inventories stated on the LIFO basis amounted to \$16.4 million at December 31, 2016 and \$13.5 million at December 31, 2015, which were below replacement costs by \$15.3 million at December 31, 2016 and \$13.4 million at December 31, 2015. During 2016 certain PE Films inventories accounted for on a LIFO basis increased, which resulted in cost of goods sold being stated at above replacement costs by \$0.9 million and, during 2015 and 2014, certain PE Films inventories accounted for on a LIFO basis declined, which resulted in cost of goods sold being stated at below replacement costs by \$0.4 million and \$1.0 million, respectively.

## 8 GOODWILL AND OTHER INTANGIBLE ASSETS

The components of goodwill and other intangibles at December 31, 2016 and 2015, and related amortization periods for continuing operations are as follows:

(In Thousands)	2016	2015	Amortization Periods
Goodwill	\$ 117,822	\$ 117,839	Not amortized
Other identifiable intangibles (a):			
Customer relationships (cost basis of \$26,021 in 2016 and \$23,766 in 2015)	14,844	15,620	10-12 years
Proprietary technology (cost basis of \$17,366 in 2016 and \$16,738 in 2015)	7,582	9,037	Not more than 15 years
Trade names	11,175	10,576	Indefinite life
Total carrying value of other intangibles	33,601	35,233	
Total carrying value of goodwill and other intangibles	\$ 151,423	\$ 153,072	

(a) Other identifiable intangibles also includes non-compete agreements, which have been fully amortized. These identifiable intangible assets, which have a cost basis of \$4.2 million, were previously amortized over 2 years.

A reconciliation of the beginning and ending balance of goodwill for each of the two years in the period ended December 31, 2016 is as follows:

(In Thousands)	PE Films	Flexible Packaging Films	Aluminum Extrusions (1)	Total
Net carrying value of goodwill at January 1, 2015	\$ 104,160	\$ 51,831	\$ 13,696	\$ 169,687
Goodwill impairment charge	—	(44,465)	—	(44,465)
Increase (decrease) due to foreign currency translation	(17)	(7,366)	—	(7,383)
Net carrying value of goodwill at December 31, 2015	104,143	—	13,696	117,839
Increase (decrease) due to foreign currency translation	(17)	—	—	(17)
Net carrying value of goodwill at December 31, 2016	\$ 104,126	\$ —	\$ 13,696	\$ 117,822

(1) Goodwill balance is net of accumulated impairment losses of \$30.6 million.

The Company recorded a goodwill impairment charge of \$44.5 million (\$44.5 million after taxes) for goodwill associated with Flexible Packaging Films in 2015. This impairment charge represented the entire amount of goodwill associated with the Flexible Packaging Films segment. The operations of Flexible Packaging Films were adversely impacted by competitive pressures that were primarily related to unfavorable economic conditions in its primary market of Brazil and excess global capacity in the industry. The Company's assessment of future prospects and timing of a recovery under these conditions indicated that its enterprise value was less than \$120 million (Flexible Packaging Films' net assets excluding goodwill), the minimum value needed to have avoided a full write-off of its goodwill.

Amortization expense for continuing operations over the next five years is expected to be as follows:

Year	Amount (In Thousands)
2017	\$ 4,007
2018	3,873
2019	3,473
2020	3,473
2021	3,360

## 9 FINANCIAL INSTRUMENTS

Tredegar uses derivative financial instruments for the purpose of hedging margin exposure from fixed-price forward sales contracts in Aluminum Extrusions and currency exchange rate exposures that exist as part of ongoing business operations (primarily in PE Films). These derivative financial instruments are designated as and qualify as cash flow hedges and are

recognized in the consolidated balance sheet at fair value. The fair value of derivative instruments recorded on the consolidated balance sheets are based upon Level 2 inputs. If individual derivative instruments with the same counterparty can be settled on a net basis, the Company records the corresponding derivative fair values as a net asset or net liability.

In the normal course of business, Aluminum Extrusions enters into fixed-price forward sales contracts with certain customers for the future sale of fixed quantities of aluminum extrusions at scheduled intervals. In order to hedge margin exposure created from the fixing of future sales prices relative to volatile raw material (aluminum) costs, Aluminum Extrusions enters into a combination of forward purchase commitments and futures contracts to acquire or hedge aluminum, based on the scheduled purchases for the firm sales commitments. The fixed-price firm sales commitments and related hedging instruments generally have durations of not more than 12 months, and the notional amount of aluminum futures contracts that hedged future purchases of aluminum to meet fixed-price forward sales contract obligations was \$8.0 million (9.6 million pounds of aluminum) at December 31, 2016 and \$16.6 million (18.9 million pounds of aluminum) at December 31, 2015.

The table below summarizes the location and gross amounts of aluminum derivative contract fair values (Level 2) in the consolidated balance sheets as of December 31, 2016 and 2015:

(In Thousands)	December 31, 2016		December 31, 2015	
	Balance Sheet Account	Fair Value	Balance Sheet Account	Fair Value
<b>Derivatives Designated as Hedging Instruments</b>				
Asset derivatives:	Prepaid expenses and other		Accrued expenses	
Aluminum futures contracts		\$ 308		\$ 44
Liability derivatives:	Prepaid expenses and other		Accrued expenses	
Aluminum futures contracts		\$ (37)		\$ (1,797)
<b>Derivatives Not Designated as Hedging Instruments</b>				
Asset derivatives:	Prepaid expenses and other		Accrued expenses	
Aluminum futures contracts		\$ —		\$ —
Liability derivatives:	Prepaid expenses and other		Accrued expenses	
Aluminum futures contracts		\$ —		\$ —
<b>Net asset (liability)</b>		<b>\$ 271</b>		<b>\$ (1,753)</b>

In the event that a counterparty to an aluminum fixed-price forward sales contract chooses not to take delivery of its aluminum extrusions, the customer is contractually obligated to compensate Aluminum Extrusions for any losses on the related aluminum futures and/or forward contracts through the date of cancellation. The offsetting asset and liability positions included in the table above are associated with the unwinding of aluminum futures contracts due to such cancellations.

Tredegar used future fixed Euro-denominated contractual payments for equipment purchased as part of its multi-year capacity expansion project at the Flexible Packaging Films manufacturing facility in Cabo de Santo Agostinho, Brazil. The Company used fixed rate Euro forward contracts with various settlement dates through February 2014 to hedge exchange rate exposure on these obligations. The Company did not have any fixed rate forward contracts with outstanding notional amounts as of December 31, 2016 and 2015.

Tredegar receives Euro-based royalty payments relating to its operations in Europe. From time to time Tredegar uses zero-cost collar currency options to hedge a portion of its exposure to changes in cash flows due to variability in U.S. Dollar and Euro exchange rates. There were no outstanding notional amounts on these collars at December 31, 2016 and 2015 as there were no derivatives outstanding related to the hedging of royalty payments with currency options.

The counterparties to the Company's forward purchase commitments are major aluminum brokers and suppliers, and the counterparties to aluminum futures contracts are major financial institutions. Fixed-price forward sales contracts are only made available to the best and most credit-worthy customers. The counterparties to Tredegar's foreign currency futures and zero-cost collar contracts are major financial institutions.

The pretax effect on net income (loss) and other comprehensive income (loss) of derivative instruments classified as cash flow hedges and described in the previous paragraphs for years ended December 31, 2016, 2015, and 2014 is summarized in the tables below:

(In Thousands)	Cash Flow Derivative Hedges					
	Aluminum Futures Contracts			Foreign Currency Forwards and Options		
	2016	2015	2014	2016	2015	2014
Years Ended December 31,						
Amount of pre-tax gain (loss) recognized in other comprehensive income	\$ 394	\$ (5,055)	\$ 542	\$ —	\$ —	\$ (120)
Location of gain (loss) reclassified from accumulated other comprehensive income into net income (effective portion)	Cost of sales	Cost of sales	Cost of sales	Cost of sales	Cost of sales	Cost of sales
Amount of pre-tax gain (loss) reclassified from accumulated other comprehensive income to net income (effective portion)	\$ (1,630)	\$ (3,538)	\$ 631	\$ 62	\$ 62	\$ 16

Gains and losses on the ineffective portion of derivative instruments or derivative instruments that were not designated as hedging instruments were not material in 2016, 2015 and 2014. For the years ended December 31, 2016, 2015 and 2014, unrealized net losses from hedges that were discontinued were not material. As of December 31, 2016, the Company expected \$0.2 million of unrealized after-tax gains on derivative instruments reported in accumulated other comprehensive income to be reclassified to earnings within the next 12 months.

## 10 ACCRUED EXPENSES

Accrued expenses consist of the following:

(In Thousands)	2016	2015
Vacation	\$ 8,254	\$ 7,155
Incentive compensation	5,530	3,883
Payrolls, related taxes and medical and other benefits	5,519	4,762
Workers' compensation and disabilities	3,732	3,036
Accrued utilities	2,126	2,048
Environmental liabilities (current)	2,100	1,713
Accrued severance	1,976	1,908
Accrued freight	1,612	1,111
Customer rebates	842	2,032
Derivative contract liability	—	1,753
Other	6,956	4,252
Total	\$ 38,647	\$ 33,653



A reconciliation of the beginning and ending balances of accrued expenses associated with asset impairments and costs associated with exit and disposal activities for each of the three years in the period ended December 31, 2016 is as follows:

(In Thousands)	Severance	Asset Impairments	Other (a)	Total
Balance at January 1, 2014	\$ 331	\$ —	\$ 356	\$ 687
For the year ended December 31, 2014:				
Charges	2,668	227	131	3,026
Cash spend	(2,753)	—	(286)	(3,039)
Charges against assets	—	(227)	—	(227)
Balance at December 31, 2014	246	—	201	447
For the year ended December 31, 2015:				
Charges	2,568	403	879	3,850
Cash spend	(1,352)	—	(675)	(2,027)
Charges against assets	—	(403)	—	(403)
Balance at December 31, 2015	1,462	—	405	1,867
For the year ended December 31, 2016:				
Charges	1,535	603	546	2,684
Cash spend	(1,143)	—	(397)	(1,540)
Charges against assets	—	(603)	—	(603)
Balance at December 31, 2016	\$ 1,854	\$ —	\$ 554	\$ 2,408

(a) Other includes other shutdown-related costs associated with the consolidation of domestic PE Films manufacturing facilities and the shutdown of the Company's aluminum extrusions manufacturing facility in Kentland, Indiana.

See Note 18 for more information on plant shutdowns, asset impairments and restructurings of continuing operations.

## 11 DEBT AND CREDIT AGREEMENTS

On March 1, 2016, Tredegar entered into a \$400 million five-year, secured revolving credit facility ("Credit Agreement"), with an option to increase that amount by \$50 million. The Credit Agreement replaced the Company's previous \$350 million five-year, unsecured revolving credit facility that was due to expire on April 17, 2017. In connection with the refinancing, the Company borrowed \$107 million under the Credit Agreement, which was used, together with available cash on hand, to repay all indebtedness under the previous revolving credit facility.

Borrowings under the Credit Agreement bear an interest rate of LIBOR plus a credit spread and commitment fees charged on the unused amount under the Credit Agreement at various indebtedness-to-adjusted EBITDA levels as follows:

Pricing Under Credit Revolving Agreement (Basis Points)		
Indebtedness-to-Adjusted EBITDA Ratio	Credit Spread Over LIBOR	Commitment Fee
> 3.5x but ≤ 4.0x	250	45
> 3.0x but ≤ 3.5x	225	40
> 2.0x but ≤ 3.0x	200	35
> 1.0x but ≤ 2.0x	175	30
≤ 1.0x	150	25

At December 31, 2016, the interest cost on debt borrowed under the Credit Agreement was priced at one-month LIBOR plus the applicable credit spread of 175 basis points.

The most restrictive covenants in the Credit Agreement include:

- Maximum indebtedness-to-adjusted EBITDA ("Leverage Ratio") of 4.00x;

- Minimum adjusted EBIT-to-interest expense of 2.50x; and
- Maximum aggregate distributions to shareholders over the term of the Credit Agreement of \$100,000 plus, beginning with the fiscal quarter ended March 31, 2016, 50% of net income and, at a Leverage Ratio of equal to or greater than 3.00x, a limitation on such payments for the succeeding quarter at the greater of (i) \$4 million and (ii) 50% of consolidated net income for the most recent fiscal quarter, and, at a Leverage Ratio of equal to or greater than 3.50x, the prevention of such payments for the succeeding quarter unless the fixed charge coverage ratio is equal to or greater than 1.20x.

The Credit Agreement is secured by substantially all of the Company's and its domestic subsidiaries' assets, including equity in certain material first-tier foreign subsidiaries.

At December 31, 2016, based upon the most restrictive covenants within the Credit Agreement, available credit under the Credit Agreement was approximately \$185.0 million. Total debt due and outstanding at December 31, 2016 is summarized below:

Debt Due and Outstanding at December 31, 2016 (In Thousands)			
Year Due	Credit Agreement	Other	Total Debt Due
2017	\$ —	\$ —	\$ —
2018	—	—	—
2019	—	—	—
2020	—	—	—
2021	95,000	—	95,000
Total	\$ 95,000	\$ —	\$ 95,000

Tredegar believes that it was in compliance with all of its debt covenants as of December 31, 2016. Noncompliance with any of the debt covenants may have a material adverse effect on financial condition or liquidity in the event such noncompliance cannot be cured or should the Company be unable to obtain a waiver from the lenders. Renegotiation of the covenant through an amendment to the Credit Agreement may effectively cure the noncompliance, but may have an effect on financial condition or liquidity depending upon how the covenant is renegotiated.

## 12 SHAREHOLDER RIGHTS AGREEMENT

Pursuant to the Second Amended and Restated Rights Agreement (the "Rights Agreement"), dated as of November 18, 2013, with Computershare Trust Company, N.A., as Rights Agent, one purchase right (a "Right") was attached to each outstanding share of Tredegar's common stock. Each Right entitled the registered holder to purchase from Tredegar one one-hundredth of a share of Tredegar's Series A Participating Cumulative Preferred Stock at an exercise price of \$150, subject to adjustment (the "Purchase Price"). Unless otherwise noted in the Rights Agreement, the Rights would have become exercisable, if not earlier redeemed, only if a person or group (i) acquires beneficial ownership of 20% or more of the outstanding shares of the Company's common stock or (ii) commences, or publicly discloses an intention to commence, a tender offer or exchange offer that would result in beneficial ownership by a person or group of 20% or more of the outstanding shares of the Company's common stock.

On February 19, 2014, Tredegar's Board of Directors authorized the termination of the Rights Agreement and the redemption of all of the outstanding Rights, at a redemption price of \$.01 per Right to be paid in cash to shareholders of record as of the close of business on March 3, 2014, with the payment date of such redemption price to be on March 7, 2014. The corresponding redemption payment of \$0.3 million was made in 2014.

## 13 STOCK OPTION AND STOCK AWARD PLANS

Tredegar has one equity incentive plan under which stock options may be granted to purchase a specified number of shares of common stock at a price no lower than the fair market value on the date of grant and for a term not to exceed 10 years. Employee options granted in 2012 and thereafter ordinarily vest over a four-year period, with a quarter of the options granted vesting on each year on the grant date anniversary. The option plan also permits the grant of stock appreciation rights ("SARs"), stock, restricted stock, stock unit awards and incentive awards. Restricted stock grants ordinarily vest three years

from the date of grant based upon continued employment. Stock unit awards vest upon the achievement of certain performance targets. No SARs have been granted since 1992 and none are currently outstanding.

A summary of stock options outstanding at December 31, 2016, 2015 and 2014, and changes during those years, is presented below:

	Number of Options	Option Exercise Price/Share			
		Range		Weighted Average	
Outstanding at January 1, 2014	1,046,800	\$ 14.06	to \$ 30.01	\$ 19.06	
Granted	181,476	19.84	to 22.49	22.41	
Forfeited and Expired	(22,581)	15.80	to 24.84	21.42	
Exercised	(41,575)	15.80	to 19.84	17.55	
Outstanding at December 31, 2014	1,164,120	14.06	to 30.01	19.59	
Granted	—	—	to —	—	
Forfeited and Expired	(60,207)	17.13	to 30.01	22.30	
Exercised	(222,400)	14.06	to 19.84	16.34	
Outstanding at December 31, 2015	881,513	17.13	to 30.01	20.22	
Granted	—	—	to —	—	
Forfeited and Expired	(246,394)	17.13	to 30.01	18.90	
Exercised	(134,200)	17.13	to 19.84	17.23	
Outstanding at December 31, 2016	500,919	\$ 17.13	to \$ 30.01	\$ 21.67	

The following table summarizes additional information about stock options outstanding and exercisable at December 31, 2016:

Options Outstanding at December 31, 2016							Options Exercisable at December 31, 2016			
Range of Exercise Prices		Shares	Weighted Average			Aggregate Intrinsic Value (In Thousands)	Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value (In Thousands)	
			Remaining Contractual Life (Years)	Exercise Price						
\$ —	to \$ 15.00	—	0.0	\$ —	\$ —	—	\$ —	\$ —		
15.01	to 17.50	13,000	0.1	17.13	89,310	13,000	17.13	89,310		
17.51	to 20.00	226,425	2.8	19.59	999,156	226,425	19.59	999,156		
20.01	to 25.00	258,694	6.5	23.63	201,274	211,542	23.74	149,553		
25.01	to 30.01	2,800	6.6	30.01	—	2,100	30.01	—		
Total		500,919	4.6	\$ 21.67	\$ 1,289,740	453,067	\$ 21.50	\$ 1,238,019		

During 2015, the Board of Directors approved the accelerated vesting of stock options and restricted stock for several Tredegar executives who left the Company in recognition of their many years of service. Compensation expense recognized in 2015 for accelerated stock option vestings (0.4 million shares) and accelerated restricted stock vestings (0.1 million shares) totaled \$0.4 million and \$1.0 million, respectively.

The following table summarizes additional information about unvested restricted stock outstanding at December 31, 2016, 2015 and 2014:

	Unvested Restricted Stock			Maximum Unvested Restricted Stock Units Issuable Upon Satisfaction of Certain Performance Criteria		
	Number of Shares	Weighted Avg. Grant Date Fair Value/ Share	Grant Date Fair Value (In Thousands)	Number of Shares	Weighted Avg. Grant Date Fair Value/ Share	Grant Date Fair Value (In Thousands)
Outstanding at January 1, 2014	157,850	\$ 22.00	\$ 3,473	132,300	\$ 23.81	\$ 3,150
Granted	95,707	22.18	2,123	59,675	21.54	1,285
Vested	(54,921)	20.73	(1,139)	—	—	—
Forfeited	(10,578)	21.76	(230)	(62,262)	19.18	(1,194)
Outstanding at December 31, 2014	188,058	22.48	4,227	129,713	24.99	3,241
Granted	147,666	18.87	2,786	144,582	18.47	2,670
Vested	(174,145)	20.57	(3,582)	—	—	—
Forfeited	(29,226)	21.42	(626)	(107,167)	20.78	(2,227)
Outstanding at December 31, 2015	132,353	21.19	2,805	167,128	22.04	3,684
Granted	144,546	13.47	1,947	136,986	11.34	1,553
Vested	(52,167)	21.56	(1,125)	—	—	—
Forfeited	(17,377)	18.97	(330)	(65,685)	20.24	(1,329)
Outstanding at December 31, 2016	207,355	\$ 15.90	\$ 3,297	238,429	\$ 16.39	\$ 3,908

The total intrinsic value of stock options exercised was \$0.2 million in 2016, \$1.0 million in 2015 and \$0.1 million in 2014. The grant-date fair value of stock option-based awards vested was \$0.4 million in 2016, \$1.9 million in 2015 and \$0.7 million in 2014. As of December 31, 2016, there was unrecognized compensation cost of \$0.1 million related to stock option-based awards and \$1.6 million related to non-vested restricted stock and other stock-based awards. This cost is expected to be recognized over the remaining weighted average period of 0.6 years for stock option-based awards and 1.6 years for non-vested restricted stock and other stock-based awards.

Stock options exercisable totaled 453,067 at December 31, 2016 and 771,000 shares at December 31, 2015. Stock options available for grant totaled 2,748,000 shares at December 31, 2016.

## 14 RETIREMENT PLANS AND OTHER POSTRETIREMENT BENEFITS

Tredegar sponsors noncontributory defined benefit (pension) plans covering certain current and former employees. The plans for salaried and hourly employees currently in effect are based on a formula using the participant's years of service and compensation or using the participant's years of service and a dollar amount. The plan is closed to new participants, and pay for active participants of the plan was frozen as of December 31, 2007. With the exception of plan participants at one of the Company's U.S. manufacturing facilities, the plan no longer accrues benefits associated with crediting employees for service, thereby freezing all future benefits under the plan.

In addition to providing pension benefits, the Company provides postretirement life insurance and health care benefits for certain groups of employees. Tredegar and retirees share in the cost of postretirement health care benefits, with employees hired on or before January 1, 1993, receiving a fixed subsidy to cover a portion of their health care premiums. The Company eliminated prescription drug coverage for Medicare-eligible retirees as of January 1, 2006. Consequently, Tredegar is not eligible for any federal subsidies.

The following tables reconcile the changes in benefit obligations and plan assets in 2016 and 2015, and reconcile the funded status to prepaid or accrued cost at December 31, 2016 and 2015:

(In Thousands)	Pension Benefits		Other Post-Retirement Benefits	
	2016	2015	2016	2015
<b>Change in benefit obligation:</b>				
Benefit obligation, beginning of year	\$ 303,852	\$ 325,426	\$ 7,745	\$ 8,372
Service cost	231	530	38	44
Interest cost	13,323	13,217	337	325
Effect of actuarial (gains) losses related to the following:				
Discount rate change	9,296	(14,687)	210	(356)
Retirement rate assumptions and mortality table adjustments	(5,537)	(5,456)	(433)	32
Other	(3,025)	(746)	(131)	(332)
Plan participant contributions	—	—	634	625
Benefits paid	(15,014)	(14,432)	(964)	(965)
<b>Benefit obligation, end of year</b>	<b>\$ 303,126</b>	<b>\$ 303,852</b>	<b>\$ 7,436</b>	<b>\$ 7,745</b>
<b>Change in plan assets:</b>				
Plan assets at fair value, beginning of year	\$ 210,642	\$ 229,017	\$ —	\$ —
Actual return on plan assets	11,199	(6,311)	—	—
Employer contributions	7,732	2,368	330	340
Plan participant contributions	—	—	634	625
Benefits paid	(15,014)	(14,432)	(964)	(965)
<b>Plan assets at fair value, end of year</b>	<b>\$ 214,559</b>	<b>\$ 210,642</b>	<b>\$ —</b>	<b>\$ —</b>
<b>Funded status of the plans</b>	<b>\$ (88,567)</b>	<b>\$ (93,210)</b>	<b>\$ (7,436)</b>	<b>\$ (7,745)</b>
<b>Amounts recognized in the consolidated balance sheets:</b>				
Accrued expenses (current)	\$ 182	\$ 210	\$ 453	\$ 455
Other noncurrent liabilities	88,385	93,000	6,983	7,290
<b>Net amount recognized</b>	<b>\$ 88,567</b>	<b>\$ 93,210</b>	<b>\$ 7,436</b>	<b>\$ 7,745</b>

Assumptions used for financial reporting purposes to compute net benefit income or cost and benefit obligations for continuing operations, and the components of net periodic benefit income or cost for continuing operations, are as follows:

(In Thousands, Except Percentages)	Pension Benefits			Other Post-Retirement Benefits		
	2016	2015	2014	2016	2015	2014
Weighted-average assumptions used to determine benefit obligations:						
Discount rate	<b>4.29%</b>	4.55%	4.17%	<b>4.24%</b>	4.49%	4.11%
Expected long-term return on plan assets	<b>6.50%</b>	7.00%	7.50%	<b>n/a</b>	n/a	n/a
Weighted-average assumptions used to determine net periodic benefit cost:						
Discount rate	<b>4.55%</b>	4.17%	4.99%	<b>4.49%</b>	4.11%	4.88%
Expected long-term return on plan assets	<b>7.00%</b>	7.50%	7.75%	<b>n/a</b>	n/a	n/a
Components of net periodic benefit cost:						
Service cost	<b>\$ 231</b>	\$ 530	\$ 869	<b>\$ 38</b>	\$ 44	\$ 43
Interest cost	<b>13,323</b>	13,217	13,397	<b>337</b>	325	387
Expected return on plan assets	<b>(15,980)</b>	(17,636)	(18,301)	<b>—</b>	—	—
Amortization of prior service costs and gains or losses	<b>13,312</b>	16,190	10,688	<b>(214)</b>	(194)	(190)
Settlement/curtailment	<b>—</b>	45	81	<b>—</b>	—	—
Net periodic benefit cost	<b>\$ 10,886</b>	\$ 12,346	\$ 6,734	<b>\$ 161</b>	\$ 175	\$ 240

Net benefit income or cost is determined using assumptions at the beginning of each year. Funded status is determined using assumptions at the end of each year. The amount of the accumulated benefit obligation is the same as the projected benefit obligation. At December 31, 2016, the effect of a 1% change in the health care cost trend rate assumptions would not impact the post-retirement obligation.

Expected benefit payments for continuing operations over the next five years and in the aggregate for 2021-2025 are as follows:

(In Thousands)	Pension Benefits	Other Post-Retirement Benefits
2017	\$ 16,165	\$ 453
2018	16,568	456
2019	17,076	460
2020	17,537	462
2021	17,860	465
2022—2026	92,955	2,322

Amounts recorded in 2016, 2015 and 2014 in accumulated other comprehensive income, before related deferred income taxes, consist of:

(In Thousands)	Pension			Other Post-Retirement		
	2016	2015	2014	2016	2015	2014
Prior service cost (benefit)	<b>\$ 10</b>	\$ 18	\$ 87	<b>\$ —</b>	\$ —	\$ —
Net actuarial (gain) loss	<b>145,782</b>	153,570	166,678	<b>(1,756)</b>	(1,616)	(1,154)

Pension expense is expected to be \$10.4 million in 2017. The amounts in accumulated other comprehensive income, before related deferred income taxes, that are expected to be recognized as components of net periodic benefit or cost during 2017 are as follows:

(In Thousands)	Pension	Other Post-Retirement
Prior service cost (benefit)	\$ 5	\$ —
Net actuarial (gain) loss	12,329	(245)

The percentage composition of assets held by pension plans for continuing operations at December 31, 2016, 2015 and 2014 are as follows:

	% Composition of Plan Assets at December 31,		
	2016	2015	2014
Pension plans related to continuing operations:			
Fixed income securities	<b>8.0%</b>	12.8%	14.5%
Large/mid-capitalization equity securities	<b>14.7</b>	13.8	13.7
Small-capitalization equity securities	<b>5.3</b>	4.0	4.3
International and emerging market equity securities	<b>11.5</b>	10.9	11.0
Total equity securities	<b>31.5</b>	28.7	29.0
Private equity and hedge funds	<b>48.4</b>	52.4	51.2
Other assets	<b>12.1</b>	6.1	5.3
Total for continuing operations	<b>100.0%</b>	100.0%	100.0%

Tredegar's targeted allocation percentage for pension plan assets and the expected long-term rate of return on assets used to determine its benefit obligation at December 31, 2016, are as follows:

	Target % Composition of Plan Assets *	Expected Long- term Return %
Pension plans related to continuing operations:		
Fixed income securities	22.0%	3.8%
Large/mid-capitalization equity securities	14.0	8.4
Small-capitalization equity securities	5.0	9.5
International and emerging market equity securities	13.0	8.6
Total equity securities	32.0	8.7
Private equity and hedge funds	46.0	6.3
Total for continuing operations	100.0%	6.5%

\* Target percentages for the composition of plan assets represents a neutral position within the approved range of allocations for such assets.

Expected long-term returns are estimated by asset class and generally are based on inflation-adjusted historical returns, volatilities, risk premiums and managed asset premiums. The portfolio of fixed income securities is structured with maturities that generally match estimated benefit payments over the next 1-2 years. The other assets category is primarily comprised of cash and contracts with insurance companies. The Company's primary investment objective is to maximize total return with a strong emphasis on the preservation of capital, and it believes that over the long-term a diversified portfolio of fixed income securities, equity securities, hedge funds and private equity funds has a better risk-return profile than fixed income securities alone. The average remaining duration of benefit payments for the pension plans is about 11.4 years. The Company expects its required contributions to be approximately \$5.5 million in 2017.

Estimates of the fair value of assets held by the Company's pension plan are provided by unaffiliated third parties. Investments in private equity and hedge funds and certain fixed income securities by the Company's pension plan are measured at NAV, which is a practical expedient for measuring fair value. These assets are therefore excluded from the fair value hierarchy for each of the years presented. At December 31, 2016 and 2015, the pension plan assets are categorized by level within the fair value measurement hierarchy as follows:

(In Thousands)	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Balances at December 31, 2016</b>				
Large/mid-capitalization equity securities	\$ 31,549	\$ 31,549	\$ —	\$ —
Small-capitalization equity securities	11,389	11,389	—	—
International and emerging market equity securities	24,710	11,410	13,300	—
Fixed income securities	17,213	4,441	12,772	—
Other assets	15,853	15,853	—	—
<b>Total plan assets at fair value</b>	<b>\$ 100,714</b>	<b>\$ 74,642</b>	<b>\$ 26,072</b>	<b>\$ —</b>
Private equity and hedge funds	103,686			
Contracts with insurance companies	10,158			
<b>Total plan assets, December 31, 2016</b>	<b>\$ 214,558</b>			
<b>Balances at December 31, 2015</b>				
Large/mid-capitalization equity securities	\$ 29,027	\$ 29,027	\$ —	\$ —
Small-capitalization equity securities	8,457	8,457	—	—
International and emerging market equity securities	23,054	10,126	12,928	—
Fixed income securities	22,968	10,626	12,342	—
Other assets	2,727	2,727	—	—
<b>Total plan assets at fair value</b>	<b>\$ 86,233</b>	<b>\$ 60,963</b>	<b>\$ 25,270</b>	<b>\$ —</b>
Private equity and hedge funds	110,340			
Contracts with insurance companies	10,207			
Fixed income securities	3,862			
<b>Total plan assets, December 31, 2015</b>	<b>\$ 210,642</b>			

Tredegar also has a non-qualified supplemental pension plan covering certain employees. Effective December 31, 2005, further participation in this plan was terminated and benefit accruals for existing participants were frozen. The plan was designed to restore all or a part of the pension benefits that would have been payable to designated participants from the principal pension plans if it were not for limitations imposed by income tax regulations. The projected benefit obligation relating to this unfunded plan was \$2.2 million at December 31, 2016 and \$2.3 million at December 31, 2015. Pension expense recognized for this plan was \$0.1 million in 2016, \$0.1 million in 2015 and \$0.1 million in 2014. This information has been included in the preceding pension benefit tables.

Approximately 78 employees at the Company's film products manufacturing facility in Kerkrade, The Netherlands are covered by a collective bargaining agreement that includes participation in a multi-employer pension plan. Pension expense recognized for participation in this plan, which is equal to required contributions, was \$0.4 million in 2016, \$0.4 million in 2015 and \$0.5 million in 2014. This information has been excluded from the preceding pension benefit tables.

## 15 SAVINGS PLAN

Tredegar has a savings plan that allows eligible employees to voluntarily contribute a percentage of their compensation, up to Internal Revenue Service ("IRS") limitations. The provisions of the savings plan provided the following benefits for salaried and certain hourly employees:

- The Company makes matching contributions to the savings plan of \$1 for every \$1 of employee contribution. The matching contribution is currently on a maximum of 5% of base pay.



- The savings plan includes immediate vesting of matching contributions when made and automatic enrollment at 3% of base pay unless the employee opts out or elects a different percentage.

For the period from February 1, 2014 to December 31, 2014, the Company made matching contributions to the savings plan for salaried and non-union hourly employees of \$0.50 for every \$1 a participant contributed, with a matching contribution on a maximum of 5% of base pay during this period. The Company also has a non-qualified plan that restores matching benefits for employees suspended from the savings plan due to certain limitations imposed by income tax regulations (“restoration plan”). Charges recognized for these plans were \$3.2 million in 2016, \$3.0 million in 2015 and \$1.6 million in 2014. The Company’s liability under the restoration plan was \$1.6 million at December 31, 2016 (consisting of 67,013 phantom shares of common stock) and \$1.0 million at December 31, 2015 (consisting of 71,818 phantom shares of common stock) and valued at the closing market price on those dates.

The Tredegar Corporation Benefits Plan Trust (the “Trust”) purchased 7,200 shares of the Company’s common stock in 1998 for \$0.2 million and 46,671 shares of its common stock in 1997 for \$1.0 million, as a partial hedge against the phantom shares held in the restoration plan. There have been no shares purchased since 1998 except for re-invested dividends. The cost of the shares held by the Trust is shown as a reduction to shareholders’ equity in the consolidated balance sheets.

## 16 RENTAL EXPENSE AND CONTRACTUAL COMMITMENTS

Rental expense for continuing operations was \$2.9 million in 2016, \$3.6 million in 2015 and \$3.6 million in 2014. Rental commitments under all non-cancelable leases (including \$0.3 million for capital leases) for continuing operations as of December 31, 2016, are as follows:

(in thousands)	
2017	\$ 2,397
2018	2,200
2019	1,982
2020	1,976
2021	1,491
Remainder	1,169
<b>Total minimum lease payments</b>	<b>\$ 11,215</b>

Contractual obligations for plant construction and purchases of real property and equipment amounted to \$12.0 million at December 31, 2016.

## 17 INCOME TAXES

Income from continuing operations before income taxes and income taxes are as follows:

(In Thousands)	2016	2015	2014
Income from continuing operations before income taxes:			
Domestic	\$ 26,284	\$ (9,116)	\$ 38,402
Foreign	1,399	(14,091)	7,014
Total	\$ 27,683	\$ (23,207)	\$ 45,416
Current income taxes:			
Federal	\$ 4,302	\$ 12,693	\$ 14,568
State	(709)	973	2,178
Foreign	3,255	6,064	4,102
Total	6,848	19,730	20,848
Deferred income taxes:			
Federal	(2,505)	(9,419)	(9,530)
State	1,396	(1,035)	(417)
Foreign	(2,522)	(348)	(1,514)
Total	(3,631)	(10,802)	(11,461)
Total income taxes	\$ 3,217	\$ 8,928	\$ 9,387

The significant differences between the U.S. federal statutory rate and the effective income tax rate for continuing operations are as follows:

	Percent of Income Before Income Taxes from Continuing Operations		
	2016	2015	2014
Federal statutory rate	35.0	35.0	35.0
State taxes, net of federal income tax benefit	2.3	0.3	2.2
Foreign rate differences	1.8	3.1	(0.1)
Non-deductible expenses	1.4	(1.9)	0.9
Changes in estimates related to prior year tax provision	1.2	(2.1)	(2.3)
Valuation allowance for capital loss carry-forwards	1.0	1.3	(10.2)
Tax contingency accruals and tax settlements	0.4	(3.1)	2.0
Tax incentive	—	0.5	(0.1)
Foreign investment write down	(0.7)	(10.9)	—
Unremitted earnings from foreign operations	(0.9)	2.2	(3.8)
Valuation allowance due to foreign losses	(1.5)	—	(0.4)
Research and development tax credit	(2.0)	1.5	(0.6)
Domestic Production Activities Deduction	(2.7)	3.6	(1.9)
Remitted earnings from foreign operations	(23.7)	0.1	—
Goodwill impairment	—	(68.1)	—
Effective income tax rate for continuing operations	11.6	(38.5)	20.7

Income taxes from continuing operations in 2016 included the recognition of an additional valuation allowance of \$0.3 million related to expected limitations on the utilization of assumed capital losses on certain investments. In 2016, the difference between the federal statutory rate and the effective tax rate is primarily driven by the \$6.4 million tax benefit from excess foreign tax credits related to the repatriation of cash from Brazil.

The change in income taxes from continuing operations in 2015 in comparison to the prior year can be attributed to several factors including recording no tax benefit on either the goodwill impairment charge or the unrealized loss on the portion of the Company's investment in shares of kaléo shares held in a foreign jurisdiction. Also, there was a \$0.5 million tax benefit

related to the valuation allowance associated with capital losses in 2015 compared to a \$4.9 million tax benefit in 2014. In 2014 there was a \$2.2 million tax benefit recorded for changes in the underlying basis of certain foreign subsidiaries versus a \$0.5 million tax benefit.

The Brazilian federal statutory income tax rate is a composite of 34.0% (25.0% of income tax and 9.0% of social contribution on income). Terphane's manufacturing facility in Brazil is the beneficiary of certain income tax incentives that allow for a reduction in the statutory Brazilian federal income tax rate levied on the operating profit of its products. These incentives produce a current tax rate of 15.25% for Terphane (6.25% of income tax and 9.0% social contribution on income). The current incentives will expire at the end of 2024. The benefit from the tax incentives was \$0.1 million (0 cents per share) and \$0.1 million (0 cents per share) in 2015 and 2014, respectively (none in 2016).

Deferred tax liabilities and deferred tax assets at December 31, 2016 and 2015, are as follows:

(In Thousands)	2016	2015
Deferred tax liabilities:		
Amortization of goodwill and other intangibles	\$ 43,546	\$ 42,900
Depreciation	24,178	22,221
Foreign currency translation gain adjustment	1,424	2,738
Derivative financial instruments	493	—
Total deferred tax liabilities	69,641	67,859
Deferred tax assets:		
Pensions	30,733	31,972
Employee benefits	10,262	10,397
Excess capital losses and book/tax basis differences on investments	7,595	8,026
Inventory	3,622	4,636
Asset write-offs, divestitures and environmental accruals	2,515	2,022
Tax benefit on state and foreign NOL and credit carryforwards	4,921	1,624
Timing adjustment for unrecognized tax benefits on uncertain tax positions, including portion relating to interest and penalties	395	1,006
Allowance for doubtful accounts	198	406
Derivative financial instruments	—	234
Other	1,568	2,224
Deferred tax assets before valuation allowance	61,809	62,547
Less: Valuation allowance	12,694	13,344
Total deferred tax assets	49,115	49,203
Net deferred tax liability	\$ 20,526	\$ 18,656
Amounts recognized in the consolidated balance sheets:		
Other assets and deferred charges (noncurrent)	584	—
Deferred income taxes (noncurrent)	\$ 21,110	\$ 18,656
Net deferred tax liability	\$ 20,526	\$ 18,656

Except as noted below, the Company believes that it is more likely than not that future taxable income will exceed future tax deductible amounts thereby resulting in the realization of deferred tax assets. The Company has estimated gross state and foreign tax credits and net operating loss carryforwards of \$4.9 million and \$1.6 million at December 31, 2016 and 2015, respectively, which primarily expire at different points over the next 5 to 8 years. Valuation allowances of \$1.5 million, \$1.5 million and \$2.8 million at December 31, 2016, 2015 and 2014, respectively, are recorded against the tax benefit on state and foreign tax credits and net operating loss carryforwards generated by certain foreign and domestic subsidiaries that may not be recoverable in the carryforward period. The valuation allowance for excess capital losses from investments and other related items was \$11.2 million, \$10.9 million and \$11.4 million at December 31, 2016, 2015 and 2014. The current year balance increased due to changes in the relative amounts of capital gains and losses generated during the year. The amount of the deferred tax asset considered realizable, however, could be adjusted in the near term if estimates of the fair value of certain investments during the carryforward period change. Tredgear continues to evaluate opportunities to utilize capital loss carryforwards prior to their expiration at various dates in the future. As circumstances and events warrant, allowances will be

reversed when it is more likely than not that future taxable income will exceed deductible amounts, thereby resulting in the realization of deferred tax assets. The valuation allowance for asset impairments in foreign jurisdictions where the Company believes it is more likely than not that the deferred tax asset will not be realized was \$0.9 million at December 31, 2015 and \$0.4 million at December 31, 2014 (none in 2016).

A reconciliation of the Company's unrecognized uncertain tax positions since January 1, 2014, is shown below:

(In Thousands)	Years Ended December 31,		
	2016	2015	2014
Balance at beginning of period	\$ 4,049	\$ 3,255	\$ 2,239
Increase (decrease) due to tax positions taken in:			
Current period	1,151	518	619
Prior period	43	326	397
Increase (decrease) due to settlements with taxing authorities	(1,706)	—	—
Reductions due to lapse of statute of limitations	(222)	(50)	—
Balance at end of period	\$ 3,315	\$ 4,049	\$ 3,255

Additional information related to unrecognized uncertain tax positions since January 1, 2014 is summarized below:

(In Thousands)	Years Ended December 31,		
	2016	2015	2014
Gross unrecognized tax benefits on uncertain tax positions (reflected in current income tax and other noncurrent liability accounts in the balance sheet)	\$ 3,315	\$ 4,049	\$ 3,255
Deferred income tax assets related to unrecognized tax benefits on uncertain tax positions (reflected in deferred income tax accounts in the balance sheet)	(345)	(858)	(726)
Net unrecognized tax benefits on uncertain tax positions, which would impact the effective tax rate if recognized	2,970	3,191	2,529
Interest and penalties accrued on deductions taken relating to uncertain tax positions (approximately \$(262), \$90 and \$150 reflected in income tax expense in the income statement in 2016, 2015 and 2014, respectively, with the balance shown in current income tax and other noncurrent liability accounts in the balance sheet)	135	397	310
Related deferred income tax assets recognized on interest and penalties	(49)	(148)	(116)
Interest and penalties accrued on uncertain tax positions net of related deferred income tax benefits, which would impact the effective tax rate if recognized	86	249	194
Total net unrecognized tax benefits on uncertain tax positions reflected in the balance sheet, which would impact the effective tax rate if recognized	\$ 3,056	\$ 3,440	\$ 2,723

Tredegear, or one of its subsidiaries, files income tax returns in the U.S. federal jurisdiction, various states and jurisdictions outside the U.S. With few exceptions, Tredegear is no longer subject to U.S. federal, state or non-U.S. income tax examinations by tax authorities for years before 2013. The Company anticipates that it is reasonably possible that Federal and state income tax audits or statutes may settle or close within the next 12 months, which could result in the recognition of up to approximately \$0.8 million of the balance of unrecognized tax positions, including any payments that may be made.

## 18 LOSSES ASSOCIATED WITH PLANT SHUTDOWNS, ASSET IMPAIRMENTS AND RESTRUCTURINGS, UNUSUAL ITEMS, GAINS FROM SALE OF ASSETS AND OTHER ITEMS

Losses associated with plant shutdowns, asset impairments, restructurings and other charges in 2016 (as shown in the segment operating profit table in Note 5) totaled \$6.1 million (\$3.9 million after taxes), and unless otherwise noted below, are also included in "Asset impairments and costs associated with exit and disposal activities" in the consolidated statements of income. Results in 2016 included:

- Fourth quarter net loss \$0.7 million (\$0.4 million after taxes), related to the explosion that occurred in the second quarter of 2016 at the aluminum extrusions manufacturing facility in Newnan, Georgia, which consists of excess production costs for which recovery from insurance is not assured of \$0.6 million (\$0.4 million after taxes) (included in “Cost of goods sold” in the consolidated statements of income) and legal and consulting fees of \$0.1 million (\$0.1 million after taxes) (included in “Selling, general and administrative expenses” in the consolidated statements of income), third quarter net income of \$1.7 million (\$1.1 million after taxes), which includes the recognition of a gain of \$1.9 million (\$1.2 million after taxes) for a portion of the insurance recoveries approved by the insurer to begin the replacement of capital equipment, offset by the impairment of equipment damaged by the explosion of \$0.3 million (\$0.2 million after taxes) (net amount included in “Other income (expense), net” in the consolidated statements of income), and the reversal of an accrual for other costs related to the explosion not recoverable from insurance of \$0.1 million (\$0.0 million after taxes) (included in “Selling, general and administrative expenses” in the consolidated statements of income), and second quarter net loss of \$0.6 million (\$0.4 million after taxes) for other costs related to the explosion not recoverable from insurance (included in “Selling, general and administrative expenses” in the consolidated statements of income);
- Quarterly charges associated with the consolidation of domestic PE Films’ manufacturing facilities, which includes categories of expenses shown in the table below (Accelerated depreciation and a portion of Other facility consolidation-related costs as noted in the table below are included in “Cost of goods sold” in the consolidated statements of income):

(\$ in Millions)	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		2016	
	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
Severance	0.3	0.2	0.4	0.2	0.3	0.2	0.3	0.2	1.2	0.8
Asset impairments	0.3	0.2	0.1	0.1	0.1	—	—	—	0.4	0.3
Accelerated depreciation	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.6	0.4
Other facility consolidation-related costs	0.5	0.3	0.8	0.5	0.6	0.4	0.2	0.1	2.0	1.3
Total	1.1	0.7	1.3	0.9	1.1	0.7	0.8	0.5	4.3	2.8
Other facility consolidation-related costs included in “Cost of goods sold” in the consolidated statements of income	0.4	0.2	0.7	0.4	0.4	0.2	0.2	0.1	1.6	1.0

Note: BT = before taxes; AT = after taxes

- A fourth quarter charge of \$0.6 million (\$0.4 million after taxes) associated with the acquisition of Futura Industries by Bonnell Aluminum (included in “Selling, general and administrative expenses” in the consolidated statements of income);
- A fourth quarter charge of \$0.5 million (\$0.3 million after taxes) related to expected future environmental costs at the aluminum extrusions manufacturing facility in Newnan, Georgia (included in “Cost of goods sold” in the consolidated statements of income);
- A first quarter charge of \$0.4 million (\$0.2 million after taxes) associated with a non-recurring business development project (included in “Selling, general and administrative expense” in the consolidated statements of income and “Corporate expenses, net” in the statement of net sales and operating profit by segment);
- A third quarter charge of \$0.3 million (\$0.2 million after taxes) for severance and other employee-related costs associated with restructurings in PE Films (\$0.1 million) (\$0.1 million after taxes) and Corporate (\$0.2 million) (\$0.1 million after taxes) (included in “Corporate expenses, net” in the statement of net sales and operating profit by segment);
- A fourth quarter charge of \$0.3 million (\$0.2 million after taxes) related to contingencies associated with the application of prior period Brazilian value-added tax credits in Flexible Packaging Films (included in “Cost of goods sold” in the consolidated statements of income);
- A fourth quarter charge of \$0.2 million (\$0.1 million after taxes) associated with asset impairments in PE Films;
- A fourth quarter gain of \$0.1 million (\$0.0 million after taxes) related to contractual indemnifications associated with the anticipated settlement of a Terphane pre-acquisition contingency (included in “Other income (expense), net” in the consolidated statements of income); and

- A fourth quarter gain of \$0.1 million (\$0.1 million after taxes) associated with the shutdown of the aluminum extrusions manufacturing facility in Kentland, Indiana, which includes a pretax gain of \$0.2 million (\$0.1 million after taxes) related to the sale of the property, partially offset by pretax charges of \$0.1 million (\$0.0 million after taxes) associated with the shutdown of this facility and a third quarter charge of \$0.3 million (\$0.2 million after taxes) associated with shutdown costs.

Results in 2016 include a net unrealized gain on the Company's investment in kaléo (included in "Other income (expense), net" in the consolidated statements of income) of \$1.6 million (\$1.2 million after taxes). The Company recorded an unrealized loss on its investment property in Alleghany and Bath Counties, Virginia (included in "Other income (expense), net" in the consolidated statements of income) of \$1.0 million (\$0.7 million after taxes) in the fourth quarter of 2016. See Note 4 for additional information on investments.

In July 2015, the Company announced its intention to consolidate its domestic production for PE Films by restructuring the operations in its manufacturing facility in Lake Zurich, Illinois. Efforts to transition domestic production from the Lake Zurich manufacturing facility will require various machinery upgrades and equipment transfers to its other manufacturing facilities. Given PE Films' focus on maintaining product quality and customer satisfaction, the Company anticipates that these activities will be completed in the middle of 2017. Total pre-tax cash expenditures associated with restructuring the Lake Zurich manufacturing facility are expected to be approximately \$17 million over the project period, and once complete, annual pre-tax cash cost savings are expected to be approximately \$5-6 million.

The Company expects to recognize costs associated with the exit and disposal activities of approximately \$5-6 million over the project period. Exit and disposal costs include severance charges and other employee-related expenses arising from the termination of employees of approximately \$3-4 million and equipment transfers and other facility consolidation-related costs of approximately \$2 million. During the same period of time, operating expenses will include the acceleration of approximately \$3 million of non-cash depreciation expense for certain machinery and equipment at the Lake Zurich manufacturing facility. Total expenses associated with the North American facility consolidation project were \$4.3 million in the full year 2016 with \$2.1 million (\$1.3 million after taxes) included in "Asset impairments and costs associated with exit and disposal activities, net of adjustments" and \$2.2 million (\$1.4 million after taxes) included in "Cost of goods sold" in the consolidated statements of income. As of December 31, 2016, total expenses incurred since the project began in the third quarter of 2015 were \$6.5 million (\$4.1 million after taxes).

Total estimated cash expenditures of \$16-17 million over the project period include the following:

- Cash outlays associated with previously discussed exit and disposal expenses of approximately \$5 million, including additional operating expenses of approximately \$1 million associated with customer product qualifications on upgraded and transferred production lines;
- Capital expenditures associated with equipment upgrades at other PE Films manufacturing facilities in the U.S. of approximately \$11 million; and
- Cash incentives of approximately \$1 million in connection with meeting safety and quality standards while production ramps down at the Lake Zurich manufacturing facility.

Cash expenditures for the North American facility consolidation project were \$10.2 million in the full year 2016, which includes capital expenditures of \$8.2 million. As of December 31, 2016, total cash expenditures since the project began in the third quarter of 2015 were \$13.8 million, which includes \$11.1 million for capital expenditures.

Losses associated with plant shutdowns, asset impairments, restructurings and other charges for continuing operations in 2015 (as shown in the segment operating profit table in Note 5) totaled \$10.1 million (\$6.4 million after taxes), and unless otherwise noted below, are also included in "Asset impairments and costs associated with exit and disposal activities" in the consolidated statements of income. Results in 2015 included:

- A second quarter charge of \$3.9 million (\$2.5 million after taxes) for severance and other employee-related costs associated with the resignation of the Company's former chief executive and chief financial officers (included in "Selling, general and administrative expense" in the consolidated statements of income and "Corporate expenses, net" in the statement of net sales and operating profit by segment);
- A fourth quarter charge of \$1.0 million (\$0.6 million after taxes) and a third quarter charge of \$1.2 million (\$0.7 million) associated with the consolidation of domestic PE Films' manufacturing facilities, which includes severance and other employee-related costs of \$0.8 million, asset impairments of \$0.4 million, accelerated depreciation of \$0.4 million (included in "Cost of goods sold" in the consolidated statements of income) and other facility consolidation-related expenses of \$0.6 million (\$0.1 million is included in "Cost of goods sold" in the consolidated statements of income);

- A fourth quarter charge of \$1.1 million (\$0.7 million after taxes) in PE Films (\$0.4 million included in “Selling, general and administrative expense” in the consolidated statement of income), a third quarter charge of \$0.9 million (\$0.6 million after taxes) in PE Films (\$0.9 million), Aluminum Extrusions (\$35,000) and Corporate (\$26,000, included in “Corporate expenses, net” in the statement of net sales and operating profit by segment), and a second quarter charge of \$0.3 million (\$0.2 million taxes) in Flexible Packaging Films (\$0.3 million) and PE Films (\$7,000) for severance and other employee-related costs, and a first quarter reversal of previously accrued severance and other employee related costs of \$67,000 (\$43,000 after taxes) in Flexible Packaging Films, all associated with restructurings;
- A fourth quarter charge of \$1.0 million (\$0.6 million after taxes) associated with a business development project (included in “Selling, general and administrative expense” in the consolidated statement of income and “Corporate expenses, net” in the statement of net sales and operating profit by segment);
- A fourth quarter charge of \$31,000 (\$19,000 after taxes), a third quarter charge of \$0.3 million (\$0.2 million after taxes), a second quarter charge of \$18,000 (\$11,000 after taxes) and a first quarter charge of \$15,000 (\$9,000 after taxes) associated with the previously shutdown aluminum extrusions manufacturing facility in Kentland, Indiana; and
- A fourth quarter charge of \$0.3 million (\$0.2 million after taxes) related to expected future environmental costs at the aluminum extrusions manufacturing facility in Newnan, Georgia (included in “Cost of goods sold” in the consolidated statements of income).

Results in 2015 include a net unrealized loss on the Company’s investment in kaléo (included in “Other income (expense), net” in the consolidated statements of income) of \$20.5 million (\$15.7 million after taxes). See Note 4 for additional information on investments.

Losses associated with plant shutdowns, asset impairments, restructurings and other charges for continuing operations in 2014 (as shown in the segment operating profit table in Note 5) totaled \$13.8 million (\$9.3 million after taxes), and unless otherwise noted below, are also included in “Asset impairments and costs associated with exit and disposal activities” in the consolidated statements of income. Results in 2014 included:

- A second quarter charge of \$10.0 million (\$6.8 million after taxes) associated with a one-time, lump sum license payment to the 3M Company after the Company settled all litigation issues associated with a patent infringement complaint (included in “Other income (expense), net” in the consolidated statements of income);
- A fourth quarter charge of \$0.5 million (\$0.3 million after taxes) in Flexible Packaging Films (\$0.3 million) and PE Films (\$0.2 million), a third quarter charge of \$0.4 million (\$0.2 million after taxes) in Flexible Packaging Films (\$0.3 million), PE Films (\$78,000) and Aluminum Extrusions (\$31,000), a second quarter charge of \$0.6 million (\$0.4 million after taxes) in PE Films and a first quarter charge of \$0.8 million (\$0.5 million after taxes) in PE Films for severance and other employee-related costs associated with restructurings;
- A fourth quarter charge of \$0.7 million (\$0.4 million after taxes), a third quarter charge of \$75,000 (\$46,000 after taxes) and a second quarter charge of \$0.2 million (\$0.1 million after taxes) related to expected future environmental costs at the aluminum extrusions manufacturing facility in Newnan, Georgia (included in “Cost of goods sold” in the consolidated statements of income);
- A fourth quarter adjustment of previously accrued severance and other employee-related costs of \$0.1 million (\$63,000 after taxes) and a third quarter charge of \$37,000 (\$23,000 after taxes), a second quarter charge of \$0.3 million (\$0.2 million after taxes) and a first quarter charge of \$0.5 million (\$0.3 million after taxes) associated with the shutdown of the PE Films’ manufacturing facility in Red Springs, North Carolina, which includes net severance and other employee-related costs of \$0.4 million and asset impairment and other shutdown-related charges of \$0.3 million;
- A fourth quarter gain of \$0.1 million (\$73,000 after taxes) related to the sale of a previously shutdown PE Films’ manufacturing facility in LaGrange, Georgia (included in “Other income (expense), net” in the consolidated statements of income); and
- A fourth quarter charge of \$11,000 (\$7,000 after taxes), a third quarter charge of \$20,000 (\$12,000 after taxes) and a second quarter charge of \$24,000 (\$15,000 after taxes) associated with the previously shutdown aluminum extrusions manufacturing facility in Kentland, Indiana.

Results in 2014 include a net unrealized gain on the Company's investment in kaléo (included in "Other income (expense), net" in the consolidated statements of income) of \$2.0 million (\$1.0 million after taxes). An unrealized loss on the Company's investment in the Harbinger Fund (included in "Other income (expense), net" in the consolidated statements of income and "Corporate expenses, net" in the statement of net sales and operating profit by segment) of \$0.8 million (\$0.4 million after taxes) was recorded in 2014 as a result of a reduction in the fair value of the investment that is not expected to be temporary. The Company realized a gain on the sale of a portion of its investment property in Alleghany and Bath Counties, Virginia (included in "Other income (expense), net" in the consolidated statements of income) of \$1.2 million (\$0.8 million after taxes) in 2014. See Note 4 for additional information on investments.

PE Films closed its manufacturing facility in Red Springs, North Carolina in June 2014. The plant, which was a leased facility, was solely dedicated to producing babycare elastic laminate films for P&G, who has consolidated its North American suppliers for this product. The Red Springs manufacturing facility employed 66 people, and total charges incurred related to the shutdown, which primarily consisted of severance and other employee-related costs, were \$0.7 million in 2014. Impairment charges were recognized to write down the machinery and equipment to the lower of their carrying value or estimated fair value. The estimated fair value of machinery and equipment that was evaluated for impairment was primarily based on estimates of the proceeds that the Company would receive if and/or when assets are sold. Estimates of the remaining fair value for the related machinery and equipment were based on both Level 2 and 3 inputs as defined under GAAP.

## 19 CONTINGENCIES

Tredegar is involved in various stages of investigation and remediation relating to environmental matters at certain current and former plant locations. Where the Company has determined the nature and scope of any required environmental remediation activity, estimates of cleanup costs have been obtained and accrued. As efforts continue to maintain compliance with applicable environmental laws and regulations, additional contingencies may be identified. If additional contingencies are identified, the Company's practice is to determine the nature and scope of those contingencies, obtain and accrue estimates of the cost of remediation, and perform remediation. The Company does not believe that additional costs that could arise from those activities will have a material adverse effect on its financial position. However, those costs could have a material adverse effect on its financial condition, results of operations and cash flows at that time.

The Company is involved in various other legal actions arising in the normal course of business. After taking into consideration the relevant information, the Company believes that it has sufficiently accrued for probable losses and that the actions will not have a material adverse effect on its financial position. However, the resolution of the actions in a future period could have a material adverse effect on quarterly or annual operating results at that time.

From time to time, the Company enters into transactions with third parties in connection with the sale of assets or businesses in which it agrees to indemnify the buyers or third parties involved in the transaction, or in which the sellers or third parties involved in the transaction agree to indemnify Tredegar, for certain liabilities or risks related to the assets or business. Also, in the ordinary course of its business, the Company may enter into agreements with third parties for the sale of goods or services that may contain indemnification provisions. In the event that an indemnification claim is asserted, liability for indemnification would be subject to an assessment of the underlying facts and circumstances under the terms of the applicable agreement. Further, any indemnification payments may be limited or barred by a monetary cap, a time limitation, or a deductible or basket. For these reasons, Tredegar is unable to estimate the maximum amount of the potential future liability under the indemnity provisions of these agreements. The Company does, however, accrue for losses for any known contingent liability, including those that may arise from indemnification provisions, when future payment is probable and the amount is reasonably estimable. The Company discloses contingent liabilities if the probability of loss is reasonably possible and material.



In 2011, Tredegar was notified by U.S. Customs and Border Protection (“U.S. Customs”) that certain film products exported by Terphane to the U.S. since November 6, 2008 could be subject to duties associated with an anti-dumping duty order on imported polyester films from Brazil. The Company contested the applicability of these anti-dumping duties to the films exported by Terphane, and a request was filed with the U.S. Department of Commerce (“Commerce”) for clarification about whether the film products at issue are within the scope of the anti-dumping duty order. On January 8, 2013, Commerce issued a scope ruling confirming that the films are not subject to the order, provided that Terphane can establish to the satisfaction of U.S. Customs that the performance enhancing layer on those films is greater than 0.00001 inches thick. The films at issue are manufactured to specifications that exceed that threshold. On February 6, 2013, certain U.S. producers of PET film filed a summons with the U.S. Court of International Trade to appeal the scope ruling from Commerce. If U.S. Customs ultimately were to require the collection of anti-dumping duties because Commerce’s scope ruling was overturned on appeal, or otherwise, indemnifications for related liabilities are specifically provided for under the Terphane purchase agreement. In December 2014, the U.S. International Trade Commission voted to revoke the anti-dumping duty order on imported PET films from Brazil. The revocation, as a result of the vote by the International Trade Commission, was effective as of November 2013. On February 20, 2015, certain U.S. producers of Flexible Packaging Films filed a summons with the U.S. Court of International Trade to appeal the determination by the U.S. International Trade Commission. The Court granted a motion by the plaintiffs to stay the appeal of the revocation decision pending the resolution of the scope appeal. A decision by the Court in the scope appeal remains pending.

## 20 SELECTED QUARTERLY FINANCIAL DATA

Tredegar Corporation and Subsidiaries  
(In Thousands, Except Per-Share Amounts)  
(Unaudited)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
For the year ended December 31, 2016				
Sales	\$ 207,333	\$ 208,533	\$ 207,702	\$ 204,772
Gross profit	37,279	31,637	33,927	27,801
Net income	\$ 7,281	\$ 3,408	\$ 12,048	\$ 1,728
Earnings per share:				
Basic	\$ 0.22	\$ 0.10	\$ 0.37	\$ 0.05
Diluted	\$ 0.22	\$ 0.10	\$ 0.37	\$ 0.05
Shares used to compute earnings per share:				
Basic	32,654	32,716	32,818	32,856
Diluted	32,654	32,716	32,828	32,900
For the year ended December 31, 2015				
Sales	\$ 234,171	\$ 221,245	\$ 223,772	\$ 216,989
Gross profit	37,415	29,748	33,468	40,249
Net income (loss)	\$ 9,870	\$ 594	\$ (36,723)	\$ (5,876)
Earnings (loss) per share:				
Basic	\$ 0.30	\$ 0.02	\$ (1.13)	\$ (0.18)
Diluted	\$ 0.30	\$ 0.02	\$ (1.13)	\$ (0.18)
Shares used to compute earnings (loss) per share:				
Basic	32,482	32,609	32,605	32,614
Diluted	32,628	32,746	32,605	32,614

### Item 16. FORM 10-K SUMMARY

Not Applicable.



## EXHIBIT INDEX

- 2.1 Stock Purchase Agreement, made as of October 1, 2012, by and among The William L. Bonnell Company, Inc., AACOA, Inc., the shareholders of AACOA, Inc., and Daniel G. Formsma, as the representative of the shareholders of AACOA, Inc. (filed as Exhibit 2.1 to Tredegar Corporation's ("Tredegar's") Current Report on Form 8-K (File No. 1-10258), filed on October 3, 2012, and incorporated herein by reference). (Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Tredegar agrees to furnish supplementally to the Securities and Exchange Commission a copy of any omitted exhibit or schedule upon request)
- 2.2 Membership Interest Purchase Agreement, dated as of October 14, 2011, by and among TAC Holdings, LLC, Gaucho Holdings B.V. and Tredegar Film Products Corporation (filed as Exhibit 2.1 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on October 19, 2011, and incorporated herein by reference). (Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Tredegar agrees to furnish supplementally to the Securities and Exchange Commission a copy of any omitted exhibit or schedule upon request)
- 2.3 Stock Purchase Agreement, dated as of February 1, 2017, by and among Futura Industries Corporation, Futura Corporation, Susan D. Johnson, The Susan D. Johnson Trust, Ken Wells, The William L. Bonnell Company, Inc., and, in his capacity as Sellers' Representative, Brent F. Lloyd (filed as Exhibit 2.1 of Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on February 2, 2017, and incorporated herein by reference). (Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Tredegar agrees to furnish supplementally to the Securities and Exchange Commission a copy of any omitted exhibit or schedule upon request.)
- 3.1 Amended and Restated Articles of Incorporation of Tredegar (filed as Exhibit 3.1 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2004, and incorporated herein by reference)
  - 3.1.1 Articles of Amendment to Amended and Restated Articles of Incorporation of Tredegar (filed as Exhibit 3.3 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2004, and incorporated herein by reference)
  - 3.1.2 Articles of Amendment to Amended and Restated Articles of Incorporation of Tredegar, as of May 24, 2013 (filed as Exhibit 3.1 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on May 29, 2013 and incorporated herein by reference)
  - 3.1.3 Articles of Amendment to Amended and Restated Articles of Incorporation of Tredegar Corporation, as of May 4, 2016 (filed as Exhibit 3.1 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on May 6, 2016, and incorporated herein by reference).
- 3.2 Amended and Restated Bylaws of Tredegar (filed as Exhibit 3.2 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on August 10, 2015, and incorporated herein by reference)
- 4.1 Form of Common Stock Certificate (filed as Exhibit 4.1 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2004, and incorporated herein by reference)
- 4.2 Credit Agreement, dated as of March 1, 2016, among Tredegar Corporation, as borrower, the lenders named therein, JPMorgan Chase Bank, N.A., as administrative agent, SunTrust Bank, Citizens Bank of Pennsylvania and PNC Bank, National Association, as co-syndication agents, and U.S. Bank National Association, BMO Harris Bank, N.A., Bank of America, N.A. and Wells Fargo Bank, National Association, as co-documentation agents, and the other lenders party thereto (filed as Exhibit 4.1 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on March 3, 2016, and incorporated herein by reference).
  - 4.2.1 Guaranty, dated as of March 1, 2016, by and among the subsidiaries of Tredegar Corporation listed on the signature pages thereto in favor of JPMorgan Chase Bank, N.A., as administrative agent, for the ratable benefit of the Holders of Guaranteed Obligations (as defined therein) (filed as Exhibit 4.2 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on March 3, 2016, and incorporated herein by reference).
  - 4.2.2 Pledge and Security Agreement, dated as of March 1, 2016, by and among Tredegar Corporation and the subsidiaries of Tredegar Corporation listed on the signature pages thereto and JPMorgan Chase Bank, N.A., as administrative agent, for the ratable benefit of the Secured Parties (as defined therein) (filed as Exhibit 4.3 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on March 3, 2016, and incorporated herein by reference).
- 10.1 Reorganization and Distribution Agreement, dated as of June 1, 1989, between Tredegar and Ethyl Corporation (filed as Exhibit 10.1 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2004, and incorporated herein by reference)

- \*10.2 Employee Benefits Agreement, dated as of June 1, 1989, between Tredegar and Ethyl Corporation (filed as Exhibit 10.2 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2004, and incorporated herein by reference)
- 10.3 Tax Sharing Agreement, dated as of June 1, 1989, between Tredegar and Ethyl Corporation (filed as Exhibit 10.3 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2004, and incorporated herein by reference)
- 10.4 Indemnification Agreement, dated as of June 1, 1989, between Tredegar and Ethyl Corporation (filed as Exhibit 10.4 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2004, and incorporated herein by reference)
- \*10.5 Tredegar Industries, Inc. Retirement Benefit Restoration Plan (filed as Exhibit 10.7 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2004, and incorporated herein by reference)
- \*10.5.1 Amendment to the Tredegar Industries, Inc. Retirement Benefit Restoration Plan (filed as Exhibit 10.7.1 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2004, and incorporated herein by reference)
- \*10.6 Tredegar Industries, Inc. Savings Plan Benefit Restoration Plan (filed as Exhibit 10.6 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2013, and incorporated herein by reference)
- \*10.6.1 Resolutions of the Executive Committee of the Board of Directors of Tredegar Corporation adopted on December 28, 2004 (effective as of December 31, 2004) amending the Tredegar Corporation Retirement Savings Plan Benefit Restoration Plan (filed as Exhibit 10.9.1 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on December 30, 2004, and incorporated herein by reference)
- \*10.7 Tredegar 2004 Equity Incentive Plan as Amended and Restated Effective March 27, 2009 (filed as Annex 1 to Tredegar's Definitive Proxy Statement on Schedule 14A (File No. 1-10258) filed on April 14, 2009 and incorporated herein by reference)
- \*10.8 Form of Notice of Stock Award and Stock Award Terms and Conditions (filed as Exhibit 10.2 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on April 3, 2014, and incorporated herein by reference)
- \*10.9 Form of Notice of Nonstatutory Stock Option Grant and Nonstatutory Stock Option Terms and Conditions (filed as Exhibit 10.3 to Tredegar's Current Report on Form 8-K (File No. 1-10258) filed on February 27, 2013, and incorporated herein by reference)
- \*10.10 Form of Notice of Stock Unit Award and Stock Unit Award Terms and Conditions (filed as Exhibit 10.1 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on March 1, 2016, and incorporated herein by reference)
- \*10.11 Form of Notice of Stock Award and Stock Award Terms and Conditions (filed as Exhibit 10.2 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on March 1, 2016, and incorporated herein by reference)
- \*10.12 Summary of Director Compensation for Fiscal 2015 (filed as Exhibit 10.15 to Tredegar's Annual Report on Form 10-K (File No. 1-10258) for the year ended December 31, 2015, and incorporated herein by reference)
- 10.13 Agreement, dated as of February 19, 2014, by and among Tredegar Corporation, John D. Gottwald, William M. Gottwald and Floyd D. Gottwald, Jr. (filed as Exhibit 10.1 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on February 20, 2014, and incorporated herein by reference)
- \*10.14 Form of Notice of Stock Unit Award and Stock Unit Award Terms and Conditions (filed as Exhibit 10.1 to Tredegar's Current Report on Form 8-K (File No. 1-10258) filed on March 3, 2015, and incorporated herein by reference)
- \*10.15 Form of Notice of Stock Award and Stock Terms and Conditions (filed as Exhibit 10.2 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on March 3, 2015, and incorporated herein by reference)
- \*10.16 Severance Agreement with D. Andrew Edwards, dated June 25, 2015 (filed as Exhibit 10.3 to Tredegar's Current Report on Form 8-K (file No. 1-10258) filed on June 29, 2015, and incorporated herein by reference)
- \*10.16.1 First Amendment to Severance Agreement with D. Andrew Edwards, dated February 25, 2016 (filed as Exhibit 10.3 to Tredegar's Current Report on Form 8-K (File No. 1-10258), filed on March 1, 2016, and incorporated herein by reference)
- \*+10.17 Severance Agreement with Michael J. Schewel, dated May 9, 2016
- +21 Subsidiaries of Tredegar
- +23.1 Consent of PricewaterhouseCoopers, LLC, Independent Registered Public Accounting Firm

- +23.2 Consent of Dixon Hughes Goodman LLP, Independent Auditors
- +23.3 Consent of Ernst & Young LLP, Independent Auditors
- +31.1 Certification of John D. Gottwald, President and Chief Executive Officer of Tredegar Corporation, pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- +31.2 Certification of D. Andrew Edwards, Vice President and Chief Financial Officer (Principal Financial Officer) of Tredegar Corporation, pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- +32.1 Certification of John D. Gottwald, President and Chief Executive Officer of Tredegar Corporation, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- +32.2 Certification of D. Andrew Edwards, Vice President and Chief Financial Officer (Principal Financial Officer) of Tredegar Corporation, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- +99 Financial Statements of kaleo, Inc. and Independent Auditors' Reports
- +101 XBRL Instance Document and Related Items

\* Denotes compensatory plans or arrangements or management contracts.

+ Filed herewith

## APPENDIX – FOOTNOTES

- 1 The after-tax effects of losses associated with plant shutdowns, asset impairments and restructurings and gains or losses from the sale of assets, goodwill impairment charges and other items (which includes unrealized gains and losses on non-operating investments) have been presented separately and removed from net income and earnings per share from continuing operations as reported under generally accepted accounting principles in the United States (U.S. GAAP) to determine Tredegar's presentation of net income and earnings per share from ongoing operations. Net income and earnings per share from ongoing operations are key financial and analytical measures used by Tredegar to gauge the operating performance of its ongoing operations. They are not intended to represent the stand-alone results for Tredegar's ongoing operations under U.S. GAAP and should not be considered as an alternative to net income or earnings per share from continuing operations as defined by U.S. GAAP. They exclude items that Tredegar believes do not relate to its ongoing operations. A reconciliation of earnings (loss) per share from continuing operations under U.S. GAAP (diluted) to earnings per share from ongoing operations (diluted) is shown below:

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Earnings (loss) per share from continuing operations under GAAP (diluted)	\$0.87	\$(0.04)	\$0.82	\$0.89	\$1.34	\$1.10	\$1.11	\$(0.99)	\$ 0.75
After tax effects of:									
(Gains) losses associated with plant shutdowns, asset impairments and restructurings	0.26	0.07	0.03	0.04	0.10	0.03	0.06	0.09	0.09
(Gains) losses from sale of assets and other	(0.20)	(0.08)	0.03	(0.06)	(0.24)	0.02	(0.04)	0.54	(0.15)
Goodwill impairment related to flexible packaging films business	-	-	-	-	-	-	-	1.37	-
Goodwill impairment related to aluminum extrusions business	-	0.90	-	-	-	-	-	-	-
Earnings per share from ongoing operations (diluted)	\$0.93	\$ 0.85	\$0.88	\$0.87	\$1.20	\$1.15	\$1.13	\$ 1.01	\$ 0.69

- 2 Operating profit (loss) from ongoing operations is a non-GAAP financial measure that is not intended to represent net income as defined by U.S. GAAP. Operating profit (loss) from ongoing operations is a key measure used by the chief operating decision maker for purposes of assessing the operating performance of its business segments. A reconciliation of operating profit (loss) from ongoing operations to net income (loss) is shown below:

(in thousands)	2008	2009	2010	2011	2012	2013	2014	2015	2016
PE Films:									
Operating profit from ongoing operations	\$ 53,914	\$ 64,379	\$ 66,718	\$ 56,521	\$ 50,814	\$ 61,866	\$ 60,971	\$ 48,275	\$ 26,312
Plant shutdowns, asset impairments and restructurings, gain from sale of assets and other items	(11,297)	(1,846)	(758)	(901)	1,011	(671)	(12,236)	(4,180)	(4,602)
Flexible Packaging Films:									
Operating profit(loss) from ongoing operations	-	-	-	2,972	19,136	9,100	(2,917)	5,453	1,774
Plant shutdowns, asset impairments and restructurings, gain from sale of assets and other items	-	-	-	(5,906)	(1,120)	-	(591)	(185)	(214)
Goodwill Impairment charge	-	-	-	-	-	-	-	(44,465)	-
Aluminum Extrusions:									
Operating profit(loss) from ongoing operations	10,132	(6,494)	(4,154)	3,457	9,037	18,291	25,664	30,432	37,794
Goodwill Impairment charge	-	(30,559)	-	-	-	-	-	-	-
Plant shutdowns, asset impairments and restructurings, gain from sale of assets and other items	(687)	(639)	493	58	(5,427)	(2,748)	(976)	(708)	(741)
AFBS (formerly Therics):									
Gain on sale of investments in Theken Spine and Therics, LLC	1,499	1,968	-	-	-	-	-	-	-
Total	53,561	26,809	62,299	56,201	73,451	85,838	69,915	34,622	60,323
Interest income	1,006	806	709	1,023	418	594	588	294	261
Interest expense	2,393	783	1,136	1,926	3,590	2,870	2,713	3,502	3,806
Gain on sale of investment property	1,001	404	-	-	-	-	1,208	-	-
Unrealized loss on investment property	-	-	-	-	-	(1,018)	-	-	(1,032)
Gain (loss) from an investment accounted for under the fair value method	5,600	5,100	(2,200)	1,600	16,100	3,400	2,000	(20,500)	1,600
Stock option-based compensation costs	782	1,692	2,064	1,940	1,432	1,155	1,272	483	56
Corporate expenses, net	8,866	13,334	17,118	16,169	23,443	31,857	24,310	33,638	29,607
Income (loss) from continuing operations before income taxes	49,127	17,310	40,490	38,789	61,504	52,932	45,416	(23,207)	27,683
Income taxes	19,486	18,663	13,649	10,244	18,319	16,995	9,387	8,928	3,217
Income (loss) from continuing operations	29,641	(1,353)	26,841	28,545	43,185	35,937	36,029	(32,135)	24,466
Income (loss) from discontinued operations, net of tax	(705)	-	186	(3,690)	(14,934)	(13,990)	850	-	-
Net income (loss)	\$ 28,936	\$ (1,353)	\$ 27,027	\$ 24,855	\$ 28,251	\$ 21,947	\$ 36,879	\$ (32,135)	\$ 24,466

## APPENDIX – FOOTNOTES, CONTINUED

- 3 Adjusted EBITDA represents income from continuing operations before interest, taxes, depreciation, amortization, unusual items, losses associated with plant shutdowns, asset impairments and restructurings, gains or losses from the sale of assets, unrealized gains (losses) on investments, charges related to stock option awards accounted for under the fair value-based method, goodwill impairment charges and other items. Adjusted EBITDA is a non-GAAP financial measure that is not intended to represent net income or cash flows from operating activities as defined by U.S. GAAP and should not be considered as either an alternative to net income (as an indicator of operating performance) or to cash flows from operations (as a measure of liquidity). Tredegar uses adjusted EBITDA as a measure of unlevered (debt-free) operating cash flow. Tredegar also uses it when comparing relative enterprise values of manufacturing companies and when measuring debt capacity. When comparing the valuations of a peer group of manufacturing companies, Tredegar expresses enterprise value as a multiple of adjusted EBITDA. The Company believes adjusted EBITDA is preferable to net income from continuing operations and other GAAP measures when applying a comparable multiple approach to enterprise valuation because it excludes the items noted above, measures of which may vary among peer companies.

A reconciliation of operating profit from ongoing operations to adjusted EBITDA as defined in Tredegar's revolving credit agreement is shown below.

Computations of Adjusted EBITDA and Leverage Ratio as Defined in the Revolving Credit Agreement As of and for the Twelve Months Ended December 31, 2016 (In Millions)	
Computations of adjusted EBITDA as defined in revolving credit agreement for the twelve months ended December 31, 2016:	
Net income	\$ 24.5
Plus:	
Total income tax expense for continuing operations	3.2
Interest expense	3.8
Depreciation and amortization expense for continuing operations	32.5
All non-cash losses and expenses, plus cash losses and expenses not to exceed \$10.0, for continuing operations that are classified as unusual, extraordinary or which are related to plant shutdowns, asset impairments and/or restructurings (cash-related of \$6.7)	8.6
Charges related to stock option grants and awards accounted for under the fair value-based method	0.1
Minus:	
Interest income	(0.3)
Income related to adjustments in the estimated fair value of assets accounted for under the fair value method of accounting	(1.6)
Adjusted EBITDA as defined in revolving credit agreement	<u>70.8</u>
Futura proforma adjusted EBITDA	13.6
Proforma adjusted EBITDA	<u>84.4</u>
Total debt	95.0
Face value of letters of credit	2.7
Capital Lease	0.3
Other	0.2
Indebtedness	<u>98.2</u>
Futura purchase price	92.0
Proforma indebtedness	<u>190.2</u>
Computation of leverage ratio as defined in revolving credit agreement at December 31, 2016:	
Leverage ratio (indebtedness-to-adjusted EBITDA)	1.39 x
Proforma leverage ratio	<u>2.25 x</u>

Adjusted EBITDA in the fourth quarter and year ended December 31, 2016 includes an adjustment of \$0.6 million for accelerated depreciation associated with the consolidation of PE Films manufacturing facilities in North America.



- 4 Total Recordable Incident Rate (TRIR) is a measure of recordable workplace injuries, normalized to represent the number of recordable injuries per 100 workers per year. TRIR is derived by multiplying the number of recordable injuries in a time period by 200,000 and dividing this value by the total man-hours actually worked in that time period. Recordable workplace injuries include occupational death, non-fatal occupational illness and those non-fatal occupational injuries that involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, lost time or medical treatment other than first aid.

The Bonnell and PE Films Safety Performance chart includes a five-year industry average through 2014 for each of the respective industries. The sources for these averages are the Bureau of Labor Statistics (NAICS Code 326) for PE Films and the Occupational Health and Safety Administration for Bonnell.

# CORPORATE INFORMATION

## CORPORATE OFFICERS AND OPERATING COMPANY MANAGEMENT

**John D. Gottwald**  
President and  
Chief Executive Officer

**D. Andrew Edwards**  
Vice President and  
Chief Financial Officer

**Michael W. Giancaspro**  
Vice President, Business Processes  
and Corporate Development

**Michael J. Schewel**  
Vice President, General Counsel  
and Corporate Secretary

**W. Brook Hamilton**  
President, Bonnell Aluminum

**Jose Bosco Silveira, Jr.**  
President, Flexible  
Packaging Films

**Jennifer Aspell**  
President,  
Bright View Technologies

**Arijit (Bapi) DasGupta**  
President, Surface Protection

**J. Stephen Prince**  
President, Personal Care

### PE Films

## DIRECTORS

**William M. Gottwald<sup>2</sup>**  
Chairman of the Board  
Tredegar Corporation  
Retired  
Albemarle Corporation

**George A. Newbill<sup>3, 5</sup>**  
Retired  
Albemarle Corporation

**Thomas G. Snead, Jr.<sup>1, 3, 5</sup>**  
Retired  
Wellpoint, Inc.

- 1) Audit Committee
- 2) Executive Committee
- 3) Executive Compensation Committee
- 4) Nominating and Governance Committee
- 5) Independent Director

**George C. Freeman, III<sup>3, 4, 5</sup>**  
President and  
Chief Executive Officer  
Universal Corporation

**Kenneth R. Newsome<sup>2, 3, 5</sup>**  
President and  
Chief Executive Officer  
Markel Food Group

**John M. Steitz<sup>5</sup>**  
President and  
Chief Executive Officer  
Addivant Corporation

**John D. Gottwald<sup>2</sup>**  
President and  
Chief Executive Officer  
Tredegar Corporation

**Gregory A. Pratt<sup>1, 4, 5</sup>**  
Chairman of the Board  
Carpenter Technology  
Corporation

**Carl E. Tack, III<sup>1, 4, 5</sup>**  
Clinical Professor  
Mason School of Business  
College of William and Mary

## SHAREHOLDER INFORMATION

**CORPORATE  
HEADQUARTERS**  
1100 Boulders Parkway  
Richmond, Virginia 23225  
Phone: 804-330-1000  
Website: [www.tredegar.com](http://www.tredegar.com)

**NUMBER OF EMPLOYEES**  
3,200

**STOCK LISTING**  
New York Stock Exchange  
Ticker Symbol: TG

Additional shareholder information is available on the investor section of the Tredegar website @ [www.tredegar.com/investors/IR](http://www.tredegar.com/investors/IR).

## OPERATING COMPANY LOCATIONS

	Domestic Manufacturing	International Manufacturing	Technical Centers
<b>PE FILMS</b> Division Headquarters Richmond, Virginia	Lake Zurich, Illinois Terre Haute, Indiana Durham, North Carolina Pottsville, Pennsylvania	Guangzhou, China Kerkrade, Netherlands Pune, India Rétság, Hungary São Paulo, Brazil Shanghai, China	Durham, North Carolina Richmond, Virginia Terre Haute, Indiana
<b>FLEXIBLE PACKAGING</b> Division Headquarters São Paulo, Brazil	Bloomfield, New York	Cabo de Santo Agostinho, Brazil	Bloomfield, New York Cabo de Santo Agostinho, Brazil
<b>ALUMINUM EXTRUSIONS</b> Division Headquarters Newnan, Georgia	Newnan, Georgia Elkhart, Indiana Niles, Michigan Carthage, Tennessee Clearfield, Utah		



**TREDEGAR CORPORATION**

1100 Boulders Parkway  
Richmond, Virginia 23225  
[www.tredegar.com](http://www.tredegar.com)