

Tecnoglass Inc.
Form 10-K
March 08, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2018

**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 **001-35436**

TECNOGLASS INC.

(Exact Name of Registrant as Specified in Its Charter)

Cayman Islands

98-1271120

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(State or Other Jurisdiction of (I.R.S. Employer
Incorporation or Organization) Identification Number)

Avenida Circunvalar a 100 mts de la Via 40

Barrio Las Flores, Barranquilla

Colombia

(Address of Principal Executive Offices) (Zip Code)

(57)(5)3734000

(Registrant's Telephone Number, Including Area Code)

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

Title of each class	Name of each exchange on which registered
Ordinary Shares, par value \$0.0001 per share	The NASDAQ Stock Market LLC

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 [X]

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act.

Yes [] No [X]

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to

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file such reports), and (2) has been subject to such filing requirement for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 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 in response to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the 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 definition of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.:

Large accelerated filer Accelerated filer
Non-accelerated filer Smaller reporting company
(Do not check if a smaller reporting company) Emerging growth company

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No

As of June 30, 2018 (the last business day of the registrant's most recently completed second fiscal quarter), the aggregate market value of the ordinary shares held by non-affiliates of the registrant was approximately \$109,957,829 based on its last reported sales price of \$8.69 on the NASDAQ Capital Market.

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As of December 31, 2018, there were **38,092,996** ordinary shares, \$0.0001 par value per share, outstanding.

Documents Incorporated by Reference: None.

TECNOGLASS INC.

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FORWARD LOOKING STATEMENTS AND INTRODUCTION

All statements other than statements of historical fact included in this Annual Report on Form 10-K (this “Form 10-K”) including, without limitation, statements under “Management’s Discussion and Analysis of Financial Condition and Results of Operations” regarding our financial position, business strategy and the plans and objectives of management for future operations, are forward looking statements. When used in this Form 10-K, words such as “anticipate,” “believe,” “estimate,” “expect,” “intend” and similar expressions, as they relate to us or our management, identify forward looking statements. Such forward looking statements are based on the beliefs of management, as well as assumptions made by, and information currently available to, our management. Actual results could differ materially from those contemplated by the forward looking statements as a result of certain factors detailed in our filings with the Securities and Exchange Commission. All subsequent written or oral forward looking statements attributable to us or persons acting on our behalf are qualified in their entirety by this paragraph.

Unless the context otherwise requires:

references to the “Company”, “Tecnoglass” and to “we”, “us” or “our” are to Tecnoglass Inc., a Cayman Islands exempted company, and its subsidiaries;

references to “Tecnoglass Holding” are to Tecno Corporation;

references to “TG” are to Tecnoglass S.A.S;

references to “ES” are to C.I. Energía Solar S.A.S E.S. Windows;

references to “ESW” are to ES Windows LLC, our indirect wholly-owned subsidiary, based in Florida.

References to “VS” are to Ventana Solar S.A., a Panama-based company with which we have a strategic commercial relationship

references to “Tecno LLC” are to Tecnoglass LLC;

references to “Tecno RE” are to Tecno RE LLC; and

references to “GM&P” are to Giovanni Monti and Partners Consulting and Glazing Contractors. We recently acquired GM&P, which was formerly a customer of ours.

PART I

Item 1. Business.

Overview and Recent Developments

Tecnoglass is a leading vertically-integrated manufacturer, supplier and installer of architectural glass, windows, and associated aluminum products for the global commercial and residential construction industries. Tecnoglass was rated the second largest glass & metal fabricator serving the United States in 2018 by Glass Magazine. Headquartered in Barranquilla, Colombia, the Company operates out of a 2.7 million square foot vertically-integrated, state-of-the-art manufacturing complex that provides easy access to the Americas, the Caribbean, and the Pacific. Tecnoglass supplies over 1,000 customers in North, Central and South America, with the United States accounting for 80% of revenues. Tecnoglass' tailored, high-end products are found on some of the world's most distinctive properties, including the El Dorado Airport (Bogota), 50 United Nations Plaza (New York), Trump Plaza (Panama), Icon Bay (Miami), and Salesforce Tower (San Francisco).

On March 1, 2017, the Company acquired GM&P, a South Florida glazing contracting company that sells and installs our products, acting as an "arm" to support a broader geographical reach to reach new clients while providing a comprehensive offering. The primary reasons for the acquisitions were to expand into different markets in the U.S. while streamlining its distribution logistics of Company products, and to be able to carry out light fabrication in the United States when economically advantageous.

On January 11, 2019, we entered into a joint venture agreement with Saint-Gobain, a world leader in the production of float glass, a key component of our manufacturing process, whereby we will acquire an approximate 25% minority ownership interest in Vidrio Andino Holdings S.A.S, a Colombia-based subsidiary of Saint-Gobain. The purchase price for our interest in this entity is \$34.1 million in cash and land worth \$10.9 million near our facility in Barranquilla, which will be contributed on our behalf by our Chief Executive Officer and Chief Operating Officer, José M. Daes and Christian T. Daes with a third party valuation to be conducted. Vidrio Andino's float glass plant located in the outskirts of Bogota, Colombia, had been one of our main suppliers of raw glass. We believe this transaction will solidify our vertical integration strategy by acquiring an interest in the first stage of our production chain, while securing ample glass supply for our expected production needs.

Additionally, the joint venture agreement includes plans to build a new plant in Galapa, Colombia that will be located approximately 20 miles from our primary manufacturing facility, in which we will also have a 25% interest. The new plant will be funded with proceeds the original cash contribution made by the Company, operating cashflows from the Bogota plant, debt incurred at the joint venture level that will not consolidate into the Company and an additional contribution by us of approximately \$12.5 million to be paid between 2020 and 2021. Under the joint venture

agreement, Saint Gobain will retain a majority ownership position and will have control over the operations of both plants and as such, the transaction will be accounted for under the equity method. The acquisition will be consummated on or before May 2019, once the original cash and land contributions have been completed and the shares of Vidrio Andino have been contributed.

Our Business

General

We are a vertically-integrated manufacturer, supplier and installer of architectural glass, windows and associated aluminum products for the global commercial and residential construction markets. With a focus on innovation, combined with providing highly specified products with the highest quality standards at competitive prices, we have developed a leadership position in each of our core markets. In the United States, which is our largest market, we were ranked as the second largest glass and metal fabricator in 2018 by Glass Magazine. In addition, we believe we are the leading glass transformation company in Colombia. Based on our analysis of third-party industry sources we had an estimated market share of over 45% of the Colombian market in 2017. Our customers, which include developers, general contractors or installers for hotels, office buildings, shopping centers, airports, universities, hospitals and multi-family and residential buildings, look to us as a value-added partner based on our product development capabilities, our high quality products and our unwavering commitment to exceptional service.

We have more than 30 years of experience in architectural glass and aluminum profile structure assembly, we transform a variety of glass products, including tempered safety, double thermo-acoustic and laminated glass. Our finished glass products are installed in a wide variety of buildings across a number of different applications, including floating facades, curtain walls, windows, doors, handrails, interior and bathroom spatial dividers. We also produce aluminum products such as profiles, rods, bars, plates and other hardware used in the manufacturing of windows.

Our products are manufactured in a 2.7 million square foot, state-of-the-art manufacturing complex in Barranquilla, Colombia that provides easy access to North, Central and South America, the Caribbean and the Pacific. Our products can be found on some of the most distinctive buildings in these regions, including El Dorado Airport (Bogota), 50 United Nations Plaza (New York), Trump Plaza (Panama), Icon Bay (Miami), and Salesforce Tower (San Francisco). Our track record of successfully delivering high profile projects has earned us an increasing number of opportunities across the United States, evidenced by our expanding backlog and overall revenue growth.

Our structural competitive advantage is underpinned by our low-cost manufacturing footprint, vertically integrated business model and geographic location. Our integrated facilities in Colombia and distribution and services operations in Florida provide us with a significant cost advantage in both manufacturing and distribution, and we continue to invest in these operations to expand our operational capabilities. Our lower cost manufacturing footprint allows us to offer competitive prices for our customers, while also providing innovative, high quality and high value-added products, together with consistent and reliable service. We have historically generated high margin organic growth based on our position as a value-added solutions provider for our customers.

We have a strong presence in the Florida market, which represents a substantial portion of our revenue stream and backlog. Our success in Florida has primarily been achieved through sustained organic growth, with further penetration now taking place into other highly populated areas of the United States. As part of our strategy to become a fully vertically integrated company, we have supplemented our organic growth with some recent acquisitions that have allowed us added control over our supply chain. In March 2017, we completed the acquisition of GM&P, a consulting and glazing installation business that was previously our largest installation customer. In 2016, we completed the acquisition of ESW, which gave us control over the distribution of products into the United States from our manufacturing facilities in Colombia. These acquisitions allowed for further vertical integration of our business and will act as a platform for our future expansion in the United States.

The continued diversification of the group's presence and product portfolio is a core component of our strategy. In particular, we are actively seeking to expand our presence in the United States outside of Florida. We also recently launched a residential windows offering which, we believe, will help us expand our presence in the United States and generate additional organic growth. We believe that the quality of our products, coupled with our ability to price competitively given our structural advantages on cost, will allow us to generate further growth in the future.

Competitive Strengths

Our success has been grounded in our ability to offer high quality products at the most competitive prices. We are able to competitively price our products, while still achieving strong margins, due to a number of unique cost advantages. In addition to our vertically integrated business model, we benefit from structural cost advantages in manufacturing and distribution due to our geographic location. Alongside these structural advantages, we are committed to quality, product innovation and customer service. We believe these competitive strengths create a significant barrier to entry, which is underpinned and sustained by the experience of our senior management team and the loyalty of our highly motivated employees.

Vertical Integration

We believe we are unique within the industry in vertically integrating the purchasing of raw materials and the manufacturing, distribution and installation of our products. By vertically integrating each of these functions, we are able to eliminate inefficiencies throughout the supply chain and generate strong margins. These efficiencies are only enhanced as our business grows and we benefit from operating leverage and economies of scale.

This business model also allows us to maintain strict quality control, from the sourcing of input materials to the installation of our finished products. Our vertically integrated business model therefore enables us to provide consistent high quality products to our end-customers. Ownership of the entire production process also reduces our dependence on third parties, allowing us to respond more quickly to our customers' needs and reducing lead-times for new or customized products.

Cost of Production Advantages

We enjoy significant cost advantages because of our location in Colombia that we would not be able to realize if our production facility was located in the United States. We believe we are able to offer competitive prices, in part, as a result of our low labor and energy costs relative to those in the United States while maintaining efficient transportation costs into the markets we serve. Employees at our manufacturing facilities in Colombia earn above the local minimum wage, yet these wages are typically less than one quarter of the cost of a comparable employee located within the United States. In 2018, we completed a solar panel project with the capacity to generate approximately five megawatts of eco-friendly energy on-site at our manufacturing facilities. This investment has allowed us to reduce energy costs, while also having a positive tax effect due to our ability to deduct the investment from our taxable income in compliance with applicable Colombian tax regulations.

Low-Cost Distribution

Our principal manufacturing facility is located in Barranquilla, Colombia, which is strategically located near three of the country's major ports: Barranquilla, Cartagena and Santa Marta. These ports provide us with maritime access to all major global markets. The Barranquilla port is just 16 kilometers away from our production facility. From there, our products can be shipped to Miami in three days and New York in four days. In addition, for short lead-time projects, our products can be transported by air from Barranquilla to Houston or Miami within a few hours.

As a result of the significant trade imbalance between Colombia and the United States for goods transported in container ships, we are able to transport our products to the United States in containers that would otherwise return empty to the United States. We are therefore able to distribute our products to the eastern, southern and western regions of the United States at very attractive rates, which are often lower than a comparable domestic land shipment within the United States. Demand for high-specification architectural glass is typically highest in large coastal cities, which we are able to ship to directly, while most of our competitors must utilize relatively expensive land transportation services to deliver finished goods to these sites by land.

Commitment to Quality and Innovation

Our commitment to quality is evidenced by our significant recent investments in machinery and equipment. Since 2012, we have invested over \$270 million in the latest technologies to enhance the efficiency and accuracy of our production lines, and ultimately to improve the quality of the products that we deliver to our customers. We believe these significant investments position us to meet our growth objectives over the next several years. We operate state-of-the-art glass making equipment, glass laminating lines, aluminum presses and high-volume insulating equipment which facilitate more precise manufacturing, enabling us to offer a broader selection of and higher quality products and remain agile in responding to customer demands, while generating less raw material waste.

We believe our investments in technology within recent years have positioned us well for continued growth, improved profitability and enhanced cash generation in the years ahead. Recent examples of our investments include:

our acquisition of three aluminum extrusion presses that together added more than 1,000 tons of production capacity per month, alongside associated investments in new aluminum paint lines and foundries;

our purchase of equipment used to produce soft-coated, low emissivity glass;

our completion of our solar panel project that generates approximately five megawatts of eco-friendly energy at our manufacturing facilities. We estimate these investments will continue to reduce our energy costs, with a total cost reduction target of approximately 6%-8%;

our purchase of glass-laminating and tempering furnaces that use state-of the-art technology to produce curved glass in a broad range of easily modifiable curvatures (“TecnoBend”). TecnoBend uses a flexible mold to produce customized shapes for architectural structures; and

our investment in a jumbo tempering oven capable of producing extra-large slabs of laminated glass. These products are sought after in high-specification designs, allowing us to supply these high profile projects. For example, our extra-large glass slabs were recently installed in the El Dorado Airport, located in Bogotá, Colombia.

Our quality assurance department maintains rigorous oversight over the production process to ensure the consistent production of high quality products. In addition, we adhere to quality standards that meet all guidelines and requirements for the Insulating Glass Certification Council (IGCC) and Safety Glazing Certification Council (SGCC) certification programs.

Finally, our commitment to quality also extends to our partnerships and alliances. Most notably, for certain products we offer Kuraray Sentryglass®. These laminated glass interlayers are five times stronger than conventional laminating materials.

On September 20, 2018, we entered an agreement with Schüco USA LLLP (“Schüco”), a division of the Schüco International KG, a worldwide leader of architectural systems headquartered in Germany, with more than 60 years of experience and a presence in over 80 countries. Schüco is known for its expertise in the innovative design of building envelopes, windows, doors and facade systems, for the construction industry. This agreement enables Tecnoglass to manufacture and sell Schüco’s architectural systems to customers in North, Central and South America, alongside our existing ESWindows products. Additionally, Tecnoglass will extrude and paint aluminum profile designs as part of Schüco’s global supply chain primarily for products sold in the United States. This agreement also allows Tecnoglass to expand its portfolio and offer more solutions to its clients with high-end, renowned designs.

Superior Customer Service

In addition to manufacturing high quality products at competitive prices, our customer value proposition is supplemented by short lead-times, on-time delivery and after-sale support. Through the coordinated efforts of our sales teams, product specialists and field service teams, we deliver high quality service to our customers, from the initial order to the delivery and installation of our products. We believe our ability to accompany our clients throughout every phase of their projects’ engineering, consulting, manufacturing and installation services along with our ability to coordinate these efforts as a one-stop-shop is a key differentiator from our competition.

High Barriers to Entry

The ability of new competitors to enter the markets that we serve is limited due to the technical certifications required on high specification building projects, such as IGCC, IqNet Icontec 14001 and ISO9001. We attribute our success, in large part, to our ability to produce a broad range of sophisticated products, as well as our reputation for delivering high quality, made-to-order architectural glass on time. Our employees have extensive training, knowledge and experience at manufacturing high specification products. We believe the vertically-integrated nature of our operations means that there are high barriers to successfully entering our markets and competing with us on price, quality and agility. In addition, the equipment needed to operate in the glass and window industry is expensive, therefore requiring significant upfront capital investment.

Loyal and Highly Motivated Employees

Capitalizing on our various competitive advantages also requires a skilled and dedicated workforce. We actively encourage and facilitate the development of our employees through rolling training programs, with multiple training sessions held every week. These programs increase the skills of our employees and are designed to allow our employees to keep pace with the new technologies being installed at our manufacturing facilities. We are committed to developing our employees and remaining at the forefront of technology in our industry. These investments have also helped us manage workplace injuries, with our rate of one accident per 24 workers per year, being substantially lower than the average of one accident per 12 workers per year for manufacturing companies in Colombia.

We value our employees and invest in them and their communities. For several decades, we have committed resources to improving the quality of life of our local communities. Our local foundation, “Fundación Tecnoglass,” provides local communities with assistance purchasing or improving homes and facilitating higher education scholarships. During 2018, over 160 families benefited from these initiatives. Fundación Tecnoglass provides funding for different local schools looking to improve social transformation and community development. Vive Bailando, a program recently developed in the Las Flores neighborhood (local community near Tecnoglass’ headquarters) has positively impacted more than 100 families in less than a year. Additionally, we donate our recyclable glass to the foundation, which sells it to local recycling cooperatives and uses the proceeds to fund scholarships for Company employees. We believe these initiatives have allowed us to maintain a strong relationship with our employees, which in turn has ensured a skilled, motivated and loyal workforce with low levels of turnover. We have remained union-free since our incorporation in 1984.

Strategy

We have identified the following strategic priorities that we believe are important in advancing our business:

Further Geographic Penetration in the United States

We have successfully established a leading reputation in the Florida construction market by providing high value, impact-resistant architectural glass products. Our products have become widely regarded in Florida for their quality and are certified in compliance with all U.S. regulations.

In recent years, we have begun to successfully grow our geographic presence in the United States outside of Florida, particularly into markets along the east coast. Sales from Florida, where we have a significant presence comprised 84% of United States revenue in the year ended December 31, 2018. Coastal markets are particularly attractive to us, as they can be directly accessed by ship, resulting in transportation costs from our manufacturing facilities that are similar to our transportation costs to Florida. These regions are also affected by hurricanes, significant temperature fluctuations and other extreme forms of weather that foster demand for our products. We are actively expanding our sales presence in these markets and have already successfully completed several projects in large U.S. markets such as New York, Boston, Washington D.C. and Baltimore as well as cities along the U.S. Gulf Coast, such as Houston.

We intend to continue growing the business organically outside of Florida. As we explore growth opportunities in new U.S. markets, we intend to leverage the strong reputation we have developed with national commercial construction contractors, architects and designers for providing high quality products at the most competitive prices.

Penetrate the U.S. Residential Market

In April 2017 we launched “ES Windows: Elite Collection” and “ES Windows: Prestige Collection” to target the U.S. residential new and replacement sectors. We have received positive interest for the new products to date and positive reactions from our customers. Although residential sales represent a relatively small portion of our sales today, we believe it will be a significant source of growth for us in the future. Our U.S. residential market sales represent 10% of our total sales for the year ended December 31, 2018. The U.S. residential housing construction market exceeded \$544 billion in spending during the twelve months ended November 30, 2018 according to the United States Census Bureau. Deutsche Bank published a research report estimating that new residential housing starts in the United States will grow at an annual rate of 5% in each of 2019 and 2020. We believe that our core strengths that have facilitated our success to date, namely the quality of our products and the structural cost advantages that allows us to price our products competitively, will similarly contribute to our success in residential window sales.

Continued Investment in Technology to Meet Evolving Demands

We have a track record of developing innovative new products, and we intend to continue our focus on new product opportunities in the future. We are constantly identifying shifts in global trends and customer needs, and designing new products to meet those changes in demand. In order to continue this success, it is critical that we invest in the latest technologies available in our industry. For example, with the installation of our soft-coating facility, we are now able to manufacture low emissivity glass that is energy efficient and will allow us to meet growing demand for “green” products.

Our recent investment in new tempering equipment, which uses air cushion technology to offer greater transparency and less distortion, further boosts the quality of our products. Further investments are planned to expand our offering of value-added glass products, such as soft-coated, low-emissivity window panes that minimize the effects of solar heat. We are committed to investing in technology and remaining at the forefront of the industry.

We operate state-of-the-art architectural glass making equipment, glass laminating lines, aluminum presses and high-volume insulating equipment, which facilitate more precise manufacturing and generate less raw material waste. We will seek to leverage this platform of cutting-edge equipment to adapt our products to evolving demands in both current and new markets. We expect that our focus on innovation, which is founded upon our investments in technology, will position us well to take advantage of new opportunities.

Rigorous Adherence to Quality Standards

Maintaining the high quality standards for which we have become known is essential to the execution of our strategy. All of our internal processes are continually and independently supervised by Tecnoglass' Quality Assurance department. The Quality Assurance department maintains rigorous oversight of optimization indicators covering energy, water, recyclable waste and other facets of the production process. Constant monitoring of these indicators is integral to ensuring that we consistently produce high quality products. Between 5% and 10% of our production is randomly selected to verify compliance with a variety of quality standards, such as water leaks, functionality, manufacturing and accessories, according to ASTM International (ASTM) and American Architectural Manufacturers Association (AAMA) rules.

These measures allow us to effectively detect issues and take specific actions to mitigate their reoccurrence. As we grow and our use of technology evolves, our Quality Assurance team must also evolve its tests, controls and remedies. We believe this rigorous adherence to quality control will ensure that we will continue to provide the highest quality products and, ultimately, promote customer satisfaction.

Products

We manufacture and sell the following products:

Low-e Glass – Low emissivity glass manufactured by depositing metal particles on the surface of the glass inside a vacuum chamber. This product offers excellent thermal insulation designed to improve energy efficiency of buildings.

Laminated/Thermo-Laminated Glass - produced by bonding two glass sheets with an intermediate film in-between. As a safety feature, this product fractures into small pieces if it breaks.

Thermo-Acoustic Glass - manufactured with two or more glass sheets separated by an aluminum or micro-perforated steel profile. This product has a double-seal system that ensures the unit's tightness, buffering noise and improving thermal control. This product serves as an excellent noise barrier, which is used especially in zones close to airports, traffic or wherever there are unpleasant sounds.

Tempered Glass - glass subject to a tempering process through elevated temperatures resulting in greater superficial elasticity and resistance than conventional glass.

Silk-Screened Glass - special paint is applied to glass using automatic machinery and numerical control, which ensures paint homogeneity and an excellent finish.

Curved Glass - produced by bending a flat glass sheet over a mold, using an automated heat process, which maintains the glass' physical properties.

Digital Print Glass - digital printing allows any kind of appearance required by the client, offering versatility to projects.

Aluminum products - sold through our Alutions brand include bars, plates, profiles, rods and tubes used primarily in the manufacture of architectural glass settings including windows, doors, spatial separators and similar products.

Curtain Wall / Floating facades - a non-structural window screen suspended outside a building and are available in many technical specifications for high performance required in high-rise buildings, resistant to strong winds and ensuring high quality standards.

Stick facade systems – are glass and aluminum facade elements fixed to the structure of the building and the glass and spandrel are inserted in the grid on site available in many combinations to define colors, thickness, glass types and finishes, and types of ventilation and design complements.

Windows and Doors - line of window and door products defined by the different types of glass finish, such as normal, impact resistant, hurricane-proof, safety, soundproof and thermal. Additionally, they are available in numerous structures, including fixed body, sliding windows, casement windows, hung windows, sliding doors and swinging doors.

Interior dividers and Commercial display windows - commercial and interior display windows with a broad range of profiles, colors and crystal finishes, as well as bathroom stall dividers, office cubicle separators and closets Products combine functionality, aesthetics and elegance and are available in a broad range of structures and materials.

Hurricane-proof windows - combine heavy-duty aluminum or vinyl frames with special laminated glass to provide protection from hurricane-force winds up to 180 mph and wind-borne debris by maintaining their structural integrity and preventing penetration by impacting objects.

Other – awnings, structures, automatic doors and other components of architectural systems.

Brands and Trademarks

Our main brands are Tecnoglass, ESWindows and Alutions. Our registered trademarks include “Alutions by Tecnoglass”, “ECOMAX by ESWINDOWS”, “Tecnobend”, “Tecnoair”, “ESWINDOWS Interiors”, “ESW Windows and Walls”, “Solartec by Tecnoglass”, “Prestige by ESWINDOWS”, “Eli by ESWINDOWS”, “Alessia by ESWINDOWS”.

Sales, Marketing and Customer Service

Sales and Marketing

Our sales strategy primarily focuses on attracting and retaining customers by consistently providing exceptional customer service, leading product quality, and competitive pricing. Our customers also value our shorter lead times, knowledge of building code requirements and technical expertise, which collectively generate significant customer loyalty. Our products are marketed using a combination of internal sales representatives, independent sales representatives and directly to distributors. Our internal sales representatives receive a portion of their performance-based compensation based on sales and profitability metrics. We primarily market our products based on product quality, outstanding service, shorter lead times and on-time delivery.

We employ a highly efficient number of in-house sales employees. Some of our sales and marketing efforts are handled by area sales representatives who work on a commission basis.

We do not rely on significant traditional advertising expenditures to drive net sales. We have established and maintain credibility primarily through the strength of our products, our customer service and quality assurance, the speed at which we deliver finished products and the attractiveness of our pricing. Our advertising expenditures consist primarily of maintaining our subsidiaries’ websites.

Customer Service

We believe that our ability to provide customers outstanding service quality serves as a strong competitive differentiator. Our customer relationships are established and maintained through the coordinated efforts of our sales and production teams. We employ a highly responsive and efficient team of professionals devoted to addressing customer support with the goal of resolving any issue in a timely manner. In order to promote customer loyalty and employee development, we developed an employee training program with the primary objectives of educating our staff to be aware of client and supplier needs and familiarizing them with our strategic goals in order to improve the competitiveness, productivity and quality of all products offered.

Working Capital Requirements

During the year ended December 31, 2018, \$5.0 million was used in operating activities, related to the working capital required to support an 18% growth in sales. The main use of cash from operating activities in 2018 was inventory purchases, which used \$28.1 million as the Company's inventories grew to address an increased level of activity for project deliveries during the first quarter of 2019. While it is expected that the Company will have working capital needs as it undergoes continued growth, management continues to seek ways of optimizing the collection of its receivables and its inventory procurement. The growth in sales during 2018 required a use \$23.7 million in trade account receivables albeit with a lower days sales outstanding ratio given continued efforts on the collection front and the growth in the residential market which carries a shorter cash cycle. On a similar note, also related to the increase in sales and procurement of inventories, trade accounts payable were the primary source of operating cash flows during 2018, generating \$34.6 million.

Customers

Our customers include architects, building owners, general contractors and glazing subcontractors in the commercial construction market. We have over 1,000 customers. Of our 100 most representative customers, which represent over 80% of our sales, about 70% are located in North America, 1% in Central America and the Caribbean, and 29% in South America. Only one customer, GM&P, accounted for more than 10% or more of our net sales during 2016 with 26%. On March 1, 2017 we entered into and consummated a purchase agreement with Giovanni Monti, the owner of 100% of the outstanding shares of GM&P. With the acquisition of GM&P, we have reduced our customer risk concentration, as no single customer accounted for more than 10% of our revenues during the years ended December 31, 2018 and 2017.

Backlog

We had a combined backlog of \$515 million as of December 31, 2018, \$499 million as of December 31, 2017 and \$396 million as of December 31, 2016. We do not believe that backlog is indicative of our future results of operations or prospects. Although we seek commitments from customers well in advance of shipment dates, actual confirmed orders are typically not received until close to the required shipment dates.

Materials and Suppliers

Our primary manufacturing materials include glass, ionoplast, polyvinyl butyral, and aluminum and vinyl extrusions. Although in some instances we have agreements with our suppliers, these agreements are generally terminable by us or the supplier counterparties on limited notice. Typically, all of our materials are readily available from a number of sources, and no supplier delays or shortages are anticipated.

We source raw materials and glass necessary to manufacture our products from a variety of domestic and foreign suppliers. During the year ended December 31, 2018 three suppliers individually accounted for more than 10% of total raw material purchases, which in aggregate represented 37% of raw material purchases, including Vidrio Andino SAS, from which we purchased \$14.8 million, representing 12% of our raw material purchases, and with whom we entered into a joint venture agreement in January 2019 further described in the "Overview" section of Item 1. Business on this annual report. During the year ended December 31, 2017 two suppliers individually accounted for more than 10% of total raw material purchases, which in aggregate represented 30% of raw material purchases. For the year ended December 31, 2016, three suppliers individually accounted for more than 10% of total raw material purchases, which in aggregate represented 38% of raw material purchases.

Warranties

We offer product warranties, which we believe are competitive for the markets in which our products are sold. The nature and extent of these warranties depend upon the product. Our standard warranties are generally from five to ten years for architectural glass, curtain wall, laminated and tempered glass, window and door products. Warranties are not priced or sold separately and do not provide the customer with services or coverages in addition to the assurance that the product complies with original agreed-upon specifications. In the event of a claim against a product for which we have received a warranty from the supplier, we transfer the claim back to the supplier. We evaluated historical information regarding claims for replacements under warranties and concluded that the costs that we have incurred in relation to these warranties have not been material.

Certifications

Among our many designations and certifications, Tecnoglass has earned the Miami-Dade County Notice of Acceptance (“NOA”), one of the most demanding certificates in the industry and a requirement to market hurricane-resistant glass in Florida. Tecnoglass’ products comply with Miami-Dade county’s safety code standards as its laminated anti-hurricane glass resists impact, pressure, water and wind. Tecnoglass is also the only company in Latin America authorized by PPG Industries and Guardian Industries to manufacture floating glass facades.

Our subsidiaries have received a number of other certifications from other national and international standard-setting bodies.

TG Certifications include:

NTC-1578

ASTM E774 1997

ISO 9001: 2008 Certificate of Quality Assurance

ISO 14001: 2004 Certificate of Environmental Management

Safety Glazing Certification Council (SGCC) for tempered and laminated glass: ANZI Z97 1-2004

International Glass Certification Council (IGCC) for insulated glass: ASTM E774 - 97

Pittsburgh Plate Glass (PPG) certified supplier

Member of ACOLVISE (Colombia Association of Safety Glass Transformers)

OHSAS 18001:2007. Occupational Health and Safety management System

ES Certifications include:

NTC-ISO 9001: 2008 Certificate of Quality Assurance

NTC-ISO 14001: 2004 Certificate of Environmental Management

Member of the American Architectural Manufacturers Association (AAMA)

Complies with Miami-Dade County's stringent safety code regulations for hurricane-proof windows

Competitors

We have local and international competitors that also focus on glass and aluminum transformation, window ensemble and installation and designing in the commercial and residential construction markets. The market in the United States in which we compete is mainly comprised of manufacturers, distributors and installers of glass curtain walls, windows and doors for commercial and residential buildings. Based on our analysis of IBIS World Report, we estimate that we capture 1% of the US consolidated market by revenue (manufacturing and services), which represents an attractive opportunity for further penetration. In Colombia, we believe we are the leading producer of high-end windows, with more than 30 years of experience in the glass and aluminum structure assembly market. We captured over 45% of the market share by revenue based on our analysis of external industry sources in 2017. The industry has a few well-known players and is mostly atomized and comprised of small competitors.

The key factors on which we and our competitors compete for business include: quality, price, reputation, breadth of products and service offerings, and production speed. We face intense competition from both smaller and larger market players who compete against us in our various markets including glass, window and aluminum manufacturing.

The principal methods of competition in the window and door industry are the development of long-term relationships with window and door distributors and dealers, and the retention of customers by delivering a full range of high-quality customized products on demand with short turnaround times while offering competitive pricing. The vertical integration of our operations, our geographic scope, low labor costs and economies of scale have helped our subsidiaries consolidate their leading position in Colombia and bolstered their expansion in the United States and other foreign markets.

Government Regulations

We are subject to extensive and varied federal, state and local government regulation in the jurisdictions in which we operate, including laws and regulations relating to our relationships with our employees, public health and safety and fire codes. Additionally, certain of the jurisdictions in which we operate require that installation of doors and windows be approved by competent authorities that grant distribution licenses. Although our business and facilities are subject to federal, state and local environmental regulation, environmental regulation does not have a material impact on our operations.

Also, we are subject to a potential revision of the United States-Colombia Free Trade Agreement (“USCOFTA”), which allows Colombian entities to export to USA without any tariffs. The President of the United States, Mr. Donald Trump, has made public announcements about the intention to re-negotiate certain terms of free trade agreements, which could potentially implement a tariff. However, we can mitigate this risk by transferring the price to our consumers and diversifying business operations.

Employees

As of December 31, 2018, we had a total of 5,852 employees, none of whom is represented by a union. As of December 31, 2017, and 2016 we had a total of 5,326 employees and 5,853 employees, respectively. Most of our employees are hired through seven temporary staffing companies and are employed under one-year fixed-term employment contracts. During 2017 we went through an employee reduction plan related to some projects that were delayed into 2018 since we had overhired to meet those projects. This led to a total reduction in the work force, despite the GM&P acquisition, as GM&P subcontracts a portion of its operational work. Management believes it has good relations with our employees. We provide ongoing training programs to our employees through the self-established programs.

Company History

We are an exempted company incorporated under the laws of the Cayman Islands. We were founded in 2013 in connection with a business combination between Tecnoglass subsidiaries TG and ES, and Andina Acquisition Corporation. TG and ES are corporations formed under the laws of Colombia and founded in 1994 and 1984, respectively, by José M. Daes, our Chief Executive Officer, and Christian T. Daes, our Chief Operating Officer.

Although TG and ES have been in operation since 1994 and 1984, respectively, we were originally formed on September 21, 2011, under the name “Andina Acquisition Corporation” as an exempted company incorporated in the Cayman Islands in order to effect a merger, share exchange, asset acquisition, share purchase, recapitalization, reorganization or other similar business combination with one or more businesses or entities. Tecnoglass changed its name to Tecnoglass Inc. on December 20, 2013 and registered under incorporation number 262514.

From the consummation of our initial public offering until August 17, 2013, we sought out suitable target businesses to acquire. On August 17, 2013, we entered into an agreement and plan of reorganization, which agreement, as amended, we sometimes refer to as the “business combination agreement,” with Tecnoglass Holding, TG and ES, pursuant to which we acquired TG and ES as wholly-owned indirect subsidiaries, or the Business Combination. Pursuant to the Business Combination, our wholly-owned subsidiary was merged with and into Tecnoglass Holding, with Tecnoglass Holding surviving as our wholly-owned subsidiary. In connection with the Business Combination,

our business became the business of Tecnoglass Holding, TG and ES, and we changed our name to Tecnoglass Inc.

Additional Information About the Company

We maintain websites for our subsidiaries, TG, ES and GM&P, which can be found at www.tecnoglass.com, www.energiasolarsa.com, and www.gmpglazing.com, respectively. The corporate filings of Tecnoglass Inc., including our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K, our proxy statements and reports filed by our executive officers and directors under Section 16(a) of the Securities Exchange Act, and any amendments to those filings, are available free of charge on the Investor Relations page at investors.tecnoglass.com, which are updated as soon as reasonably practicable after we electronically file (or furnish in certain cases) such material with the Securities and Exchange Commission, and can also be found at the SEC's website at <http://sec.gov>. We do not intend for information contained in either subsidiary website, including the Investor Relations pages, to be a part of this Form 10-K. Also, the public may read and copy any materials the Company files with the SEC at the SEC's public reference room at 100 F St NE, Washington D.C, 20549 or by calling 1-800-SEC-0330.

Item 1A. Risk Factors.

Risks Related to Our Business Operations

We may not realize the anticipated benefit through our joint venture with Saint-Gobain and the planned construction of a new plant as part of the joint venture may not be completed as planned.

We entered into a joint venture agreement with Saint-Gobain to acquire an approximately 25% minority interest in Vidrio Andino's float glass plant in the outskirts of Bogota, Colombia. We believe this transaction will solidify our vertical integration strategy by acquiring the first stage of our production chain while securing ample glass supply for our expected production needs. However, we may be unable to realize the planned synergies and fail to integrate the facility's production capacity into our manufacturing process, which may have a negative impact on our financial condition. Additionally, the joint venture agreement includes plans to build a new plant in Galapa, Colombia that will be located approximately 20 miles from our primary manufacturing facility in which we will also have a 25% interest. The new plant will be funded with the original cash contribution made by the Company, operating cashflows from the Bogota plant, debt incurred at the joint venture level that will not consolidate into the Company and an additional contribution by us of approximately \$12.5 million to be paid between 2020 and 2021.

There can be no assurance that the anticipated joint venture cost synergies, increases in capacity or production and optimization of certain manufacturing processes associated with the reduction of raw material waste, and supply chain synergies, including purchasing raw materials at more advantageous prices, will be achieved, or that they might not be significantly and materially less than anticipated, or that the completion of the joint venture with Saint-Gobain will be timely or effectively accomplished. In addition, our ability to realize the anticipated cost synergies and production

capacity increases are subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond our control, such as changes to government regulation governing or otherwise impacting our industry, operating difficulties, client preferences, changes in competition and general economic or industry condition.

Constructing a new manufacturing facility involves risks, including financial, construction and governmental approval risks. If Vidrio Andino's plant fails to produce the anticipated cash flow, if we are unable to allocate the required capital to the new plant, if we are unable to secure the necessary permits, approvals or consents or if we are unable to enter into a contract for the construction of the plant on suitable terms, we will fail to realize the expected benefits of the joint venture.

We operate in competitive markets, and our business could suffer if we are unable to adequately address potential downward pricing pressures and other factors that may reduce operating margins.

The principal markets that we serve are highly competitive. Competition is based primarily on the precision and range of achievable tolerances, quality, price and the ability to meet delivery schedules dictated by customers. Our competition comes from companies of various sizes, some of which have greater financial and other resources than we do and some of which have more established brand names in the markets that we serve. We currently compete with companies such as Viracon (a subsidiary within the Apogee Enterprises Inc. Group), PGT, Cardinal Glass and Oldcastle Glass among others in the United States and companies such as Vidrio Andino, Vitro, Vitelco and others in the Colombia and Latin America. Any of these competitors may foresee the course of market development more accurately than we will, develop products that are superior to ours, have the ability to produce similar products at a lower cost than us or adapt more quickly than we can to new technologies or evolving customer requirements. Increased competition could force us to lower our prices or to offer additional services at a higher cost to us, which could reduce gross profit and net income. Accordingly, we may not be able to adequately address potential downward pricing pressures and other factors, which may adversely affect our financial condition and results of operations.

Failure to maintain the performance, reliability and quality standards required by our customers could have a materially negative impact on our financial condition and results of operation.

If our products or services have performance, reliability or quality problems, or products are installed with incompatible glazing materials, we may experience additional warranty and service expenses, reduced or canceled orders, diminished pricing power, higher manufacturing or installation costs or delays in the collection of accounts receivable. Additionally, performance, reliability or quality claims from our customers, with or without merit, could result in costly and time-consuming litigation that could require significant time and attention of management and involve significant monetary damages that could negatively affect our financial results.

The volatility of the cost of raw materials used to produce our products could materially adversely affect our results of operations in the future.

The cost of raw materials included in our products, including aluminum extrusion and polyvinyl butyral, are subject to significant fluctuations derived from changes in price or volume. A variety of factors over which we have no control, including global demand for aluminum, fluctuations in oil prices, speculation in commodities futures and the creation of new laminates or other products based on new technologies, impact the cost of raw materials which we purchase for the manufacture of our products. We quote our prices of aluminum products based on the price of aluminum in the London Metal Exchange plus a premium, and our suppliers of glass and polyvinyl butyral provide us with price lists that are updated annually, thus reducing the risk of changing prices for orders in the short term. While we may attempt to minimize the risk from severe price fluctuations by entering into aluminum forward contracts to hedge these fluctuations in the purchase price of aluminum extrusion we use in production, substantial, prolonged upward trends

in aluminum prices could significantly increase the cost of our aluminum needs and have an adverse impact on our results of operations. If we are not able to pass on significant cost increases to our customers, our results in the future may be negatively affected by a delay between the cost increases and price increases in our products. Accordingly, the price volatility of raw materials could adversely affect our financial condition and results of operations in the future.

We depend on third-party suppliers for our raw materials and any failure of such third-party suppliers in providing raw materials could negatively affect our ability to manufacture our products.

Our ability to offer a wide variety of products to our customers depends on receipt of adequate material supplies from manufacturers and other suppliers. It is possible in the future that our competitors or other suppliers may create products based on new technologies that are not available to us or are more effective than our products at surviving hurricane-force winds and wind-borne debris or that they may have access to products of a similar quality at lower prices. Although in some instances we have agreements with our suppliers, these agreements are generally terminable by us or the supplier counterparties on limited notice. We have a fixed set of maximum price rates, and from those prices we negotiate with the supplier of the material depending on the project. We source raw materials and glass necessary to manufacture our products from a variety of domestic and foreign suppliers. During the year ended December 31, 2018, three suppliers individually accounted for more than 10% of total raw material purchases, which in aggregate represent 37% of raw material purchases, including Vidrio Andino SAS, from which we purchased \$14.8 million, or 12% of our raw material purchases, and with whom we entered into a joint venture agreement in January 2019 further described in the “Overview” section of Item 1. Business on this annual report. Failures of third-party suppliers to provide raw materials to us in the future could have an adverse impact on our operating results or our ability to manufacture our products.

The home building industry and the home repair and remodeling sector are regulated and any increased regulatory restrictions could negatively affect our sales and results of operations.

The home building industry and the home repair and remodeling sector are subject to various local, state and federal statutes, ordinances, rules and regulations concerning zoning, building design and safety, hurricane and floods, construction, and similar matters, including regulations that impose restrictive zoning and density requirements in order to limit the number of homes that can be built within the boundaries of a particular area. Increased regulatory restrictions could limit demand for new homes and home repair and remodeling products, which could negatively affect our sales and results of operations. We may not be able to satisfy any future regulations, which consequently could have a negative effect on our sales and results of operations.

Changes in building codes could lower the demand for our impact-resistant windows and doors.

The market for our impact-resistant windows and doors depends in large part on our ability to satisfy state and local building codes that require protection from wind-borne debris. If the standards in such building codes are raised, we may not be able to meet such requirements, and demand for our products could decline. Conversely, if the standards in such building codes are lowered or are not enforced in certain areas, demand for impact-resistant products may decrease. If we are unable to satisfy future regulations, including building code standards, it could negatively affect our sales and results of operations. Further, if states and regions that are affected by hurricanes but do not currently have such building codes fail to adopt and enforce hurricane protection building codes, our ability to expand our business in such markets may be limited.

Equipment failures, delays in deliveries and catastrophic loss at our manufacturing facility could lead to production curtailments or shutdowns that prevent us from producing our products.

An interruption in production capabilities at any of our facilities because of equipment failure or other reasons could result in our inability to produce our products, which would reduce our sales and earnings for the affected period. In addition, we generally manufacture our products only after receiving the order from the customer and thus do not hold large inventories. If there is a stoppage in production at our manufacturing facilities, even if only temporarily, or if they experience delays because of events that are beyond our control, delivery times could be severely affected. Any significant delay in deliveries to our customers could lead to increased product returns or cancellations and cause us to lose future sales. Our manufacturing facilities are also subject to the risk of catastrophic loss due to unanticipated events such as fires, explosions or violent weather conditions. If we experience plant shutdowns or periods of reduced production because of equipment failure, delays in deliveries or catastrophic loss, it could have a material adverse effect on our results of operations or financial condition. Further, we may not have adequate insurance to compensate for all losses that result from any of these events.

Our reliance on a single facility subjects us to concentrated risks.

We currently operate the vast majority of our business from a single production facility in Barranquilla, Colombia. Due to the lack of diversification in our assets and geographic location, an adverse development at or impacting our facility or in local or regional economic or political conditions, could have a significantly greater impact on our results of operations and financial condition than if we maintained more diverse assets and locations. While we implement preventative and proactive maintenance at our facility, it is possible that we could experience prolonged periods of reduced production and increased maintenance and repair costs due to equipment failures. In addition, because of our single facility and location, in certain cases we rely on limited or single suppliers for significant inputs, such as electricity. We are also reliant on the adequacy of the local skilled labor force to support our operations. Supply interruptions to or labor shortages or stoppages at our facility could be caused by any of the aforementioned factors, many of which are beyond our control, and would adversely affect our operations and we would not have any ability to offset this concentrated impact with activities at any alternative facilities or locations.

Our business involves complex manufacturing processes that may cause personal injury or property damage, subjecting us to liabilities and possible losses other disruptions of our operations in the future, which may not be covered by insurance.

Our business involves complex manufacturing processes. Some of these processes involve high pressures, temperatures, hot metal and other hazards that present certain safety risks to workers employed at our manufacturing facilities. The potential exists for accidents involving death or serious injury. Although our management is highly committed to health and safety, since January 2014, two fatalities have occurred at our operations. The potential liability resulting from any such accident, to the extent not covered by insurance, could result in unexpected cash expenditures, thereby reducing the cash available to operate our business. Such an accident could disrupt operations at any of our facilities, which could adversely affect our ability to deliver products to our customers on a timely basis and to retain our current business.

Operating hazards inherent in our business, some of which may be outside of our control, can cause personal injury and loss of life, damage to or destruction of property, plant and equipment and environmental damage. We maintain insurance coverage in amounts and against the risks we believe are consistent with industry practice, but this insurance may not be adequate or available to cover all losses or liabilities we may incur in our operations. Our insurance policies are subject to varying levels of deductibles. Losses up to our deductible amounts accrue based upon our estimates of the ultimate liability for claims incurred and an estimate of claims incurred but not reported. However, liabilities subject to insurance are difficult to estimate due to unknown factors, including the severity of an injury, the determination of our liability in proportion to other parties, the number of incidents not reported and the effectiveness of our safety programs. If we were to experience insurance claims or costs above our estimates, we might also be required to use working capital to satisfy these claims.

Our results may not match our provided guidance or the expectations of securities analysts or investors, which likely would have an adverse effect on the market price of our securities.

Our results may fall below provided guidance and the expectations of securities analysts or investors in future periods. Our results may vary depending on a number of factors, including, but not limited to, fluctuating customer demand, delay or timing of shipments, construction delays or cancellations due to lack of financing for construction projects or market acceptance of new products. Manufacturing or operational difficulties that may arise due to quality control, capacity utilization of our production equipment or staffing requirements may also adversely affect annual net sales and operating results. Moreover, where we participate in fixed-price contracts for installation services, changes in timing of construction projects or difficulties or errors in their execution caused by us or other parties, could result in a failure to achieve expected results. In addition, competition, including new entrants into our markets, the introduction of new products by competitors, adoption of improved technologies by competitors and competitive pressures on prices of products and services, could adversely affect our results. Finally, our results may vary depending on raw material pricing, the potential for disruption of supply and changes in legislation that could have an adverse impact on labor or other costs. Our failure to meet our provided guidance or the expectations of securities analysts or investors would likely adversely affect the market price of our securities.

If new construction levels and repair and remodeling markets decline, such market pressures could negatively affect our results of operations.

The architectural glass industry is subject to the cyclical market pressures of the larger new construction and repair and remodeling markets. In turn, these larger markets may be affected by adverse changes in economic conditions such as demographic trends, employment levels, interest rates, commodity prices, availability of credit and consumer confidence, as well as by changing needs and trends in the markets, such as shifts in customers' preferences and architectural trends. Any future downturn or any other negative market pressures could negatively affect our results of operations in the future, as margins may decrease as a direct result of an overall decrease in demand for our products. Additionally, we may have idle capacity which may have a negative effect on our cost structure.

We may be adversely affected by disruptions to our manufacturing facilities or disruptions to our customer, supplier or employee base.

Any disruption to our facilities resulting from weather-related events, fire, an act of terrorism or any other cause could damage a significant portion of our inventory, affect our distribution of products and materially impair our ability to distribute products to customers. We could incur significantly higher costs and longer lead times associated with distributing our products to customers during the time that it takes for us to reopen or replace a damaged facility. In addition, if there are disruptions to our customer and supplier base or to our employees caused by weather-related events, acts of terrorism or any other cause, our business could be temporarily adversely affected by higher costs for materials, increased shipping and storage costs, increased labor costs, increased absentee rates and scheduling issues. Any interruption in the production or delivery of our supplies could reduce sales of our products and increase costs.

Customer concentration and related credit, commercial and legal risk may adversely impact our future earnings and cash flows.

Our ten largest third-party customers worldwide collectively accounted for 38% of our total sales revenue for the year ended December 31, 2018, though no single customer accounted for more than 10% of annual revenues. We also do not have any long-term requirements contracts pursuant to which we would be required to fulfill customers on an as-needed basis.

Although the customary terms of our arrangements with customers require a significant upfront payment ranging between 30% and 50% of the cost of an order, if a large customer were to experience financial difficulty, or file for bankruptcy or similar protection, or if we were unable to collect amounts due from customers that are currently under bankruptcy or similar protection, it could adversely impact our results of operations, cash flows and asset valuations. Therefore, the risk we face in doing business with these customers may increase. Financial problems experienced by our customers could result in the impairment of our assets, a decrease in our operating cash flows and may also reduce or curtail our customers' future use of our products and services, which may have an adverse effect on our revenues.

Disagreements between the parties can arise as a result of the scope and nature of the relationship and ongoing negotiations. Although we do not have any disputes with any major customers as of the date hereof that are expected to have a material adverse effect on our financial position, results of operations or cash flows, we cannot predict whether such disputes will arise in the future.

The nature of our business exposes each of our subsidiaries to product liability and warranty claims that, if adversely determined, could negatively affect our financial condition and results of operations and the confidence of customers in our products.

Our subsidiaries are, from time to time, involved in product liability and product warranty claims relating to the products they manufacture and distribute that, if adversely determined, could adversely affect our financial condition, results of operations and cash flows. In addition, they may be exposed to potential claims arising from the conduct of homebuilders and home remodelers and their sub-contractors. We may not be able to maintain insurance on acceptable terms or insurance may not provide adequate protection against potential liabilities in the future. Product liability claims can be expensive to defend and can divert the attention of management and other personnel for significant periods, regardless of the ultimate outcome. Claims of this nature could also have a negative impact on customer confidence in our products and us. We are not aware of any such claims at this time.

We are subject to potential exposure to environmental liabilities and are subject to environmental regulation and any such liabilities or regulation may negatively affect our costs and results of operations in the future.

Our subsidiaries are subject to various national, state and local environmental laws, ordinances and regulations that are frequently changing and becoming more stringent. Although we believe that our facilities are materially in compliance with such laws, ordinances and regulations, we cannot be certain that we will, at all times, be able to maintain compliance. Furthermore, as owners of real property, our subsidiaries can be held liable for the investigation or remediation of contamination on such properties, in some circumstances, without regard to whether we knew of or were responsible for such contamination. Remediation may be required in the future because of spills or releases of petroleum products or hazardous substances, the discovery of unknown environmental conditions, or more stringent standards regarding existing residual contamination. Environmental regulatory requirements may become more burdensome, increase our general and administrative costs, and increase the risk that our subsidiaries incur fines or penalties or be held liable for violations of such regulatory requirements.

Weather can materially affect our business and we are subject to seasonality.

Seasonal changes and other weather-related conditions can adversely affect our business and operations through a decline in both the use and production of our products and demand for our services. Adverse weather conditions, such as extended rainy and cold weather in the spring and fall, can reduce demand for our products and reduce sales or render our distribution operations less efficient. Major weather events such as hurricanes, tornadoes, tropical storms and heavy snows with quick rainy melts could adversely affect sales in the near term.

Construction materials production and shipment levels follow activity in the construction industry, which typically occurs in the spring, summer and fall. Warmer and drier weather during the second and third quarters typically result in higher activity and revenue levels during those quarters. The first quarter typically has lower levels of activity partially due to inclement weather conditions. The activity level during the second quarter varies greatly with variations in temperature and precipitation.

Our success depends upon our ability to develop new products and services, integrate acquired products and services and enhance existing products and services through product development initiatives and technological advances; any failure to make such improvements could harm our future business and prospects.

We have continuing programs designed to develop new products and to enhance and improve our existing products. We are expending resources for the development of new products in all aspects of our business, including products that can reach a broader customer base. Some of these new products must be developed due to changes in legislative, regulatory or industry requirements or in competitive technologies that render certain of our existing products obsolete or less competitive. The successful development of our products and product enhancements are subject to numerous risks, both known and unknown, including unanticipated delays, access to significant capital, budget overruns, technical problems and other difficulties that could result in the abandonment or substantial change in the design, development and commercialization of these new products. The events could have a materially adverse impact on our results of operations.

Given the uncertainties inherent with product development and introduction, including lack of market acceptance, we cannot provide assurance that any of our product development efforts will be successful on a timely basis or within budget, if at all. Failure to develop new products and product enhancements on a timely basis or within budget could harm our business and prospects. In addition, we may not be able to achieve the technological advances necessary for us to remain competitive, which could have a materially negative impact on our financial condition.

We are dependent on sales to customers outside Colombia and any failure to make these sales may adversely affect our operating results in the future.

In the year ended December 31, 2018, 83% of our sales were to customers outside Colombia, including to the United States and Panama, and we expect sales into the United States and other foreign markets to continue to represent a significant portion of our net sales. Foreign sales and operations are subject to changes in local government regulations and policies, including those related to tariffs and trade barriers, investments, property ownership rights, taxation, exchange controls and repatriation of earnings. An increase in tariffs on products shipped to countries like the United States, which President Trump has indicated is possible, or changes in the relative values of currencies occur from time to time and could affect our operating results. This risk and the other risks inherent in foreign sales and operations could adversely affect our operating results in the future.

We are dependent on certain key personnel, the loss of whom could materially affect our financial performance and prospects in the future.

Our continued success depends largely upon the continued services of our senior management and certain key employees. Each member of our senior management teams has substantial experience and expertise in his or her industry and has made significant contributions to our growth and success. We face the risk, however, that members of our senior management may not continue in their current positions and the loss of the services of any of these individuals could cause us to lose customers and reduce our net sales, lead to employee morale problems and the loss of other key employees or cause disruptions to production. In addition, we may be unable to find qualified individuals to replace any senior executive officers who leave our employ or that of our subsidiaries.

Our results of operations could be significantly affected by foreign currency fluctuations and currency regulations.

We are subject to risks relating to fluctuations in currency exchange rates that may affect our sales, cost of sales, operating margins and cash flows. During the year ended December 31, 2018, approximately 17% of our revenues and 51% of our expenses were in Colombian pesos. The remainder of our expenses and revenues were denominated, priced and realized in U.S. dollars. In the future, and especially as we further expand our sales in other markets, our customers may increasingly make payments in non-U.S. currencies. In addition, currency devaluation can result in a loss to us if we hold monetary assets in that currency. Hedging foreign currencies can be difficult and costly, especially if the currency is not actively traded. We cannot predict the effect of future exchange rate fluctuations on our operating results.

In addition, we are subject to risks relating to governmental regulation of foreign currency, which may limit our ability to:

- transfer funds from or convert currencies in certain countries;
- repatriate foreign currency received in excess of local currency requirements; and
- repatriate funds held by foreign subsidiaries to the United States at favorable tax rates.

Furthermore, the Colombian government and the Colombian Central Bank intervene in the country's economy and occasionally make significant changes in monetary, fiscal and regulatory policy, which may include the following measures:

- controls on capital flows;
- international investments and exchange regime.

For a more detailed description of foreign exchange regulations in Colombia, see "Disclosure Regarding Foreign Exchange Rates in Colombia" and "Risk factors – Risks Related to Colombia and Other Countries Where We Operate – The Colombian government and the Central Bank exercise significant influence on the Colombian economy".

As we continue to increase our operations in foreign countries, there is an increased risk that foreign currency controls may create difficulty in repatriating profits from foreign countries in the form of taxes or other restrictions, which could restrict our cash flow.

We have entered into significant transactions with affiliates or other related parties, which may result in conflicts of interest.

We have entered into transactions with affiliates or other related parties in the past and may do so again in the future. While we believe such transactions have been and will continue to be negotiated on an arm's length basis, giving us a competitive advantage with vertical integration, there can be no assurance that such transactions could not give rise to conflicts of interest that could adversely affect our financial condition and results of operations.

The interests of our controlling shareholders could differ from the interests of our other shareholders.

Energy Holding Corporation exercises significant influence over us as a result of its majority shareholder position and voting rights. As of December 31, 2018, Energy Holding Corporation beneficially owned approximately 63.7% of our outstanding ordinary shares. Energy Holding Corporation, in turn, is controlled by members of the Daes family, who together own 100% of the shares of Energy Holding Corporation. See "Principal Securityholders." Accordingly, our controlling shareholders would have considerable influence regarding the outcome of any transaction that requires shareholder approval. In addition, if we are unable to obtain requisite approvals from Energy Holding Corporation, we may be prevented from executing critical elements of our business strategy.

We conduct all of our operations through our subsidiaries, and will rely on payments from our subsidiaries to meet all of our obligations and may fail to meet our obligations if our subsidiaries are unable to make payments to us.

We are a holding company and derive substantially all of our operating income from our subsidiaries. All of our assets are held by our subsidiaries, and we rely on the earnings and cash flows of our subsidiaries to meet our debt service obligations or dividend payments. The ability of our subsidiaries to make payments to us will depend on their respective operating results and may be restricted by, among other things, the laws of their jurisdiction of organization including Colombian foreign exchange regulations (which may limit the amount of funds available for distributions to us), the terms of existing and future indebtedness and other agreements of our subsidiaries, including their credit facilities, and the covenants of any future outstanding indebtedness we or our subsidiaries incur. See “Disclosure Regarding Foreign Exchange Rates in Colombia” and “Risk Factors – Risks Related to Colombia and Other Countries Where We Operate – The Colombian government and the Central Bank exercise significant influence on the Colombian economy.” If our subsidiaries are unable to declare dividends, our ability to meet debt service or dividend payments may be impacted. The ability of our subsidiaries in Colombia to declare dividends up to the total amount of their capital is not restricted by current laws, covenants in debt agreements or other agreements but could be restricted pursuant to applicable law in the future or if our Colombian subsidiaries undergo a transformation to other types of corporate entities.

We may be adversely affected by any disruption in our information technology systems. Our operations are dependent upon our information technology systems, which encompass all of our major business functions.

Increased global information technology security requirements, vulnerabilities, threats and a rise in sophisticated and targeted cybercrime pose a risk to the security of our systems, our information networks, and to the confidentiality, availability and integrity of our data, as well as to the functionality of our manufacturing process. A disruption in our information technology systems for any prolonged period could result in delays in executing certain production activities, logging and processing operational and financial data, communication with employees and third parties or fulfilling customer orders resulting in potential liability or reputational damage or otherwise adversely affect our financial results. We employ a number of measures to prevent, detect and mitigate these threats, which include employee education, password encryption, frequent password change events, firewall detection systems, anti-virus software in-place and frequent backups; however, there is no guarantee such efforts will be successful in preventing a cyber-attack.

We rely on third party transportation, which subjects us to risks and costs that we cannot control, and which risks and costs may materially adversely affect our operations.

We rely on third party trucking companies to transport raw materials to the manufacturing facilities used by each of our businesses and, to a lesser degree, to ship finished products to customers. These transport operations are subject to various hazards and risks, including extreme weather conditions, work stoppages and operating hazards, as well as

interstate transportation regulations. In addition, the methods of transportation we utilize may be subject to additional, more stringent and more costly regulations in the future. If we are delayed or unable to ship finished products or unable to obtain raw materials as a result of any such new regulations or public policy changes related to transportation safety, or these transportation companies fail to operate properly, or if there were significant changes in the cost of these services due to new or additional regulations, or otherwise, we may not be able to arrange efficient alternatives and timely means to obtain raw materials or ship goods, which could result in a material adverse effect on our revenues and costs of operations. Transportation costs represent a significant part of our cost structure. If our transportation costs increased substantially, due to prolonged increases in fuel prices or otherwise, we may not be able to control them or pass the increased costs onto customers, and our profitability would be negatively impacted.

The success of our business depends, in part, on our ability to execute on our acquisition strategy, to successfully integrate acquisitions and to retain key employees of our acquired businesses.

A significant portion of our historical growth has occurred through acquisitions and we will likely enter into acquisitions in the future. We may at any time be engaged in discussions or negotiations with respect to possible acquisitions, including transactions that would be significant to us. We regularly make, and we expect to continue to make, acquisition proposals, and we may enter into letters of intent for acquisitions. We cannot predict the timing of any contemplated transactions. To successfully finance such acquisitions, we may need to raise additional equity capital and indebtedness, which could increase our leverage level above our leverage level at the time of, and prior to the contemplated use of proceeds of, this offering. We cannot assure you that we will enter into definitive agreements with respect to any contemplated transactions or that transactions contemplated by any definitive agreements will be completed on time or at all. Our growth has placed, and will continue to place, significant demands on our management and operational and financial resources. Acquisitions involve risks that the businesses acquired will not perform as expected and that business judgments concerning the value, strengths and weaknesses of acquired businesses will prove incorrect.

Acquisitions may require integration of acquired companies' sales and marketing, distribution, purchasing, finance and administrative organizations, as well as exposure to different legal and regulatory regimes in jurisdictions in which we have not previously operated. We may not be able to integrate successfully any business we may acquire or have acquired into our existing business, and any acquired businesses may not be profitable or as profitable as we had expected. Our inability to complete the integration of new businesses in a timely and orderly manner could increase costs and lower profits. Factors affecting the successful integration of acquired businesses include, but are not limited to, the following:

We may become liable for certain liabilities of any acquired business, whether or not known to us. These risks could include, among others, tax liabilities, product liabilities, asbestos liabilities, environmental liabilities, pension liabilities and liabilities for employment practices and they could be significant.

Substantial attention from our senior management and the management of the acquired business may be required, which could decrease the time that they have to service and attract customers.

The complete integration of acquired companies depends, to a certain extent, on the full implementation of our financial systems and policies.

We may actively pursue a number of opportunities simultaneously and we may encounter unforeseen expenses, complications and delays, including difficulties in employing sufficient staff and maintaining operational and management oversight.

Increasing interest rates could materially adversely affect our ability to generate positive cashflows and secure financing required to carry out our strategic plans.

Historically, portions of our debt have been indexed to variable interest rates. A variety of factors over which we have no control. A rise in interest rates could negatively impact the cost of financing for a portion of our debt with variable interest rates which could negatively impact our cash flow generation. Furthermore, a rise in interest rates could limit our ability to obtain financing required to support our growth through our continuing programs designed to develop new products, the expand of the installed capacity of our manufacturing facilities and execute our acquisition strategy. While we may mitigate the risk derived from interest rate fluctuations by entering into derivative contracts or by obtaining fixed rate financing, general increases in interest rates would still have an impact on the cost of financing and our ability to obtain appropriate funding.

Furthermore, the architectural glass industry is directly impacted by general construction activity trends. In turn, these markets may be affected by adverse changes in economic conditions such as interest rates, and availability of credit. Any future downturn or any other negative market pressures could negatively affect our results of operations in the future, as margins may decrease as a direct result of an overall decrease in demand for our products.

Our substantial indebtedness could adversely affect our financial health and prevent us from fulfilling our obligations.

We have a significant amount of indebtedness. As of December 31, 2018, we and our subsidiaries on a consolidated basis had \$242.3 million principal amount of USD denominated debt outstanding. Our substantial indebtedness could have important consequences to our financial health. For example, it could: